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PROJECT TITLE:

THE EFFECT OF E-HAILING EXISTENCE ON TAXI SERVICES IN
SHAH ALAM

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DECLARATION

TITLE: THE EFFECT OF E HAILING EXISTENCE ON TAXI SERVICES IN SHAH ALAM

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I, Siti Nurfarhana Binti Saidin, the representative of this group hereby declared that the project report “The Effect of E hailing Existence on Taxi Service in Shah Alam” is based on our work carried out during the course of our study under the supervision of Dr. Noordini Binti Abdullah and Madam Rosamiza Binti Meor Razak.

This research project is the end result of our work and no portion of this research project has been submitted in support of any application of for any other degree/diploma/qualification beside Business Studies of this Polytechnic. We verify that this research project and intellectual properties are original work without plagiarism from any sources.

ACKNOWLEDGEMENTS

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Lastly, we would like to express our deep appreciation to our lovely colleges for their encouragement and helping us for any difficulty during the research period. We could had not completed this research project if not for those mentioned. We truly grateful to receive help and guidance from them for the project.

ABSTRACT

E-hailing is a process of ordering a car, taxi, limousine, or any other form of transportation pick up via virtual devices: computer or mobile device. A taxi is a motor vehicle licensed to transport passengers in return for payment of a fare and typically fitted with a taximeter. In our research we study effect of e-hailing existence on taxi services. The research is conducted to know how much the taxi services affected towards the rising of e hailing services and determine the most important effect of e-hailing existence on taxi services. This research is a descriptive research that uses quantitative data. The purpose of the survey is to collect quantitative methods information. The sample selection is from taxi drivers in area Shah Alam and sampling method used for this research are convenience sampling. Descriptive analysis is used in this research. The findings that customer and driver's satisfaction give the most important effect of e hailing existence on taxi services. This give indication that e hailing existence give a tremendous effect on taxi services and government should find a way to emerge taxi services in line with the development of e hailing.

Keyword – Income, Taxi Driver Satisfaction, Location, Customer

CHAPTER 1

INTRODUCTION

1.1 Introduction

A taxi may be a car, or other vehicle which is employed for conveyance. People use them to induce to where they require to travel. this implies there are not any stops in between where they get on and where they get off. Many big cities have taxis. However, taxi had disadvantages which is the rider doesn't get to settle on the locations where they require to urge picked up or dropped off. These vehicles often take certain roads or follow a really specific route. due to this, they sometimes don't stop exactly where people want to travel and occurrence existence of e-hailing services.

Nowadays, ride hailing applications are used worldwide and has become one of the main transportations for the users. The legalization of e-hailing services in Malaysia had spurred the growth of the industry and thus affecting the taxi services. Traditionally, customers always hail empty-cruising taxis on streets, which may offer low levels of comforts and efficiency especially during rush hours or rainy days. Therefore, a lot of users has been using e-hailing services more than hailing the taxis traditionally. The booming of e-hailing services affected the supply and demand for traditional taxi services in our country also worldwide.

Previous studies stated by Rayle et al. [4] surveyed 380 ride-hailing patrons in San Francisco, and compared them with a control group of taxi riders in the same city. Findings confirmed that frequent ride-hailing users were mostly younger, better educated, and more car-dependent than the control group of frequent taxi riders. Moreover, time efficiency and convenience were found to be the main attractions for ride-hailing services. Their average wait time was reported to be less than 10 minutes, and ride-hailing trips documented in the study were generally shorter than the control group's taxi trips. Finally, a majority of the ride-hailing trips requested by patrons were for social purposes, indicating a robust pool of choice riders.

The recent development from this topic is the taxi drivers begin to using the e-hailing service as it's become the technological trend now to use smartphone-based applications rather than waited for a taxi that we didn't even know when they will arrive and had to hail taxis to be taken by someone that also waiting for taxi. So, what is cheap now may end up becoming costlier in the future once the market share of conventional taxis is wiped out. Also, competition benefits consumers. MCM calls on the government to encourage the participation of more e-hailing companies. To do this, the government should avoid setting up more regulatory barriers. While we enjoy the convenience provided by e-hailing companies, support and guidance in the form of technological know-how must also be provided to taxi drivers so that they can sustain their livelihood by adopting technological trends.

The research is conducted to identify the effect of e-hailing existence on taxi services. It is to discover on why the taxi drivers getting more lesser customer as the e hailing services getting increase whether on taxi services facilities or other reasons that made them become more irrelevant now compare to e hailing services. This study will begin with the research background, problem statement, research objectives followed by research questions, scope of the study, hypothesis of the study, significant of the study, then the limitation and operational terms.

1.2 Research Background

The spectacular rise of ride sourcing is maybe the foremost significant disruption occurred to the personal mobility market in decades. Offered mostly via mobile platforms, a ride sourcing service connects passengers to rides provided by private drivers using personal vehicles. the method that matches passengers and drivers on-line and in real-time is commonly called e-hailing, in contrast to traditional street-hailing.

A taxi may be a car, or other vehicle which is employed for conveyance. People use them to induce to where they require to travel. this implies there are not any stops in between where they get on and where they get off. Many big cities have taxis. In most other sorts

of transport, like a bus, tram, or train, the rider doesn't get to settle on the locations where they require to urge picked up or dropped off. These vehicles often take certain roads or follow a really specific route. due to this, they sometimes don't stop exactly where people want to travel. Riding a taxi could be a lot like having your own car, but you do not drive it. You merely tell the taxi driver where you wish to travel and he or she's going to take you there. what proportion you buy the ride, in most cases, depends on how far you're going from where you get on. it's common for the value for a taxi ride to be costlier than other styles of transport.

Ride-hailing companies like Grab and Uber have revolt the way we commute, providing a less expensive, convenient and efficient alternative to traditional taxi service. Driving ourselves is now an option, while negotiating with taxi drivers to travel to congested locations during peak hours could be a thing of the past. Not only have e-hailing services transformed the way we commute, they need also provided a lifeline for several to earn more money. Apparently, there are over 60,000 providing this service. Apart from being convenient, affordable and efficient, ride-hailing service firms provide driver evaluation by passengers. It's unfortunate that this feature was never used for conventional taxi drivers. While the Malaysia Consumers Movement commends Uber and Grab for this innovation, it might be ideal if more players would participate and compete during this market segment. There can be a risk of collusion between players, allowing them to dominate the arena. What's cheap now may find yourself becoming costlier within the future once the market share of conventional taxis is drained.

1.3 Problem Statement

The research is conducted to identify the effect of e-hailing existence on taxi services. The goal is to know how much the taxi services affected towards the rising of e hailing services. While taxis are on the streets since the late 1800s, e-hailing services like Uber quickly began absorbing a share of the car-service market after its launch in 2010, followed by competitors like Lyft in 2012. In the New York City and therefore the like, yellow taxi cabs have long been the transportation of choice for locals and tourists, but

with apps like Uber disrupting the space, consumers have more choices than ever to urge where they have to travel.

Taxis seem to be steadily losing passengers compared to other ride-sharing services. Still, in line with a report by Wired this year, some 106,000 for-hire vehicles are licensed to control in the New York City, a 60% increase from 2016. While both taxis and Uber create rates looking on time and distance travelled, Uber contains a slightly more predictable pricing model - offering passengers an estimated total cost (although even this can be subject to change). Additionally, one amongst the most important differences between Uber and taxis are how they price rides - with taxis taking into consideration the speed and flow of traffic while Uber doesn't.

Moreover, the traditional mode of taxi service requires passengers to hail taxis on the roadside. during this way, taxis are often difficult to reach during rush hours, atmospheric condition, and holidays, and customers could also be refused by cabdrivers. With the emergence of the e-hailing services, the normal taxi market has greatly changed. In 2009, Uber within the United State began to produce e-hailing services.

The difference between an e-hailing service and therefore the traditional taxi service is that taxi drivers and passengers is directly connected through third-party transportable applications within the former. Passengers can request taxi services through movable applications, and taxi drivers can obtain information on the passenger's origin and destination in advance. Emerging e-hailing services have greatly improved people's experience of taxi travel. Nevertheless, we need to consider some issues, like people without smartphones and older residents finding it harder to get taxi services. In addition, the surge pricing phenomenon, long work hours, safety, and market competition are subjects of concern.

1.4 Research Objectives

The objectives of this research paper:

- i. To identify the effect of e-hailing existence on taxi services.
- ii. To determine the most important effect that of e-hailing existence on taxi services.

1.5 Research Questions

The questions for taxi drivers:

- i. What is the effect of e-hailing existence on taxi services?
- ii. What are the most important effects of e-hailing existence on taxi services?

1.6 Scope of Study

The scope of this study is at Shah Alam. The reason we chose Shah Alam is because according to data that we collected from Selangor Statistics Department, the population in Shah Alam is more 617,149 people. It is one of the most popular places for tourists and newcomers. Therefore, there will be a lot of people who will use e-hailing and taxi services to travel. A lot of users had been using ride hailing services than traditional taxi services as it is more comfortable and easier to get especially for those who is in rush or want to have more capacity to travel.

1.7 Significance of Study.

First of all, this study will significantly help taxi drivers in making sure that they can keep up with the booming e-hailing services throughout the years. This will also benefit taxi drivers and their ways of getting their services used on the long run if they decide to use and exchange or upgrade their services to e-hailing services. Other than that, this will also be helpful to government to improve traditional taxi services from many aspects such as regulations and others. Lastly, researchers can also gain new knowledge and useful information regarding this issue and make further studies and research regarding this topic.

1.8 Limitation of Study.

Throughout the research, we have faced a few obstacles. One of them being the respondents. As the respondents for our research is taxi drivers, we had a little problem of getting to the place of our respondents as we had a lack of money and the travelling cost from one place to another takes quite a lot. We also had difficulty in getting all of the members together for this project because of other works or personal problem. Other than that, we had difficulty in keeping up with the due date and timeframe for this project as we had other assignments and projects to work on.

1.9 Definition of Operational Terms.

Operational definition of terms refers to a detailed explanation of the technical terms and measurements used during data collection. This is done to standardize the data. Whenever data is being collected, it is necessary to clearly define how to collect the data. Data that is not defined runs the risk of being inconsistent and might not give the same results when the study is replicated. Often, we assume that those collecting the data understand what to do and how to complete the task. However, people may have differing views and interpretations of the same thing, and this will affect the data collection. The only way to ensure that the data is consistent is by means of a detailed operational definition of terms.

a) E-hailing

E-hailing is a process of ordering a car, taxi, limousine, or any other form of transportation pick up via virtual devices: computer or mobile device

b) Taxi services

A taxicab, also known as a taxi or a cab, is a type of vehicle for hire with a driver, used by a single passenger or small group of passengers, often for a non-shared ride. A taxicab conveys passengers between locations of their choice. This differs from public transport where the pick-up and drop-off locations are decided by the service provider, not by the customers, although demand responsive transport and share taxis provide a hybrid bus/taxi mode.

c)Effect

Effect, consequence(s), result refer to something produced by an action or a cause. An effect is that which is produced, usually more or less immediately and directly: The effect of morphine is to produce sleep. A consequence, something that follows naturally or logically, as in a train of events or sequence of time, is less intimately connected with its cause than is an effect: Punishment is the consequence of disobedience. A result may be near or remote, and often is the sum of effects or consequences as making an end or final outcome.

1.10 Chapter Summary

The first chapter demonstrate research background problem statement, research objective, followed by research question, scope of the study, hypothesis of the study, significant of the study, the limitations and also operation definition. Other than that, it also studies the strategies that can affected taxi services on e-hailing existed.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

A taxi may be a car, or other vehicle which is employed for conveyance. People use them to induce to where they require to travel. this implies there are not any stops in between where they get on and where they get off. Many big cities have taxis. However, taxi had disadvantages which is the rider doesn't get to settle on the locations where they require to urge picked up or dropped off. These vehicles often take certain roads or follow a specific route. due to this, they sometimes don't stop exactly where people want to travel and occurrence existence of e-hailing services.

The spectacular rise of ride sourcing or e-hailing is maybe the foremost significant disruption occurred to the personal mobility market in decades. Offered mostly via mobile platforms, a ride sourcing service connects passengers to rides provided by private drivers using personal vehicles. the method that matches passengers and drivers on-line and in real-time is commonly called e-hailing, in contrast to traditional street-hailing.

Previous studies stated by Rayle et al. [4] surveyed 380 ride-hailing patrons in San Francisco and compared them with a control group of taxi riders in the same city. Findings confirmed that frequent ride-hailing users were mostly younger, better educated, and more car-dependent than the control group of frequent taxi riders. Moreover, time efficiency and convenience were found to be the main attractions for ride-hailing services. Their average wait time was reported to be less than 10 minutes, and ride-hailing trips documented in the study were generally shorter than the control group's taxi trips. Finally, majority of the ride-hailing trips requested by patrons were for social purposes, indicating a robust pool of choice riders.

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rather than waited for a taxi that we didn't even know when they will arrive and had to hail taxis to be taken by someone that also waiting for taxi. So, what is cheap now may end up becoming costlier in the future once the market share of conventional taxis is wiped out. Also, competition benefits consumers. MCM calls on the government to encourage the participation of more e-hailing companies. To do this, the government should avoid setting up more regulatory barriers. While we enjoy the convenience provided by e-hailing companies, supports and guidance in the form of technological know-how must also be provided to taxi drivers so that they can sustain their livelihood by adopting technological trends.

2.1 Comparison of previous studies

How can the Taxi Industry Survive The Tide of Ride Sourcing (Yu, Marco.2017) The revolution of ride sourcing is unlikely to eliminate the necessity of a dedicated service fleet, and for years to come will continue to live in a world with both ride sourcing and (upgraded) taxis.

Review of Studies on Taxi Mobility and E-hailing Taxi Services (Rongxiang Xu, Zhixiang.2019) The competition and complement among e-hailing taxi services, traditional taxi services and other forms of public transport need to be further explored while understanding the interactions among these modes of transportation is important for urban planning and management. The knowledge obtained from this can help the taxi management authorities to develop precise and targeted management tactics for e-hailing services.

Modeling and Analysis of the Daily Driving Patterns of Taxis in a Reshuffled Ride hailing Service Market (Qungyu Ma, Hong Yang.2019) The booming of e-hailing services has reshaped urban transportation systems in many cities. Since 2015, e-hailing services have a rapid growth. Surrounded by the pervasive e-hailing vehicles taxis have been more or less influenced and have to adapt to this new environment.

Disruptive Change in Taxi Business: The Case of Uber (Judd Cramer, Alan B. Krueger.2016) It shows the uber is better than taxi because capacity is more than taxi. Other than that, uber is easier to find than taxi because it can be found on the internet.

2.2 Theoretical Framework



The Income Level

Based on the data obtained, the total monthly income for taxi drivers in Kuala Lumpur is around RM1600 to RM1800 after cost and has decreased since the existence of e-hailing services. Before the existence of e-hailing, the daily income of taxi drivers was in the range of RM150 to RM180 before the cost but today, the income of taxi drivers is only around RM80 to RM100 before the cost. This study was done by Wan Agyl Wan Hassan in an article reviewing about the income of taxi's drivers after the emergence of e hailing services in the country.

Location

Taxicabs perform an indispensable function in urban transportation systems. Cabdrivers' mobility patterns and operating strategies have been widely studied since large-scale taxi GPS trajectories became obtainable due to the rapid development of information and communication technologies (ICT). For example, previous studies analyzed the distance and direction distributions of intraurban trips [1], urban cabdrivers' activity distribution [2], spatial variations in urban taxi ridership [3], cabdrivers' operation strategies with respect to revenue [4, 5], and alternative taxi services strategies [6].

Passengers usually hail a taxi on the street in the traditional manners. However, with advanced information and technologies, hailing a taxi through the smartphones has become very popular; the approach offers passengers high level of comfort and efficiency, especially during busy hours and rainy days. With the advent of smartphones, an increasing number of smartphone-based e hailing applications have emerged in recent years thus making the demand of e hailing services increase and causing less taxi services used by customers (Journal of Advanced Transportation,2019).

Customers

Based on the secondary data that we found, it was proven that the numbers of customers that use the traditional taxi services has been decreasing since the booming of E-hailing system in our country. Most of the passengers prefers ride hailing more than traditional taxi services because it is comfortable and easy to get than waiting to hail a taxi on the streets. It can also reduce the costs and save time to travel from one place to another. Also, according to advisor and founder of Big Blue Capital company, Datuk Shamsubahrin Ismail, his company had seen a significant decrease in passenger numbers over the past months and 80 percent of taxi drivers had resigned because they did not get any profit.

Satisfaction of Taxi Drivers Towards E-hailing services

(Journal of Undergraduate Research,2019) stated that taxi's operator opinion towards Grab Car were not positive, such as bad service, inappropriate dressing and being unfair towards taxi's operators. In addition, most taxi's operators had no intention of switching to e hailing services and would remain with the taxi association. They also suggested to abolish Grab Car and implement the same rules and regulations for Grab Car operators. Grab Car operator's opinion towards taxi were generally positive, such as should upgrade like Grab, sometimes too calculative, expensive fares, and unavailability. Apart from that, Grab Car drivers had no intention switching to taxis and would prefer a permanent job. This was mentioned by some operators.

Since the advent of the digital technology revolution, taxi services had begun to be affected by the existence of e-hailing services such as grab and uber. The existence of grab and uber private car services has become a hot issue in our country when it triggers the anger and dissatisfaction of taxi drivers in Malaysia. Taxi drivers are among those who receive great blows and negative effects when the development of this country occurs. Competition begin when the customers are more likely to choose the services provided by e-hailing services over taxi services. It also raises all allegations that the existence of e-hailing has 'closed their rice pot'. Following this unresolved issue, a series of protests have also been held by a taxi driver across the country to express their opposition toward e-hailing services.

2.3 Chapter Summary

The second chapter demonstrates the comparison result of the previous studies which is in the first chapter, hypothesized relationship among the variables, theoretical model of the studies and the terms of every variable involved. Other than that, this study will help taxi services and the industry to survive and adapt to the new environment.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter discusses methodology and research procedures that will be used in the research. The purpose is to discover answers to questions through the application of scientific procedures. According to the Macquarie Dictionary (3rd Ed) methodology is the science of methods, especially: a. a branch of logic dealing with the logical principles underlying the organization of the various special sciences, and the conduct of scientific inquiry. b. Education a branch of pedagogics concerned with the analysis and evaluation of subject matter and methods of teaching (p.718).

This chapter will introduce you on the method that was used to calculate the and determine the effect of e-hailing existence to taxi services that will begin with the research design, followed by population, research and sampling method, data collection method, research instruments and methods of data analysis. After that, the sources of both primary and secondary data will be identified.

3.1 Research Design

This research is a descriptive research that uses quantitative data. It is conducted in order to collect data of the strategies to determine the effect of e-hailing existence on taxi services. The purpose of the survey is to collect quantitative method information. A descriptive study is one in which the major purpose is a description of the state of affairs as it exists at the time of research. The research design process involves many interrelated decisions. This helped to analyze the response obtained to determine the effects. Therefore, this research design enabled the researchers to gather data from a range of respondents. This survey type implements a questionnaire to understand a specific subject from the sample at a definite time period.

3.2 Population, Sample Size and Sampling Method

Population can be defined as a complete set of elements (persons or objects) that possess some common characteristic defined by the sampling criteria established by the researcher. The population in this research is taxi drivers around Shah Alam.

Sample is the selected elements (people or objects) chosen for participation in a study; people are referred to as subjects or participants, while sampling is the process of selecting a group of people, events, behaviors, or other elements with which to conduct a study. The sample selection is from taxi drivers in area Shah Alam and sampling method used for this research are Convenience Sampling. A convenience sampling is a type of non-probability sampling method where the sample is taken from a group of people easy to contact or to reach. It is the most commonly used sampling technique as it's incredibly prompt, uncompleted and economical. In many cases, members are readily approachable to be a part of the sample.

3.3 Instrument

Instrument is the general term that researchers use for a measurement device such as survey, test, observation, questionnaire, etc. The instrument that we used for this research is questionnaires design. The questions are constructed as Likert scale and the questions are adapted from journal, article, and other research materials. We determine our sample size based on the convenience of collecting data, cost and time.

3.4 Data Collection Method

The method that used to collect data is multiple choice questionnaire. Respondents are offered a set of answers they have to choose from. The downside of questionnaires with Likert scale choices is that, if there are too many answers to choose from, it makes the questionnaires, confusing and boring, while discourages the respondents to answer the questionnaires. This technique is the best to get high data accuracy.

3.5 Data Analysis

The Descriptive Analysis is used in this research. This approach mainly answers questions such as why, what or how. Each of these questions is addressed via quantitative techniques such as questionnaires, attitude scaling, standard outcomes and more. Such kind of analysis is usually in the form of texts and narratives, which might also include audio and video representations.

3.6 Chapter Summary

The third chapter demonstrates the research design, population, research and sampling and it also demonstrates the data collection method, research instrument and method of data analysis. The research methodology and design indicate the overall process of the research. This chapter helps us to know more about the effect of e-hailing existence to taxi drivers and the traditional taxi industry. It helps researchers to consider it as one of the samples and models for the research data collection and process from the beginning of the problem statement to the research finding.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 Introduction

Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data. According to Shamo and Resnik (2003) various analytic procedures “provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data”.

While data analysis in qualitative research can include statistical procedures, many times analysis becomes an ongoing iterative process where data is continuously collected and analyzed almost simultaneously. Indeed, researchers generally analyze for patterns in observations through the entire data collection phase (Savenye, Robinson, 2004). The form of the analysis is determined by the specific qualitative approach taken (field study, ethnography content analysis, oral history, biography, unobtrusive research) and the form of the data (field notes, documents, audiotape, videotape).

An essential component of ensuring data integrity is the accurate and appropriate analysis of research findings. Improper statistical analyses distort scientific findings, mislead casual readers (Shepard, 2002), and may negatively influence the public perception of research. Integrity issues are just as relevant to analysis of non-statistical data as well.

This chapter presents the research findings of the data collected from the case study samples. The main source of data is the questionnaires and is also supplemented by face to face interviews. The findings will be presented in relation to the research objectives stated in the study. The method used to analyze data is already discussed in the methodology chapter.

4.2 Demographic

The demographic profile of the respondents contains their personal information and questions related to their behavior. The questions that are related to the respondents' behavior are intended to assess their ability to recall the information (Bryman, 2012). Fifty respondents participated within the study. All 50 responses were usable for data analysis. This study also requested for the respondents' personal information like age, gender, marital status, race, duration being a taxi driver, e-hailing issues and services as well e-hailing services better than taxi services. Table 4.1 shows the respondents' profile for this study.

Table 4.1: Profile of Respondents (N=50)

	Profile	Frequency (N)	Percentage (%)
Age	18 – 30 years	7	14.0
	31 – 40 years	11	22.0
	41 – 50 years	13	26.0
	51 – 60 years	18	36.0
	Other	1	2.0
Gender	Male	50	100.0
Marital Status	Single	11	22.0
	Married	39	78.0
Race	Malay	36	72.0
	Indian	11	22.0

	Chinese	3	6.0
Duration Being A Taxi Driver			
	1 – 2 years	5	10.0
	3 – 5 years	22	44.0
	6 - 8 years	16	32.0
	9 – 10 years	7	14.0
E Hailing Issue			
	Yes	45	90.0
	No	5	10.0
E Hailing Services			
	Yes	21	42.0
	Neutral	14	28.0
	No	15	30.0
E Hailing Services Better Than Taxi Services			
	Yes	30	60.0
	Neutral	16	32.0
	No	4	8.0

Table 4.1 shows the profile of respondents in the study. In total 50 responses to the questionnaire were received of which according to age group, most of the respondents are from the age group of 51 – 60 years old with a total number of 18 (36%) respondents. This is followed by the age group of 41 – 50 years old with a total number of 13 (26%) respondents. The next age group is 31 – 40 years old with a total number of 11 (22%) respondents. This is followed by the age group of 18 – 30 years old with a total number of 7 (14%) respondents. The least number of respondents are in the age group of others with 1 (2%) respondent.

According to gender, the number of respondents is fully distributed with 50 (100%) male respondents. Moving on according to race, almost all the respondents are Malay with a

total number 36 (72%) respondents, next are by Indian that are 11 (22%) respondents. Then followed by Chinese with 3 (6%) respondents. Moreover, for marital status, 39 respondents (78%) are married while 11 (22%) respondents are single. Furthermore, according to duration of being a taxi driver, most of the respondents has driving taxi for 3 – 5 years with 22 (44%) respondents. This is followed by respondents who has driving taxi for 6 – 8 years with a total number of 16 (32%) respondents. Next, taxi drivers who has driving for 9 – 10 years with a total number of 7 (14%) respondents. The least number of respondents are taxi drivers who has driving for 1 – 2 years with 5 (10%) respondents.

According to e hailing issue, the respondents were asked about whether they know about e hailing issue. The result mostly respondents answered ‘yes’ with 45 (90%) respondents while only 5 (10%) respondents answered ‘no’. Then, the respondents were asked whether they agreed with e hailing services with mostly respondents answered ‘yes’ with total number of 21 (42%) respondents. Next are respondents that answered ‘no’ with 15 (30%) respondents. The remaining with 14 (28%) respondents answered ‘neutral’ about e hailing services. In addition, the respondents were also asked about whether e hailing services better than taxi services. Half of the respondents with 30 (60%) respondents respond with ‘yes’ as an answer. 16 (32%) respondents respond ‘neutral’ while the remaining 4 (8%) respondents respond with ‘no’ for this question.

4.3 Descriptive Analysis

Reliability Analysis

The reliability of every item within the instruments was measured using the Cronbach’s Alpha coefficient. each dimension of the questionnaire was calculated separately to facilitate clear understanding. the reliability analysis is then conducted to derive the consistency of a measuring instrument in measuring whatever concept it's measuring. reliability of measure is an indication of the steadiness and consistency with which the instrument the concept and helps to assess the “goodness” of a measure.

Table 4.3: Reliability Coefficients for Each Variable (N=50)

Variables	No. of Items	Item Deleted	Cronbach's Alpha
Income	4	1	0.680
Taxi Driver's Satisfaction	5	-	0.679
Location	4	1	0.754
Customer	4	1	0.788

* Good Reliability is measured > 0.8

* Acceptable Reliability is measured > 0.6

As rules of thumb, values which were above 0.6 were considered acceptable and 0.8 is the most appropriate and acceptable stated by Pallant (2011). Based on the table appended all variable that addressed within the questionnaire achieved reliability of near 0.8 or above to the actual fact that the items within the questionnaire is reliable because had already been used and tested by other researchers within the same field of study (Judd Cramer, 2016). More or less this result also showed that the questionnaire is understandable and align with things.

4.3.1 Descriptive Statistics for Income

The descriptive statistics were also calculated for each items and variable to investigate their level among the respondents. A Likert Scale is a type of rating scale used to measure attitudes or opinions. With this scale, respondents are asked to rate items on a level of agreement. All variables were measured in 5-point Likert scale with 1 being strongly agree.

Table 4.3.1: Descriptive Statistics for Income

Items	Mean	Standard Deviation
MY INCOME RELATED TO TAXI DEMAND	1.54	0.613
IN MY OPINION, TAXI DRIVER'S INCOME IS HIGHER THAN E HAILING'S DRIVER INCOME	2.46	1.297
I GET TIPS FROM CUSTOMERS	2.30	1.111
MY INCOME COME FROM PEOPLE WHO ALWAYS USING TAXI SERVICES	1.70	0.886

Table 4.3.1 shows the results of the variables that have the highest and the lowest mean with respective standard deviation achieved. INCOME#2 which is ‘In my opinion, taxi driver’s income is higher than E hailing driver’s income has recorded the highest mean value at 2.46 with standard deviation of 1.297. On the other hand, INCOME#1 which is ‘My income related to taxi demand’ appeared to have the lowest mean value of 1.70 with standard deviation of 0.886.

Table 4.3.2: Descriptive Statistics for Taxi Driver's Satisfaction

Items	Mean	Standard Deviation
E HAILING SERVICES SHOULD BE LIMITED	1.64	0.693
AN EXPERIENCE TAXI DRIVER CAN MAKE AN ADEQUATE LIVING	2.24	0.916
TAXI DRIVERS GETTING BETTER REGULATION	1.86	0.639
TAXI SERVICES SHOULD GET MORE EXPOSURE	1.84	0.738
E HAILING IS A THREAT TO TAXI DRIVERS	1.50	0.735

Table 4.3.2 shows the results of the variables that have the highest and the lowest mean with respective standard deviation achieved. TAXIDRIVERSATISFACTION#2 which is 'An experience taxi driver can make an adequate living' have the highest mean score which 2.24 with standard deviation of 0.916. The lowest mean score achieved by TAXIDRIVERSATISFACTION#5 which is 'E hailing is a threat to taxi drivers' got 1.50 with standard deviation of 0.735.

Table 4.3.3: Descriptive Statistics for Location

Item	Mean	Standard Deviation
I AM SATISFIED WITH MY TAXI JOURNEYS EACH DAY	2.24	1.135
I NEED TO WAIT FOR CUSTOMERS AT A PLACE	1.70	0.735
I WORK SIMILAR SHIFT PATTERN EVERY DAY	1.86	0.606
MY TAXI ROUTE IS FLEXIBLE	2.32	0.891

Table 4.3.3 shows the results of the variables that have the highest and the lowest mean with respective standard deviation achieved. Firstly, LOCATION#4 which is ‘My taxi route is flexible’ has the highest mean value at 2.32 with standard deviation of 0.891 while LOCATION#2 which is ‘I need to wait for customers at a place’ shows the lowest mean 1.70 with standard deviation of 0.735.

Table 4.3.4: Descriptive Statistics for Customer

Items	Mean	Standard Deviation
THE CUSTOMERS HAVE ASKED ABOUT THE PRICE DIFFERENT BETWEEN TAXI AND E HAILING	2.48	1.054
CUSTOMER GIVE COMMENT ABOUT TAXI METRE	2.38	1.028
I HAVE TO WAIT FOR A LONG TIME TO GET CUSTOMERS	1.64	1.045
THE CUSTOMERS PREFERS PAYING ONLINE THAN USING CASH	2.82	1.480

Table 4.3.3 shows the results of the variables that have the highest and the lowest mean with respective standard deviation achieved. CUSTOMER#1 which is ‘The customers have asked about the price difference between taxi and E hailing’ have recorded the highest mean value at 2.82 with standard deviation of 1.480. On the contrary, CUSTOMER#3 which is ‘I have to wait for a long time to get customers’ appeared to have the lowest mean value of 1.64 with standard deviation of 1.045.

4.4 Summary

This chapter has included all findings and thoroughly analyses the findings. It will analyze data from sample and explain thoroughly about the findings; descriptive statistical analysis (e.g, mean, median).

Overall, the reliability of every variables within the instruments are at high level according to the Cronbach’s Alpha coefficient. All the data obtained from the

respondents was analyzed using descriptive methods. Firstly, descriptive statistics had been used to interpret data on respondent demographic that included age, gender, marital status and race. Then, the reliability of each variable was analyzed to study the effectiveness of the variables which had shown acceptable and good Cronbach Alpha for this research.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter is about discusses and conclusion in this research. According to (Bron 2008), the conclusion is the part of the research paper that brings everything together in a logical manner. As the last part of a research paper, a conclusion provides a clear interpretation of the results of your research in a way that stresses the significance of your study. A conclusion must be more extensive and encompassing compared to a particular finding and, in the same vein, various findings may be integrated into a single conclusion.

Based on the result obtained in Chapter 4, a discussion of the finding is presented in the chapter 5. All research questions will be answered subsequently and finally the achievement of research objective are determined. According “hmentro.com.my (19 August 2016) “taxi service must upgrade and improve their service because such fare taxi is expensive than e-hailing and also e-hailing passengers easy to get their service and cheaper than taxi. Finally, the contributions of the study are discussed based on theoretical, methodological, practical approaches and end with suggestions for future research.

5.2 Research summary

The Effect of E-Hailing Existence on Taxi Services

The purpose of this study was to show the effect e-hailing on taxi services. It was an experimental research study that looked at how taxi services survived after existence e-hailing. In this research, we use convenience sampling.

A convenience sample is a type of non-probability sampling method where the sample is taken from a group of people easy to contact or to reach. For example, standing at a mall or a grocery store and asking people to answer questions would be an example of a convenience sample.

5.3 Discussion

5.3.1 RECAPITULATION OF THE STUDY

This study aims to understand the effect of e-hailing on taxi services in Shah Alam. There is high need to understand how the e hailing services has spurred the growth of the industry and thus affecting the taxi services in Shah Alam. In order to substantiate the research problem, the dependent variable such as effect on taxi services .The findings of the study will eventually answer the following questions.

1. What is the effect of e-hailing existence on taxi services?
2. What is the most important effect of e-hailing existence on taxi services?

Based on descriptive analysis for INCOME, mean for 'My income related to taxi demand' is 1.54. Next, 'In my opinion, taxi driver's income is higher than E hailing driver's income' is 2.46. Furthermore, 'I get tips from customers' is 2.30. Lastly, 'My income come from people who always using taxi services' is 1.70.

For descriptive analysis TAXI DRIVERS SATISFACTION, mean for 'E hailing services should be limited' is 1.64. Mean for 'An experience taxi driver can make an adequate living' is 2.24. Next, mean for 'Taxi drivers getting better regulation' is 1. 86.

Furthermore, for 'Taxis service should get more exposure' is 1.84. Lastly, for 'E hailing is a threat to taxi drivers' is 1.50.

Next, descriptive analysis for LOCATION, mean for 'I am satisfied with my taxi journeys each day' is 2.24. Mean for 'I need to wait for customers at a place' is 1.70. Moreover, 'I work similar shift pattern everyday' is 1.86. Lastly, 'My taxi route is flexible' is 2.32.

Last but not least, descriptive analysis for CUSTOMER, mean for 'The customers have asked about the price different between taxi and E Hailing' is 2.48. 'Customer give comment about taxi meter' mean is 2.38. Mean for 'I have to wait for a long time to get customers' is 1.64. In addition, 'The customer prefer paying online than using cash' is 2.82.

Mean for descriptive analysis 'INCOME' is 2. Next, descriptive analysis for 'TAXI DRIVER'S SATISFACTION' is 2.27. Furthermore, descriptive analysis for 'LOCATION' is 2.03. Moreover, the descriptive analysis for 'CUSTOMER' is 2.33. In summary, the most important effect based on mean score level is CUSTOMER with 2.33 which at low level of mean score.

5.4 Implications and Recommendations

Implications of the Study.

The finding in this study have contributed to know the effect taxi services of existence e-hailing. This research to know how bad the impact on taxi services. The implications are followed.

This study shows income taxi services decreased. Because many people prefer to use e-hailing, income decreases. As in the study, taxi services have many shortcomings compared to taxis. For example, in terms of fare, ease of getting a taxi, capacity of vehicle.

The finding study shows the number of passengers in taxi services is decreasing. Usually, the current era many people like to use modern technology such as applications as e-hailing use. They can easily get a vehicle or e-hailing without having to leave the house. For example, if using a taxi, customers need to go out to find a taxi or need to call in advance to get taxi services. Usually, those who use taxis are traditional people because they are not good at using technology. This greatly affects the number of passengers who use taxi services

The studies establish the taxi has a limited place to get customers. For taxis, they have a special place to wait for customers, so because of that their customers also become limited.

The satisfaction of taxi drivers is reduced. This is because taxi services have a shortage in terms of capacity, fare, location. The most important is income. The main purpose of taxi drivers is to find income to bear the high cost of living nowadays. If income decreases how to cover the cost of living.

Recommendations for Studies

Recommendations is a suggestion or proposal as to the best course of action, especially one put forward by an authoritative body. The recommendations are as follow:

Firstly, should expand the study to more places. This research we only focused at Shah Alam. We can expand in the state of Selangor because if we take Shah Alam alone sometimes our study is not accurate. the data should be primarily be based on larger sample size to explore and ultimately produce high extensive result.

Next, provide space to ask the opinion of the taxi service driver himself. Taxi drivers can give their own opinion calmly study the effect of the existence of e-hailing on taxi services. In their opinion, the study will be more perfect because they themselves are experiencing this situation.

Other than that, obtain respondents from taxi drivers and e-hailing. If we listen from two parties, our study will be more effective because sometimes listening from one party only information may be less accurate.

Also, increase the number of responded. The more respondents the better the data we obtain and the data as well as the information will be more accurate.

Furthermore, Improve the technology used by taxi services. Taxi services can create special applications for taxi services such as those used by e-hailing. The existence of this application will make it easier for customers to use and obtain taxi services. The customer can choose whichever he prefers to use.

Lastly, do not charge too expensive fares. As we all know, taxi services fares are according to parameters and very expensive compared to e-hailing. In addition, if the customer orders e-hailing, the customer will continue to know the price while the taxi will follow the distance parameters. Of course, customers will choose a cheaper fare.

5.5 Future Research

In order to improve and further develop the findings, various additional researches can be conducted on the effect of e-hailing existence on taxi services at section 13, Shah Alam. This investigation will be useful for taxi services to improve the action plan. In addition to the dependent variables covered in the present research, various other variables like consumer technology anxiety, self efficacy, perceived risk and subjective norm can be also incorporated to make the research more concrete. Further studies can be carried out which can apply different conceptual framework. Therefore, it is suggested that further research should be carried out on a comprehensive basis at micro as well as macro level in order to have more accurate findings.

5.6 Conclusion

As a conclusion, this research is basically a study about the effect of e hailing existence on taxi services in Shah Alam. The demand of traditional taxi services is decrease nowadays with the booming of e hailing and new evolution lifestyles around the country. This caused an uproar among traditional taxi drivers and demanding so that e hailing need to be limited. The increasing demand of e hailing are causing traditional taxi demand decreased. Therefore, the effect of e hailing existence on taxi services was

studied and analyzed to achieve this research's objectives has been discussed in chapter 1 which is to identify the effect of e-hailing existence on taxi services. Income, taxi driver's satisfaction, location and customer are the variables that had been investigated as the effects. Totals number of 50 questionnaires were distributed. The data collected was processed and analyzed using SPSS in which outcome generated included descriptive analysis.

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APPENDIX A:
QUESTIONNAIRE

Survey Questions:

Section A: Demographic Data

1) Gender:

Male

Female

2) Age:

18 - 30 years old

31 - 40 years old

41 - 50 years old

51 - 60 years old

Others:

3) Marital Status:

Single

Married

4) Race:

Malay

Indian

Chinese

Others:

5) How long have you been a taxi driver?

- 1 - 2 years
- 3 - 5 years
- 6 - 8 years
- 9 - 10 years
- More than 10 years

6) Did you know about E-hailing issue?

- Yes
- No

7) Do you agree with E-hailing service?

- Agree
- Disagree
- Neutral

8) Do you think e-hailing services is better than taxi services?

- Yes
- No
- Neutral

Section B: Income

1: Very Satisfied, 2: Satisfied, 3: Neutral, 4: Not Satisfied, 5: Not really satisfied

1) My income is related to taxi demand? <i>Pendapatan saya berkaitan dengan permintaan servis teksi.</i>	1	2	3	4	5
2) In my opinion, taxi driver's income is higher than e hailing driver's income? <i>Pendapatan saya lebih tinggi dari pemandu E-hailing.</i>	1	2	3	4	5
3) Do you get any tips other than your main income from customers? <i>Saya mendapat tip dari pelanggan.</i>	1	2	3	4	5
4) In my opinion, my income usually from customers who usually use taxi services? <i>Pada pendapat saya, pendapatan saya datang daripada pelanggan yang selalu menggunakan servis teksi.</i>	1	2	3	4	5

Section C: Taxi Driver's Satisfaction

1) The number of e hailing services should be limited. <i>Perkhidmatan E-hailing patut dihadkan.</i>	1	2	3	4	5
2) An experienced taxi driver can make an adequate living. <i>Pemandu teksi yang berpengalaman dapat mencari pendapatan yang mencukupi.</i>	1	2	3	4	5
3) Taxi drivers getting better regulations. <i>Peraturan yang lebih baik untuk pemandu teksi.</i>	1	2	3	4	5
4) Taxi services should get more exposure. <i>Servis teksi patut mendapat lebih banyak pendedahan.</i>	1	2	3	4	5
5) E hailing is a threat to taxi drivers. <i>Perkhidmatan E-hailing merupakan ancaman kepada pemandu teksi.</i>	1	2	3	4	5

Section D: Location

1) I am satisfied with taxi journeys completed each day. <i>Saya berpuas hati dengan perjalanan teksi yang dilakukan setiap hari.</i>	1	2	3	4	5
2) I have to wait for customers at one place. <i>Saya perlu menunggu pelanggan pada satu tempat.</i>	1	2	3	4	5
3) I work similar shift pattern every day. <i>Saya melakukan corak perjalanan yang sama setiap hari?</i>	1	2	3	4	5
4) Flexible route for taxi drivers. <i>Laluan teksi yang digunakan oleh anda fleksibel.</i>	1	2	3	4	5

Section E: Customers

<p>1) Customers had asked you about the price different of your taxi and e-hailing services.</p> <p><i>Pelanggan pernah bertanya perbezaan harga antara teksi anda dengan perkhidmatan E-hailing.</i></p>	1	2	3	4	5
<p>1) Customers give a comment about your taxi meter.</p> <p><i>Pelanggan memberi komen berkenaan meter teksi anda?</i></p>	1	2	3	4	5
<p>2) If customer ride taxi, did they prefer online payment rather than cash payment?</p> <p><i>Jika pelanggan menaiki teksi, mereka lebih suka menggunakan pembayaran secara atas talian daripada tunai.</i></p>	1	2	3	4	5
<p>3) Taxi drivers wait too long to get customers.</p> <p><i>Pemandu teksi perlu menunggu dengan lama untuk mendapatkan pelanggan.</i></p>	1	2	3	4	5

APPENDIX B

DESCRIPTIVE STATISTICS

A) INCOME

Descriptive Statistics					
Items	N	Minimum	Maximum	Mean	Standard Deviation
MY INCOME RELATED TO TAXI DEMAND	50	1	5	1.54	0.613
IN MY OPINION, TAXI DRIVER'S INCOME IS HIGHER THAN THE HAILING'S DRIVER INCOME	50	1	5	2.46	1.297
I GET TIPS FROM CUSTOMERS	50	1	5	2.30	1.111
MY INCOME COME FROM PEOPLE WHO ALWAYS USING TAXI SERVICES	50	1	5	1.70	0.886
VALID N (LISTWISE)	50				

B) TAXI DRIVER SATISFACTION

Descriptive Statistics					
Items	N	Minimum	Maximum	Mean	Standard Deviation
E HAILING SERVICES SHOULD BE LIMITED	50	1	5	1.64	0.693
AN EXPERIENCE TAXI DRIVER CAN MAKE AN ADEQUATE LIVING	50	1	5	2.24	0.916
TAXI DRIVERS GETTING BETTER REGULATION	50	1	5	1.86	0.639
TAXI SERVICES SHOULD GET MORE EXPOSURE	50	1	5	1.84	0.738
E HAILING IS A THREAT TO TAXI DRIVERS	50	1	5	1.50	0.735
VALID N (LISTWISE)	50				

C) LOCATION

Descriptive Statistics					
Items	N	Minimum	Maximum	Mean	Standard Deviation
I AM SATISFIED WITH MY TAXI JOURNEYS EACH DAY	50	1	5	2.24	1.135
I NEED TO WAIT FOR CUSTOMERS AT A PLACE	50	1	5	1.70	0.735
I WORK SIMILAR SHIFT PATTERN EVERY DAY	50	1	5	1.86	0.606
MY TAXI ROUTE IS FLEXIBLE	50	1	5	2.32	0.891
VALID N (LISTWISE)	50				

D) CUSTOMER

Descriptive Statistics					
Items	N	Minimum	Maximum	Mean	Standard Deviation
THE CUSTOMERS HAVE ASKED ABOUT THE PRICE DIFFERENT BETWEEN TAXI AND E HAILING	50	1	5	2.48	1.054
CUSTOMER GIVE COMMENT ABOUT TAXI METRE	50	1	5	2.38	1.028
I HAVE TO WAIT FOR A LONG TIME TO GET CUSTOMERS	50	1	5	1.64	1.045
THE CUSTOMERS PREFERS PAYING ONLINE THAN USING CASH	50	1	5	2.82	1.480
VALID N (LISTWISE)	50				

FREQUENCY

Frequencies Statistics				
	N	Mean	Minimum	Maximum
Age	50	2.90	1	5
Gender	50	1.00	1	2
Marital Status	50	1.78	1	2
Race	50	1.34	1	3
Duration Being A Taxi Driver	50	2.50	1	4
E Hailing Issue	50	1.10	1	2
E Hailing Services	50	1.88	1	3
E Hailing Services Better Than Taxi Services	50	1.48	1	3

Frequency Table

A) Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Age	18 - 30	7	14.0	14.0	14.0
	31 - 40	11	22.0	22.0	36.0
	41 - 50	13	26.0	26.0	62.0
	51 - 60	18	36.0	36.0	98.0
	Other	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

B) Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	50	100.0	100.0	100.0

C) Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Marital Status	Single	11	22.0	22.0	22.0
	Married	39	78.0	78.0	100.0
	Total	50	100.0	100.0	

D) Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Race	Malay	36	72.0	72.0	72.0
	Indian	11	22.0	22.0	94.0
	Chinese	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

E) Duration Being A Taxi Driver

		Frequency	Percent	Valid Percent	Cumulative Percent
Duration Being A Taxi Driver	1 - 2 Years	5	10.0	10.0	10.0
	3 - 5 Years	22	44.0	44.0	54.0
	6 - 8 Years	16	32.0	32.0	86.0
	9 - 10 Years	7	14.0	14.0	100.0
	Total	50	100.0	100.0	

F) E Hailing Issue

		Frequency	Percent	Valid Percent	Cumulative Percent
E Hailing Issue	Yes	45	90.0	90.0	90.0
	No	5	10.0	10.0	100.0
	Total	50	100.0	100.0	

G) E Hailing Services

		Frequency	Percent	Valid Percent	Cumulative Percent
E Hailing Services	Yes	21	42.0	42.0	42.0
	Neutral	14	28.0	28.0	70.0
	No	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

H) E Hailing Services Better Than Taxi Services

		Frequency	Percent	Valid Percent	Cumulative Percent
E Hailing Services Better Than Taxi Services	Yes	30	60.0	60.0	60.0
	Neutral	16	32.0	32.0	92.0
	No	4	8.0	8.0	100.0
	Total	50	100.0	100.0	

APPENDIX C
SWOT ANALYSIS

SWOT ANALYSIS FOR TAXI INDUSTRY

STRENGTH	WEAKNESSES
<ul style="list-style-type: none">- Very optimistic outlook on industry growth.- Early mover advantage- Operators have better control over drivers- First into NANO service and it has huge advantages	<ul style="list-style-type: none">- Drivers are the faces of the company and hence their misbehavior directly affects the brand image- While the demand is huge, amount cash burning is huge and monetization is very difficult currently
OPPORTUNITIES	THREATS
<ul style="list-style-type: none">- Growing market- Shifting of consumers towards convenience creates huge demand	<ul style="list-style-type: none">- Competition- Customer loyalty is less in this industry

APPENDIX D
GANTT CHART

List of Activities	DATE (AUGUST 2020 – NOVEMBER 2020)															
	Week															
	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
- Research discussions - Find the current issue for research title	/															
- Research tittle discussions - Journal discussions		/														
- New research the discussions - Literature review table discussions - Proposal format discussions			/													
- Proposal drafts discussions				/												
- Proposal discussions					/											
- Questionnaire discussions - Questions sources						/										
- Questions distributions for pilot test							/									
- Obtaining respondents / Questionnaire distribution - Reliability analysis for pilot test								/								
- Result for reliability analysis of pilot test - Questionnaire distribution for 50 respondents									/							
- Analysis discussions - Format discussions for report - Reliability analysis discussions - Report discussions										/						
- Reliability and frequency analysis for 50 respondents - Report discussions											/					
- Finishing presentation slide												/				

- Finishing the report															
- Business Project Presentation														/	
- Submit final report and logbook															/