

**FACTORS THAT INFLUENCE THE
ACCEPTANCE OF DRONE USAGE IN
LOGISTICS SERVICES**

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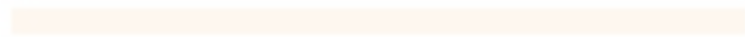
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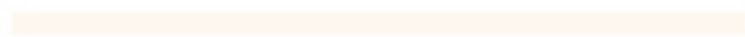
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Factors That Influence the Acceptance of Drone Usage in Logistics Services

By

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Sekian, terima kasih

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ABSTRAK

Kenderaan udara tanpa pemandu (UAV), juga dirujuk sebagai dron, telah mendapat populariti di kawasan ketenteraan dan bukan ketenteraan. Walaupun penggunaan komersil mereka kini sangat sederhana, ia akan meningkat secara berterusan dari semasa ke semasa, terutamanya untuk penghantaran jarak jauh. Oleh itu, untuk meningkatkan pengetahuan, perniagaan dan amalan pengurusan, pemahaman yang lebih mendalam tentang kesediaan pengguna untuk menerima aplikasi teknologi terkini diperlukan. Kajian ini secara khusus bertujuan untuk menyiasat faktor-faktor yang mempengaruhi bagaimana penggunaan dron dalam perkhidmatan logistik diterima. Teori model penerimaan teknologi digunakan dalam penyiasatan (TAM). Ia mengkaji interaksi antara faktor-faktor yang mempengaruhi penerimaan pengguna di kawasan Kuala Lumpur dan persepsi terhadap persepsi risiko, persepsi kemudahan penggunaan, dan pengaruh sosial. Walau bagaimanapun, terdapat beberapa kebimbangan mengenai penggunaan dron dalam perkhidmatan logistik, justeru penyelidikan ini diperlukan untuk mengetahui bagaimana penggunaan dron akan mendapatkan penerimaan pengguna. Soal selidik tinjauan atas talian telah digunakan untuk menjalankan kajian ini. Terdapat 384 responden yang berada dalam kawasan terdekat. Responden akan melengkapkan tinjauan yang akan disediakan oleh penyelidik. Untuk mendapatkan data, kajian ini menggunakan metodologi kuantitatif dan responden diberi akses kepada borang soal selidik dalam talian.

Kata kunci: dron, perkhidmatan logistik, model penerimaan teknologi, penerimaan pengguna, persepsi mudah digunakan, persepsi risiko, pengaruh sosial.

ABSTRACT

Unmanned aerial vehicle (UAV), also referred to as a drone, has gained popularity in both military and non-military areas. Although their commercial use is now very modest, it is projected that it will increase steadily over time, particularly for last-mile delivery. Therefore, to advance knowledge, business, and managerial practice, a deeper understanding of consumers' willingness to accept the most recent technological applications is required. This study specifically aims to look into the factors that influence how drone usage in logistics services is accepted. The technology acceptance model theory is used in the investigation (TAM). It examines the interaction between factors affecting consumer acceptance in the Kuala Lumpur area and perceptions of perceived ease to use, perceived risks and social influence. However, there are a number of concerns with drone use for logistical services, thus this research is necessary to find out how drone use might gain consumer acceptance. The online survey questionnaire was used to carry out this study. There will be 384 respondents in the immediate area. The respondent will complete the survey that will prepare by the research. To obtain data, this study use quantitative methodology and respondents were given access to an online questionnaire.

Keywords: drone, logistic services, technology acceptance factor, consumer acceptance, perceived ease to use, perceived of risks, social influence.

CHAPTER 1

INTRODUCTION

1.0 BACKGROUND

A drone is an unmanned aircraft, the formal names is Unmanned aerial vehicles (UAVs) or unmanned aircraft systems. Unmanned aerial vehicle (UAV), is defined as an aircraft that doesn't need a pilot to be there in person, is another name for drones. A drone, in its simplest form, is a flying robot that may be remotely controlled or fly autonomously using software-controlled flight plans in its embedded systems in conjunction with onboard sensors and a global positioning system (GPS) (Earls, 2021). In order for a drone to take off, fly, and land properly, a combination of hardware and software components are needed. Drones contain rotors or fixed wings, sensors, navigational systems, and gyroscopes for stability, and they are frequently operated by ground control stations. UAVs are frequently divided into civilian and military UAVs. Military drones are employed for reconnaissance missions and carrying out offensive strikes on enemy targets, whereas civilian UAVs are utilized for package deliveries and pleasure (Daley, 2022).

The military was most frequently connected with drones. The more controversial use of them as platforms for weapons, anti-aircraft target practice, and information gathering came first. Drones are being used for a wide range of civil functions, including deliveries, search and rescue, surveillance, traffic monitoring, weather monitoring, battling fires, and even for individual usage in photography and film making. Other than for military and entertainment purposes, drones are used. In fact, drones may be found enhancing the productivity and security of practically every sector imaginable, from medical supply delivery to wildlife conservation. First is, military drones. The military is likely the drone industry's first, most well-known, and most contentious application (Urwin, 2022).

Besides that, self-flying unmanned aerial vehicles (UAVs) that bring food, packages, or

other stuff to your front door are known as delivery drones. These drones are referred to as "last mile" delivery drones since they are used to transport products from local warehouses or merchants. Several large corporations are investigating different delivery drone variants, including Amazon, Walmart, Google, FedEx, UPS, and others. (Urwin, 2022). Drones have shown to be helpful for the agricultural industry as well, providing farmers with a number of strategies to enhance their crops in order to raise output and reduce physical labour. Drones make it easier to conduct field surveys, sow fields, monitor livestock, and calculate agricultural production while also preserving the valuable time of agriculture workers. In addition, drones are also used for outer space, wildlife, and historical conservation, in medicine and for photography (Urwin, 2022).

Drone delivery has advantages and concerns, as seen by the consumers. Drone delivery may be able to meet customers' expectations in terms of speed, flexibility, security, and cost (Joerss et al., 2016). Consumers that care about the environment will find drone delivery appealing because it is more ecologically friendly than vehicle delivery (Rose, 2013). Consumers are concerned about drone delivery about criminals' propensity to use military technology improperly. They are also aware that drones flying over their own real estate property can malfunction and invade people's privacy (Lidynia et al., 2018). As a result, companies that offer drone delivery services must understand how aspects related to the use of drones in logistics services affect the willingness of potential clients.

This study looks at the factors that influence whether or not customers accept drone deliveries. This study presents a theoretical model of the interaction between perceived ease of use, perceived risks, and social influence with consumer acceptability factors on the basis of the technological acceptance model (Davis, 1989). Therefore, through the existence of this objectives, the study can be done accurately to obtain a result and helps to highlight some problem statements.

1.1 PROBLEM STATEMENT

Based on the factors that influence of drone usage in logistics services, the main problem of drone usage is that consumers see the risk of delivering goods via drones being remotely controlled by computers, they are vulnerable to cyber-attacks and this can result in people fearing their privacy due to the possibility of being recorded or invaded (Wu ,Y ; Dai, H.N.; Wang, H.; Choo, K.K.R. 2021). Consumer reactions to drone delivery show that they resist change and the use of new technology because of their strong belief that traditional systems are safer. However, the credibility of a particular brand and consumer trust in it influence the acceptance and use of drones.

Drones can easily be used to invade people's physical privacy. This is a very serious problem that drones can cross geographical boundaries (Bonetto M., Korshunov P., Ramponi G., Ebrahimi T, 2015). According to BBC News (Horsman G. 2016): Drugs, phones and even knives are being smuggled into prisoners in high security prisons without being found on the ground. This is usually accomplished with an octo-copter that can lift 20 pounds (Guérin F., Guinand F., Brethé J.-F., Pelvillain H. 2015). Additionally, such attacks include accidentally or deliberately ramming a drone against a specific individual, or ramming a drone into personal property, which can cause minor to major damage. Another threat comes from small quad-copters such as the DJI Phantom 3, which can reach heights of 1600 feet (488 m) and ranges of 16,000 feet (4800 m) (Afzal U., Mahmood, 2013).

Delivery risk also reflects people's concerns about not getting a package delivered for various reasons, such as an accident, damage, or theft of the drone carrying the package (Choe, J.Y.; Kim, J.J.; Hwang, J, 2021). In addition, it is believed that drones may malfunction, make inaccurate deliveries, or not find a place to land in a residence Therefore, it is possible that drones fitted with data collection instruments including cameras, electronic sensors and infrared scanners will collect personal data including images of people, geo-location data or even electromagnetic signals from mobile phones. This will often be hidden without the individual

realizing they are being monitored.

Finally, people will be at risk because delivery drones will pass over them. Therefore, the people would be afraid of being hit by these drones due to the anticipated enormous quantity of drones. Another common misunderstanding concerning drones is that they are used by hostile countries or terrorist organizations. Such impressions may lead to new disputes or exacerbate already existing ones.

1.2 RESEARCH QUESTIONS

1. What is the relationship between perceived ease to use and consumer acceptance?
2. What is the relationship between perceived risks and consumer acceptance?
3. What is the relationship between social influence and consumer acceptance?

1.3 RESEARCH OBJECTIVES

1. To study the relationship between perceived ease to use and consumer acceptance.
2. To study the relationship between perceived risks and consumer acceptance.
3. To study the relationship between social influence and consumer acceptance.

1.4 SCOPE OF THE STUDY

The public in the vicinity of Kuala Lumpur is the population that was used for this study. The reason is, KL is strategic area to start using autonomous transport technology and a state that is constantly developing, and most of the local populace is made up of professionals, making it possible to conduct the study and data analysis there. KL was also rich in adoptive towards current technology systems. The process questions to gather research input regarding the public's perception factors toward the usage of drones in logistics services, an approach using research objectives and questions was used. A demographic method was used in this study, considering variables like age, gender, race, education level, and income. As a result, this demographic component made it possible to collect data and process it analytically.

1.5 SIGNIFICANT OF THE STUDY

Faster delivery times, lower maintenance costs, and environmental friendliness are just a few advantages that drone delivery has over conventional parcel delivery. Additionally, some parties may use the study's findings to apply and validate the use of drones in logistics services in Malaysia.

i. The Entrepreneur

This study aims to identify the factors that influence drone usage in order to inform the entrepreneur of the many advantages and benefits of using drones in delivery service. The business sector now has more information to help them decide how to improve the logistical services it offers. The results of this study can also help business owners who employ drones for delivery services to understand that perceived ease of use, perceived risks, and social impact are crucial elements that influence consumer acceptance. Additionally, business owners may choose to use drones to simplify the process and raise user satisfaction. Additionally, drones have the power to change businesses and boost productivity. This makes logistic services more manageable, saves time and money, and is thought to make them safe to use. This study can help businesses interested in implementing this technology make decisions. In doing so, it will raise consumer satisfaction.

ii. The Consumers

Consumers can use this information to determine whether they want or not to employ drone delivery services. As a result, it can lower delivery costs, which could have a big impact on adoption of this kind of technology. The customer will also observe that drones have evolved into a cutting-edge technology for package delivery and have shown to be extremely helpful in the context of this study's literature evaluation. Additionally, internet shopping is particularly practical because everything can be managed from home or anywhere else using a smartphone, saving time spent wondering about whether the courier has the package and

delivered it on time. This is because drone usage for delivery was claimed that the services is on time. Furthermore, the use of this technology makes the parcel securer because the drone will deliver the things follow by the location that are already set by the consumers.

iii. The Future Researchers

A new researcher or entrepreneur who is interested in a situation relating to this topic will find this research to be very informative. Since the information linked to the factors influencing technology acceptance, it might be applied in the business environment. This study serves as a fundamental overview of what a research project entails and how it would be carried out. As drone use has become one of the delivery services to lower costs, expect faster delivery times, and bring environmental benefits to the parties who use it, this might be used as a reference for future scholars who want to investigate this topic. Therefore, the upcoming researchers might use these elements as a guide for the upcoming investigations.

1.6 DEFINITION TERMS

Terms	Definition	Sources
Drone	Drones, also known as unmanned aerial vehicles (UAVs), have great potential for delivery of packages. In drone delivery could be quicker, more inexpensive, more ecologically friendly than traditional delivery methods like vehicles..	<i>identifiedtech.com</i>
Logistics Services	Logistics services referred as obtaining, producing, and delivering goods in the appropriate quantities to a final consumer or destination. It comprises the science of organizing, putting into practice, and overseeing processes for the most effective and efficient storage and delivery of commodities. To satisfy and meet client needs, services and related information are transferred through logistics from the source point to the consumer.	<i>cannonhill.net</i>
Technology Acceptance Model	According to the Technology Acceptance Model (TAM; Davis, 1989), perceived usability and ease of use are the two key factors that influence a person's intention to use new technology.	<i>sciencedirect.com</i>
Consumer Acceptance	The extent to which a consumer will use a certain innovation.	<i>Igi-global.com</i>
Social influence	The manner in which people change their conduct in response to social expectations.	<i>Wikipedia.org</i>

1.7 ORGANIZATIONAL OF THE PROPOSAL

1. Chapter 1

In the first chapter, we take a high-level look at the study by providing a description of the context and outlining the primary concerns that led to the conduct of this investigation which is factors that influence the acceptance of drone usage in logistics services. It contains the problem statement, research questions, research objectives, the study's scope, its relevance, the definition of words, the proposal's organization, and a summary of this chapter.

2. Chapter 2

The literature review on introduction, underpinning theory, previous studies, hypothesis statement, conceptual framework, and summary of the factors that influence the acceptance of drone usage in logistics services such as perceived ease to use, perceived risks and social influence are covered in Chapter 2.

3. Chapter 3

This chapter covered the research design, the data collection methods, and the population of the study. This is followed by the sample size, sampling methodologies, the development of the research instrument, and the measurement of the variables. This chapter will conclude with an explanation of the data analysis approach and a summary of its contents.

1.8 SUMMARY

Chapter 1 introduces the purpose of the research project. A brief introduction to the characteristics of a research paper is also provided, along with an explanation of the research project. This chapter is an overview of the research project which is factors that influence the acceptance of drone usage in logistics services. This chapter discuss about the research topic, research questions, research objectives, the range of the study, the significance of the study, the definition of terms, and the structure of the proposal. In the following chapter, we will analyze the previous research regarding our dependent and independent variables and introduce the theories that we will develop to guide our studies.

CHAPTER 2

LITERATURE REVIEW

2.0 INTRODUCTION

In this chapter, researchers identified three factors that influence the consumer acceptance toward usage the drones in logistics services which split into perceived ease to use, perceived risks, and social influence. In addition, this chapter will examine the hypothesis by associating the relationship between the independent variables and dependent variables.

2.1 UNDERPINNING THEORY

Davis (1989a) introduced the two main concepts that proposed the Technology Acceptance Model: Perception of Usefulness (PU) and Perception of Ease of Use (PEOU). PU refers to how much a person believes that employing a given system can improve one's job performance. PEOU, is the degree to which an individual believes in using specific systems free from physical and mental effort. The behavioral intention that results in the intended action is a key component of TAM. Davis put out this model to examine how users interact with cutting-edge technology. An information systems theory that demonstrates how consumers accept and use technology is called the Technology Acceptance Model (TAM) (Moe, 2020). This model demonstrates how a variety of factors affect users' decisions over how and when to adopt new technology when it is provided to them (Moe, 2020).

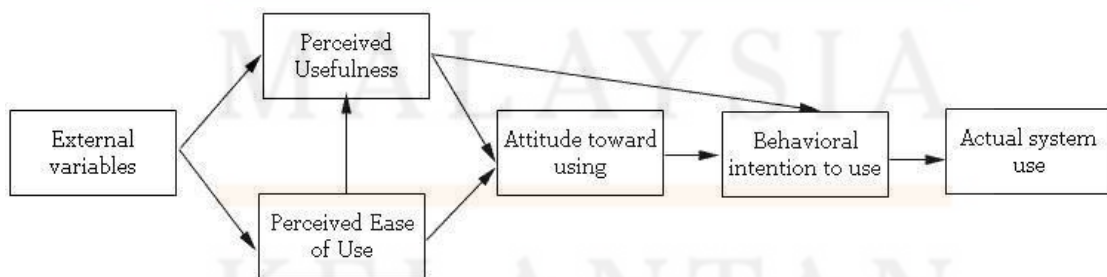


Figure 2.1: Technology Acceptance Model (TAM)

Several external factors were introduced as independent variables to a technological

acceptability model for drone usage (perceived ease to use, perceived risks and social influence).

For the purposes of this study, these external elements will be examined more specifically to determine how they affect the variables that affect drone utilization in logistics services.

Generic models are insufficient to explain how various types of technology are used because the particulars of the technology can be quite significant (Althunibat et al., 2012). A few new variables are added to this model because the use of drones has distinctive characteristics.

2.2 PREVIOUS STUDY

2.2.1 Consumer Acceptance Factors

Consumer acceptance is pivotal for the market success of new services. Consumer acceptance will influence in innovation of service. Without consumer acceptance it will not be work successfully in any innovation (Felch et al., 2019). A significant line of inquiry that emerges from the investigation is consumers' acceptance of the technology's features, including perceived security, perceived cost, perceived risk, and trust. In this area, a set of distinguishing characteristics that customers attach to the new technology converge in order to gain a thorough understanding of how to create a new system to impact consumer perceptions of its usefulness (Pantano & Di Pietro, 2012).

The important aspect that involved in consumer's acceptance of technology- based innovations which concerns users' personal traits, such as skills and abilities. Self-efficacy and behavioral control emerge as elements that can impact customers' decisions to utilize a certain technology. Self-efficacy is the consumer's perception of his or her ability to perform specific behaviors, and it is tightly tied to behavioral control (Shin 2009). Behavioral control has been defined as human control over specific action or environment (Ajzen 2002). It relates to an individual's perception of his or her ability to accomplish a particular behavior. Hence, it is governed by the whole set of accessible control beliefs on the presence of circumstances that can promote or impede performance of the behavior (Pantano & Di Pietro, 2012).

Another important aspect that involved in consumer's acceptance of technology-based innovations which concern environmental psychology. According to Mehrabian and Russell's (1974) approach, all emotional responses to physical and social surroundings can be represented by three dimensions of affect which is pleasure, arousal, and dominance (PAD). The authors hypothesized that any emotional state may be conceptualized as a position on these three dimensions for example, pleasure, arousal, and dominance adequately represent all of the

numerous emotional responses of individuals to their environments. These three components comprise a person's emotions, which in turn affect his or her actions and behaviors (Kulviwat et al., 2007).

The first dimension, pleasure, refers to the extent to which a stimulus elicits a pleasurable reaction from an individual. Positive emotions associated with this dimension include joy, pleasure, and contentment. The second dimension of arousal is the combination of mental and physical activity that an individual experiences in response to a stimulus. Excitement is a significant emotion related with this dimension. The third dimension is dominance, which relates to the degree to which a person feels in control of a stimulus or is influenced by it. Dominance can be positive or negative. This will have an impact on the consumer's uptake of technical improvements (Kulviwat et al., 2007).

Lastly, important aspect that involved in consumer's acceptance of technology-based innovations which concern diffusion of innovations. According to the previous study (Chen et al., 2022), the time it takes for people to accept a new technology or service are varies. Based on theory Rogers' Innovation Diffusion (1962), it originated in the field of communication, where it was used to describe the spread of an innovation throughout a community or social system. As a result of this propagation, portions of a social system adopt a new concept, behavior, or innovation. The key to convincing a person to adopt a new idea, activity, or product is for them to perceive it as new or distinct. When telling an innovation of idea to a specific demographic, it is crucial to understand the features of that group that may either encourage or discourage adoption (Aizstrauta et al., 2015).

2.2.2 Perceived Ease To Use

Perceived ease of use reiterates a fundamental principle of TAM, according to which people have a strong propensity to accept new technologies when they find them to be simple to use (e.g., Dwivedi et al. 2019, Legris et al. 2003, Tarhini et al 2015). Perceived ease of use, according to Indarsin and Ali (2017), is the degree to which a person believes that using technology will lessen excessive effort. People will use an information system if they believe it is easy to use (Hartono, 2010).

According to a previous study (Goon Tuck Lee, 2004), interface characteristics and individual differences are the main determinants of perceived ease to use. Interface characteristics refers to the interaction between the system and the users. Interface characteristics were discovered to be important predictors of perceived ease to use (Hong, Thong and Tam, 2002). Then, the individual differences, which refer to how much and what kind of variations there are between people when it comes to some of the most important psychological traits, personal characteristics, cognitive and emotional components. It has been established that one of the most significant variables influencing technological acceptability is individual differences. However, theories and methods created for older generations of information systems may not adequately explain the implications of individual differences on the usage of these newer technologies (Chen, Czerwinski & Macredie, 2000).

There are three indicators that are used to assess perceived ease to use, which is perception of convenience, perception of compatibility and perception complexity. These three indicators are modifications of earlier studies (Leon, 2018). According to Roy et al. (2018), convenience is the perception of time and effort saved during the consumption of a good or service, as well as the availability of time, place, acquisition, and execution. Modern technology, including drones, have made portability and quick accessibility possible. Liu and Tai (2016) examined how consumers' views of convenience and openness to experimenting with new

technology related to one another. Then, the perception of compatibility. Compatibility is consumer perception of how well innovations meet their wants and preferences. (Kang et al., 2015). When consumers assess new technologies, compatibility is crucial because it can influence their perception of how easy to use the technology will be. According to previous research, compatibility and consumers' adoption of new technology are positively correlated (Min, So and Jeong, 2019).

The third is, the perception of complexity. Complexity is the perceived challenge faced by end users in understanding and implementing technological breakthroughs (Lou and Li, 2017). In generally, innovations that are simpler for people to use will spread faster (Adeola A. Ayodele, Chibuiké B.Nwatu, Olise, Moses Chigbata, 2020). The adoption of drones for delivery would be influenced by a more widespread impression of their use as being less complex (Yoo, W. Yu, E. Jung, J (2018). Customers should be more accepting if they believe that drone delivery is an easy way to receive goods and is less complicated to utilize. A prior study found that users who had never used drone delivery services previously didn't seem to care about perceived ease of use. Experience is one of the best measures of how usable a technology is thought to be (Abdullah et al., 2016). In conclusion, when people see technology as being easy to use, they adopt it with greater competence and confidence (self-efficacy).

2.2.3 Perceived Risk

There are many studies on perceived risk in the previous literature, some of which have been published. Peter and Ryan (1976, cited in Lee 2009) defined perceived risk as the expected loss, and Featherman and Pavlou (2003) defined perceived risk as an attempt to achieve a desired goal it can be defined as the potential loss of. Perceived risk has been used in a systematic way to try to explain and analyze consumer behavior in the face of new technologies, for example their anxiety in the face of unpleasant situations they may experience when they buy a new product or acquire a new service, which is generally found in emerging field (Hwang, J, Kim, H, Kim, J.J, Kim I, 2021). As reported by Matthew et al (2021) due to ambiguity and lack of trust, consumers have a new perception of technology-induced risks to products and services. Three main risks when delivering goods using drones including performance risk, delivery risk and privacy risk (Mathew, A.O. Jha, A.N. Lingappa, A.K. Sinha, P, 2021).

Performance risk can be defined as the likelihood that a product will not meet its design criteria (Grewal, Gotlieb, & Marmorstein, 1994). Featherman and Pavlou (2003) tested performance risk in a study of consumer adaptation to e-service providers. Lee (2009), found that performance risk influences the adaptation process. Also, Yoo et al. (2018), showed that performance risks adversely affected consumer attitudes towards this service. Performance risk reflecting the consumer's concern about the losses incurred. Especially at the time of COVID-19 services are not working as expected. Therefore, customers cannot make accurate performance decisions before using the service (Hwang, J, Choe J.Y.J, 2019).

The risk consumers perceive if their purchases are not delivered to their address can be defined as 'delivery risk' (Lopez-Nicolas and Molina-Castillo, 2008). Yu et al. (2018) tested delivery risk in cargo transport by drone vehicles. Lopez- Nicolas and Molina-Castillo (2008) also investigated shipping risk in a study of consumers shopping on e-commerce sites. Delivery risk also reflects people's concerns that their packages will not be delivered for a variety of

reasons, including accident, damage or theft of cargo-carrying drones (Choe, J.Y, Kim, J.J, Hwang, J.2021) Additionally, drones are believed to malfunction, make inaccurate deliveries, or fail to find apartment landing pads (Zhu. X, Pasch, Bergstrom, 2020).

Lastly is privacy risk can be defined as the disclosure or dissemination of sensitive information beyond the consumer's control, or loss of privacy (Featherman and Pavlou, 2003). Delivery of online orders by drone carries risks such as invasion of home privacy by malicious individuals (Soffronoff et al. 2016). Privacy risks relate to how much people value the confidentiality of their information and directly influence technology adoption. In the context of drone delivery, data protection is a concern given the sensitivity of information that may be collected (Leon, S. Chen, C. Ratcliffe, A, 2021). This risk is related to the feeling of anxiety individuals experience when asked to provide personal information such as credit card numbers, addresses, and phone numbers (Hwang, J. Choe, J.Y. 2019).

In conclusion, the result obtained by previous study showed that performance risk has a significant correlation with attitude towards drone delivery, which is the strongest relationship in the model (Valencia-Arias, A.; Rodriguez-Correa, P.A; Patino-Vanegas, J.C; Benjumea-Arias, M.; De La Cruz-Vargas, J.; Moreno- Lopez, G., 2022). Yoo et al., (2018), found that in a developed country, performance risks and privacy risk were significant predictors of attitude towards drone.

2.2.4 Social Influence

According to (Roguska, 2021) Social influence is any alteration in behavior, emotion, or thought that another person causes, even if that other person is just envisioned, anticipated, or indicated. It also encompasses the interpersonal processes that result in modifications to behavior, emotion, or thought. It concerns, in essence, how people alter their opinions. Minority influence and majority influence (compliance) are examples of social influence. (Taylor, 2022). A larger group can have an impact on a single person or small group through majority influence. As psychology concentrates on the individual, the majority of social influence studies in psychology deal with majority influence (Maness, 2020). An individual or smaller group influencing a bigger group is known as minority influence. Large-scale societal change is more of a sociological concern, despite the fact that it has been explored in psychology (Lee & Chung, 2022).

Besides that, the three steps Kelman identifies for social influence are internalization, identification, and obedience. Any of these three events could happen when a group puts pressure on a person (Francis Ltd., 2022). The three types represent a spectrum of how much a person psychologically and behaviorally resembles a group. At the lowest level, an individual is completely cut off from a group, and at the highest level, they are fully united with a group (Kelly, 2021). Compliance is the social influence that has the least power. This is what is meant when a straightforward request is fulfilled. In general, people hold different beliefs in private while conforming to social norms in public. This type of social influence typically ceases after the person is no longer being watched over, and the behavior returns to normal (Lin, Qu, & Telzer, 2018).

In addition, being identified is Because they appreciate the group and want to belong to it, a person identifies with the group or members inside it. Identification is what this is, and it's the medium level of social impact (Kaur, 2022). The individual might not share all of the

group's beliefs or modes of thought, even if they alter portions of their conduct in public and private. Identification has a significant impact on socialization, peer pressure, and the desire to emulate role models (Lim, 2022). Leaders or celebrities rely on identification that might not love every aspect of a specific footballer's life or temperament but hang their poster on your wall because you admire them (Lee & Chung, 2001). Internalization is a form of conformity that is extremely excessive. In this instance, the individual has verbally and non verbally fully embraced the group's expectations. This alteration exists permanently, even when the group is not present. Internalization fundamentally results in new behavior. The person's ideas and deeds now fully reflect their assimilation into the group (Durant,2021).

Therefore, many social influences processes entail attempting to persuade others to accept our point of view. We are far more inclined to agree with something and become instantly engrossed in the concept when we believe we can relate to it (Scheinfeld, 2022). Therefore, when examining other points of view, it's crucial to have an open mind and avoid falling for seductive tricks. Cultural differences may affect societal influences differently, but it's still important to be conscious of them in our daily lives (Voorhees, 2022). Unquestionably, the emergence of new and emerging technologies has significant effects on the economy, society, and individuals. It is our use of technology, not the technology itself, that shapes our perception and, in turn, how we act. As a result, drones are becoming more and more significant in society, technology, and science. They have created brand-new, original applications and service platforms with a market focus, which has impacted the society views this technology and the related business models.

2.3 HYPOTHESIS

To examine the relationship between the dependent variable and the independent variables, three hypotheses have been generated for this study:

- H1:** There is a significant relationship between perceived ease to use and consumer acceptance factors.
- H2:** There is a significant relationship between perceived risks and consumer acceptance factors.
- H3:** There is a significant relationship between social influence and consumer acceptance factors.

2.4 THEORETICAL FRAMEWORK

Figure 2.1 shows the conceptual framework of this study related to Factors That Influence the Acceptance of Drone Usage in Logistics Services. The relationship between 3 independent variables (IV) the perceived ease to use, the perceived risks, and the social influence with the dependent variable (DV) which is consumer acceptance factors will be discussed.

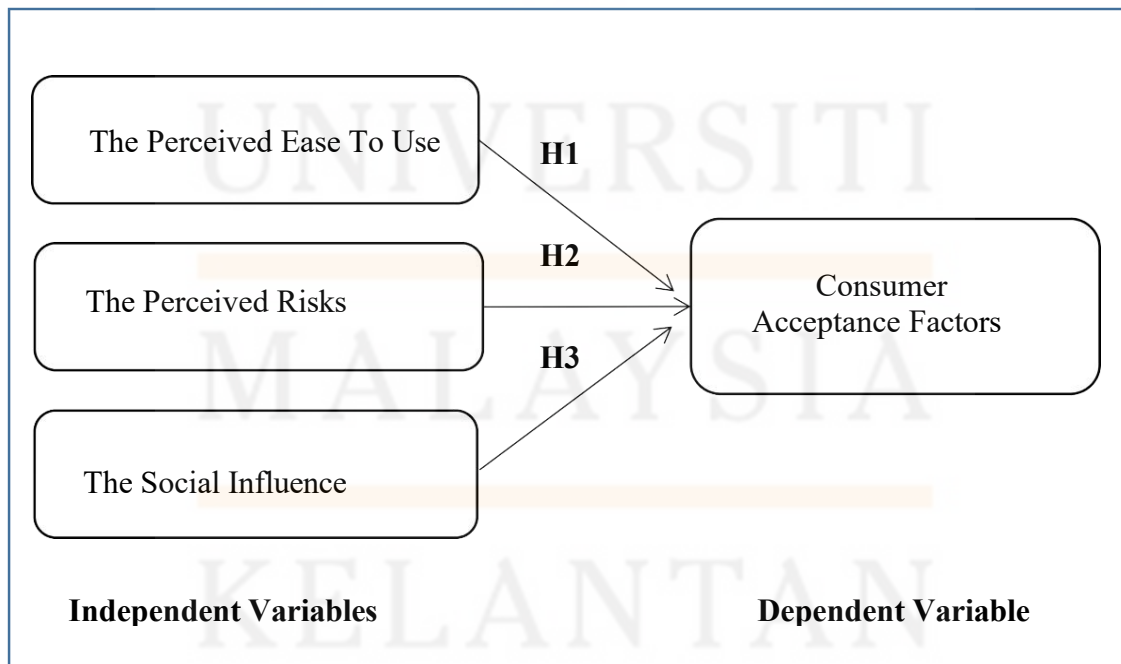


Figure 2.2: Research Theoretical Framework

2.5 SUMMARY

In conclusion, this chapter had examined the literature review pertaining to the earlier discussed components. The proposed theoretical framework was created using the literature review as a guide. The three independent variables in this study were perceived ease to use, perceived risks, and social influence. The researchers tended to analyze the relationship between all of the dependent variable's intentions consumer acceptance characteristics and the three independent variables. These three independent variables, which affect the intention of consumer acceptance factors, were agreed upon by the researchers. Methods for finding the results of this studies are detailed in the chapter 3.

CHAPTER 3

RESEARCH METHODS

3.0 INTRODUCTION

After reviewing earlier research on the subjects covered in Chapter 2, the research approach that will be used in the study was explained in this chapter. This chapter will mention every component involved in conducting this study, which is from research design, data collection methods, study population, sample size, sampling techniques, research instrument development, measurement of the variables and data analysis procedure. Then, it will follow by the summary of this chapter.

3.1 RESEARCH DESIGN

In conducting this study, the researcher has used the Quantitative Method as the empirical assessment consists of numerical measurement and analysis. In addition, this study uses descriptive analysis to survey questionnaire that will be conducted based on objectives of the study. The primary data were collected through online questionnaires. The data collected will assist the researchers in identifying the relationship between perceived ease to use, perceived risks and social influence with the consumer acceptance factors through this research design which involve the process of developing and organizing research designs. In conducting this questionnaire, demographic factors are used. For example, the focus the group or groups to whom the questionnaire is addressed are aged 18 to 50 years and above. This is because it was found that this group or age group uses a drone service system that will be implemented for online purchases that facilitate the delivery of their goods. In addition, the descriptive approach is also used to strengthen the results of the ongoing study with the Independent Variable (IV) and Dependent Variable (DV) approaches.

3.2 DATA COLLECTING METHODS

The method used to collect data for the specified variables in a methodical way is

known as the data collection method. Primary data and secondary data are the two main categories into which data can be divided. These research will make use of primary data, which will be gathered through a self-administered questionnaire. Based on the reference from "Nayak and Narayan, 2019", self-administered questionnaires can be administered and managed electronically using the internet. This study will take advantage of the free Google Forms for questionnaire administration. This provides an opportunity to temporarily reduce costs while at the same time improving efficiency and data reliability. Google Forms will be used to create an online questionnaire that is automatically hosted via a web address or Uniform Resource Locator (URL). The questionnaire method administered electronically will use mediums such as WhatsApp, Instagram, Facebook, and e-mail to be selected to obtain primary data in this.

3.3 STUDY POPULATIONS

Based on the Reference Definition of Population for Comparative Studies in Education, January 2016, it was states that population refers to a group or groups that are in place based on demographics. The population can be divided based on age, race, religion, occupation, and income based on the same characteristics. Through this situation, any individual or group with similar characteristics can also be referred to as a population. This study has specialized in several communities or residents in Kuala Lumpur to answer questionnaires submitted to obtain results and research results based on the independent variable (IV) submitted. Based on references from the official website of the Department of Statistics Malaysia, it has been stated that the total population in Kuala Lumpur is 32.7 million people. Therefore, it will be easier for the researcher to distribute and collect the data.

3.4 SAMPLE SIZE

Related to Will Kenton (2021), a sample is a subset of a bigger group that is smaller and easier to handle. It is a subset of a larger population having comparable characteristics.

Samples are utilized when the population is too large for the test to include all prospective members or observations. Instead of favoring a single characteristic, a sample should represent the entire population. When a smaller sample size represents the entire population, it is possible to achieve solid results while saving time.

Based on this research, the respondents that are from the public which aged 18 to 50 in the study's scope, specifically the general population in Kuala Lumpur. The researcher has also made use of the table that Krejcie and Morgan (1970) created to conduct this investigation. The purpose of using this table is to figure out the total sample size. Since the total population of Kuala Lumpur is 1,954,477 (Department of Statistics Malaysia Official Portal, 2022), the researcher utilized a sample size of 1,000,000 persons, with a total sample size of 384 respondents. Krejcie and Morgan's (1970) sample sizes are shown at Table 3.1 below:

Table 3.1: Table to determine the sample size of a known population

SOURCE: *Krejcie and Morgan (1970)*

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

3.5 SAMPLING TECHNIQUES

Based on this research, there are two types of sampling techniques: probability sampling and non-probability sampling. Convenience sampling, quota sampling, snowball sampling, and judgemental sampling are some of the non-probability sampling techniques used in this study. Due to time and financial constraints as well as the huge sample size, convenience sampling will be employed in this study as it is the most appropriate technique. From UMK City Campus students, the researchers will look for Kuala Lumpur residents and provide them an online questionnaire to complete. Finding the intended respondents is made easier for the researchers by the convenience sampling technique used. In general, respondents made their decisions based on their chance location and timing.

3.6 RESEARCH INSTRUMENT DEVELOPMENT

The research instrument is a good way to collect and analyze data from the people who are the focus of the research. It provides the usual survey for social and behavioral data with research questions and responses from a population sample. From the responses provided, statistical data might be retrieved for the purpose of research (A Definition of Research Instruments and Their Purpose in Obtaining Data from Research Subjects, 2021). We used an online questionnaire to collect data as one of the tools for the research.

According to the results of this research, a self-administered questionnaire was the most effective research tool. This is because the self-administered questionnaire has a structured form containing both closed and open-ended items. In this study, the survey will be in the form of a closed questionnaire, which is easier to turn into a statistical form for later analysis using the Statistical Package for Social Science (SPSS). In the meantime, the questionnaire for this study consists of five sections, including demographic questions, general questions regarding the independent variable, and questions related to consumer acceptance factors towards drone usage in logistics services.

Table 3.2: Table of Questionnaire

Section	Questionnaire	Number
A	Demographic	5
B (Independent Variable)	The Perceived Ease to Use	5
C (Independent Variable)	The Perceived Risks	5
D (Independent Variable)	The Social Influence	5
E (Dependent Variable)	Consumer Acceptance Factor	5

Table 3.3: Table Likert Scale

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

All the sections of this questionnaire from Section B through Section E use a 5-point Likert scale to gauge how strongly respondents agree or disagree with their answer. This is because it will assess by using 5 points Likert scale (1=strongly disagree until 5=strongly agree).

3.7 MEASUREMENT OF THE STUDY

In general, there are four types of measurement scales that are commonly used: nominal, ordinal, interval, and ratio. This study will use nominal, ordinal and interval measurement scales (Likert-scale) to measure the study questionnaire. The questionnaires were divided into six sections: Section A, contained the demographic information of the respondents; Section B, C, and D contained the questions for the independent variable and Section E contained the questions for the dependent variable.

3.7.1 Nominal Scale

A nominal scale is used for qualitative variables. A qualitative variable is a research procedure that produces data that can be observed (Lexy 2007). In this context, the numbers are solely employed to classify or identify items. Responses on a nominal scale are simply named or categorized. With through the qualitative variables can further support the findings of the study from the distribution of questionnaire which is a quantitative method. Nominal scale can be classified in form of categories, names, or label. Nominal data is a form of category that cannot be arranged in order such as gender (male; female). The nominal scale is use in questionnaires made for the section A question to calculate each respondent's demographic profile. In order to analyze the target respondents, gender, age, race, occupation, education level and income are all quantified in a nominal scale based on the questionnaires.

3.7.2 Ordinal Scale

An ordinal variable is a kind of measuring variable used in quantitative variables that accepts values in a certain order or rank. A quantitative variable is research that emphasizes objective and controlled phenomena through data collection and analysis (Nana, 2005, Chua, 2006, Fraenkel 2007). Ordinal scale is actually same as nominal scale. The different is that ordinal scale can be sorted in order. Survey research is to collect information by asking a set of questions to a sample of residents around KL. This method uses social media assistance to

collect data. The ordinal scale is use in questionnaires made for the section B, C, D and E. The Likert scale is used to rate the satisfaction of the items on ordinal variables based on questionnaires. A five-point Likert scale is used to allow people to express how strongly they agree or disagree with a specific statement. The strength/intensity of an attitude is assumed to be linear on a Likert scale. To determine how strongly the assertions agree or disagree, a 5-point Likert scale is used: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). Due to this, each item in sections B, C, D, and E of this questionnaire was evaluated using the Likert scale.

3.8 PROCEDURE FOR DATA ANALYSIS

After collecting the data, the quantitative data will be converted and transformed into an informative form using several data analysis techniques. Statistical Package for Social Science (SPSS) will be used in this research to analyze and interpret the data. This technique is used to analyze, customize, and generate distinctive patterns between various data variables more efficiently and effectively. Therefore, the types of data analysis methods that will be used in this study include pilot test, reliability analysis, descriptive analysis, multiple linear regressions, and correlation analysis.

3.8.1 Pilot Test

Before the main study is conducted, a small-scale study called a pilot test is conducted utilizing 30 from the study population. A pilot test is used to determine the reliability value of the item or construct and to give researchers the chance to identify any persistently troublesome items. If there is a problem with numerous elements that need to be repeated, the pilot test must be conducted more than once.

3.8.2 Reliability Analysis

Reliability analysis will be used to study the properties of measurement scales and the item that compose the scales. The reliability analysis procedure calculates a few commonly used measures of scale reliability and provides information about the relationships between individual items in the scales. The model of reliability that will be used is Alpha (Cronbach). This model is a model of internal consistency, based on the average inter item correlation. The Cronbach's Alpha will be used to see if the multiple-question Likert scales survey are reliable. These questions measure latent unobservable variables. These are very difficult to measure in real life, so this model will let the researchers know how closely related a set of test items are as a group. With using the rule of thumb for the result, a score of more than 0.7 is usually okay.

Table 3.4: Rules of Thumb about Cronbach's Alpha

Cronbach's Alpha	Internal Consistency
$\alpha > 0.9$	Excellent
$\alpha > 0.8$	Good
$\alpha > 0.7$	Acceptable
$\alpha > 0.6$	Questionable
$\alpha > 0.5$	Poor
$\alpha > 0.4$	Unacceptable

3.8.3 Descriptive Analysis

The information from the variables in sections A, B, C, D, and E will be analysed using a descriptive analysis. Measures of frequency will be employed as the type of descriptive analysis in section A. Knowing how frequently a specific event is likely to occur is crucial. Demographic characteristics like gender, age, and even education is typically represented by percentages and frequencies. It was useful in the questionnaire's Section A, which required respondents to submit demographic data. Therefore, by assessing utilizing this technique, the data may be made much more accessible. The analysis of sections B, C, D, and E will next be conducted using the Central Tendency measurements. Three averages are used to measure central tendency (mean, median and mode). Consider about a survey where 300 people's weights are to be recorded. The mean average would be a great descriptive statistic to use in this situation to measure mid-values.

3.8.4 Normality Test

This findings of the study will be used to determine if the data set is well represented by the normal distribution and to determine the likelihood that random variables are responsible for the normally distributed data set's distribution. To check whether sample data in some receptions were drawn from populations with a normal distribution, normality analysis will be employed in the interim. As a result, this study will check the data's normality using the

Shapiro-Wilk test and the Kolmogorov-Smirnov test method.

3.8.5 Correlation Analysis

For numerical variables in this investigation, the Correlation coefficient analysis will be used. A number between -1 and 1 is assigned, with 0 denoting no correlation, 1 denoting total positive correlation, and -1 denoting total negative correlation. A descriptive statistic, such as the Pearson correlation coefficient, summaries the features of a datasets. The degree and direction of the linear relationship between the quantitative variables are specifically described. Although the relationship strength is interpreted differently among disciplines, the following table provides some broad guidelines:

Table 3.5: Rule of Thumb for Interpreting the Size of a Correlation Coefficient

Size of Correlation	Interpretation
.90 to 1.00 (-.90 to -1.00)	Very high positive (negative) correlation
.70 to .90 (-.70 to -.90)	High positive (negative) correlation
.50 to .70 (-.50 to -.70)	Moderate positive (negative) correlation
.30 to .50 (-.30 to -.50)	Low positive (negative) correlation
.00 to .30 (.00 to -.30)	negligible correlation

3.9 SUMMARY

This chapter has described the detail of the methodologies such as research design, data collection, population, sample size, sampling techniques, research instrument and data analysis method that will be applied in this study. This chapter also stated that the data obtained through the questionnaire from the respondents will be studied and implemented for the next chapter.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.0 INTRODUCTION

This chapter examines the outcomes of the data analysis methods described in the preceding chapter. The Statistical Package for Social Science (SPSS) is the name of the analysis software we utilized on the data we obtained. Data from Sections A were analyzed using frequency analysis and section B, C, D, and E were analyses using the Descriptive Analysis method. Then, the reliability analysis was analyzed using the Cronbach's Alpha approach. Normality test also used to determines whether a sample is regularly distributed or not with depending on its significance value. For the significant relationship between the consumer acceptance factor and perceived ease of use, perceived risks, and social influence was measured using Pearson's Correlation. Lastly is the summary of hypothesis testing.



4.1 DEMOGRAPHIC PROFILE OF RESPONDENTS

The information from the variables in sections A have been analyzed using a descriptive analysis. Measures of frequency have been employed as the type of descriptive analysis in section A. Demographic characteristics like gender, age, academic qualification, race, occupation, monthly income and the other questions are represented by percentages and frequencies.

1. GENDER/JANTINA
385 responses

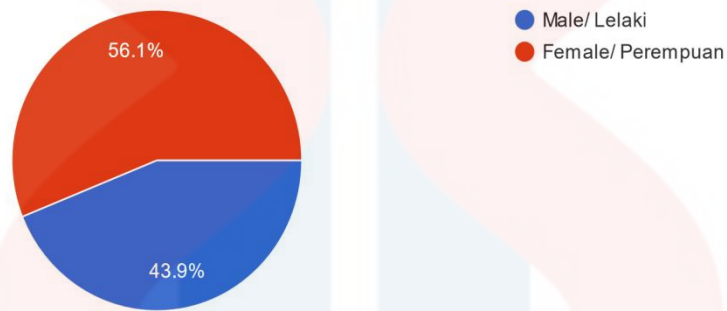


Figure 4.1: Gender

Table 4.1: Gender

Gender	Frequency (N = 384)	Percentage (%)
Male	169	44.0
Female	215	56.0
Total	384	100

Figure and Table 4.1 shows the gender among the 384 participants in this study. In this survey, female respondents filled out the questionnaire with a frequency of 56.0%, or 215 respondents, while male respondents filled out the remaining 44.0%, or 169 respondents, of the questionnaire.

2. AGE/UMUR

385 responses

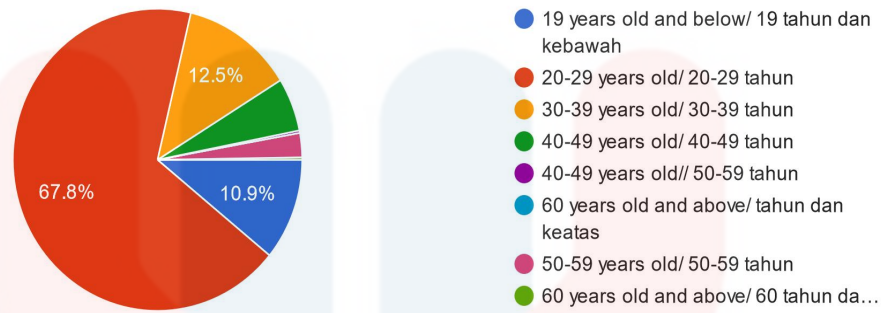


Figure 4.2 : Age

Table 4.2: Age

Age	Frequency (N = 384)	Percentage (%)
19 years old and below	42	10.9
20 - 29 years old	260	67.7
30 - 39 years old	48	12.5
40 - 49 years old	22	5.7
50 - 59 years old	11	2.9
60 years old and above	1	0.3
Total	384	100

The frequency and percentage of respondents who participated in this survey are shown in Table and Figure 4.2. The level of age 20-29-year-old make up the majority of respondents (67.7%, or 260 respondents), followed by the age of 30-39-year-old at 12.5% or 48 respondents, and those aged 19 and below at 10.9%, or 42 respondents. The remaining were 5.7% or 22 respondents at age 40–49 and 2.9% or 11 respondents at age 50–59. The lowest is 0.3% with only 3 frequencies at the age of 60 years and above.

3. ACADEMIC QUALIFICATION/ KELAYAKAN AKADEMIK

385 responses

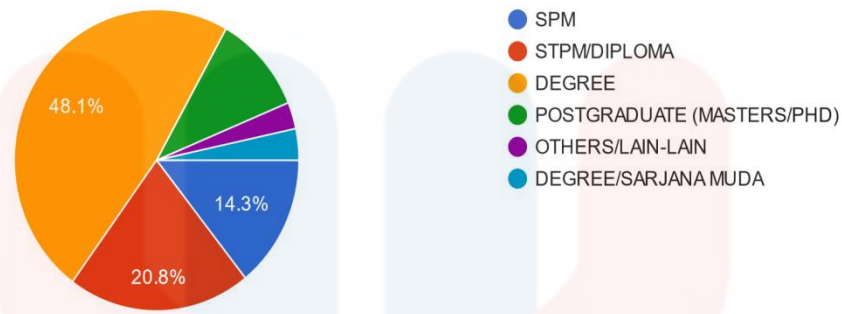


Figure 4.3: Academic Qualification

Table 4.3: Academic Qualification

Academic Qualification	Frequency (N = 384)	Percentage (%)
SPM	55	14.3
STPM/Diploma	80	20.8
Degree	197	51.3
Postgraduate (Master/Phd)	41	10.7
Others	11	2.9
Total	384	100

The frequency and percentage of respondents who took part in this survey with their academic qualifications are shown in Figure and Table 4.3 above. 51.3% or 197 respondents, of those who responded to the survey had degree-level qualifications. The STPM/Diploma level comes with 20.8% or 80 respondents, while the SPM level comes with 14.3% or 55 respondents. The remaining respondents with 10.7% or 41 frequency are postgraduate students (Master's/Ph.D.), while the others of academic qualifications respondents at 2.9%, with a frequency of 11.

4. RACE/BANGSA

385 responses

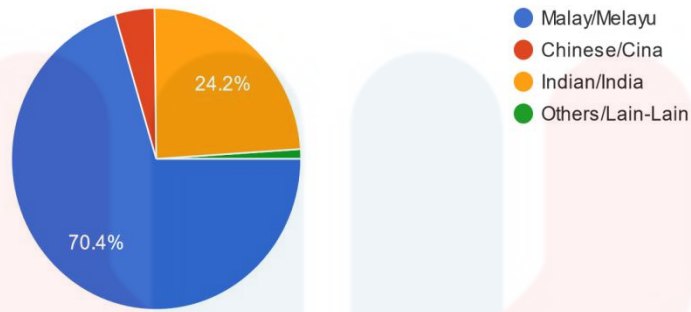


Figure 4.4: Race

Table 4.4 : Race

Races	Frequency (N = 384)	Percentage (%)
Malay	270	70.3
Chinese	18	4.7
Indian	93	24.2
Others	3	0.8
Total	384	100

Figure and Table 4.4 shows the race of the respondents who answered the questionnaire. As much as 70.3% or a frequency of 270 consisted of the Malay race. Followed by Indians with 24.2% or 93 respondents. Next is the respondents from Chinese race with 4.7% or 18 respondents and other races are at 0.8% or with 3 respondents.

5. OCCUPATION/PEKERJAAN

385 responses

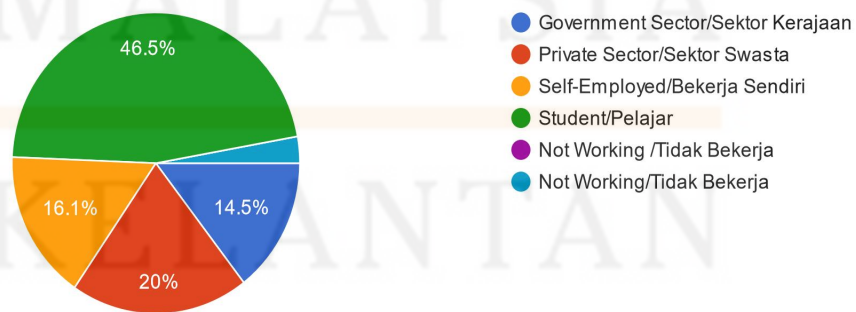


Figure 4.5 : Occupation

Table 4.5: Occupation

Occupation	Frequency (N = 384)	Percentage (%)
Government Sector	56	14.6
Private Sector	77	20.1
Self-Employed	62	16.1
Student	178	46.4
Not Working	11	2.9
Total	384	100

Figure and Table 4.5 shows the percentage and frequency of the respondents' occupations who took part in this survey. Students made up the majority of survey respondents with 46.4% or 178 frequency. Following occupation in the private sector, which had 20.1% of respondents (N=77), then those who self-employment, which had 16.1% of respondents (N=62). Next, the government sector occupation came with 14.6% or 56 of the respondents. With 2.9% or 11 respondents, the few respondents are individuals who are not employed.

6. MONTHLY INCOME/PENDAPATAN BULANAN

385 responses

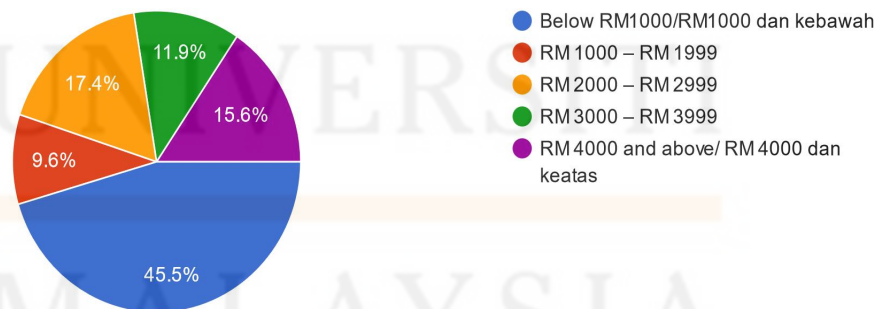


Figure 4.6: Monthly Income

Table 4.6: Monthly Income

Monthly Income	Frequency N = 384	Percentage (%)
Below RM1000	174	45.3
RM1000-RM1999	37	9.6

RM2000-RM2999	67	17.4
RM3000-RM3999	46	12.0
RM4000 and above	60	15.6
Total	384	100

The frequency and percentage of the respondent's monthly income are shown in the Figure and Table above. The frequency of 174 or 45.3% of those who responded to the survey having a monthly income of below RM1000. Following that are respondents with a monthly income of RM4000 and above with 15.6% (N=60), RM2000-RM2999 with 17.4% (N=67), and RM3000-RM3999 with 12.0% (N=46). Only 37 with 9.6% of those whose monthly income was between RM1000 and RM1999 responded.

7. How many times per month do you shop online ? / Berapa kali sebulan anda membeli-belah dalam talian ?

385 responses

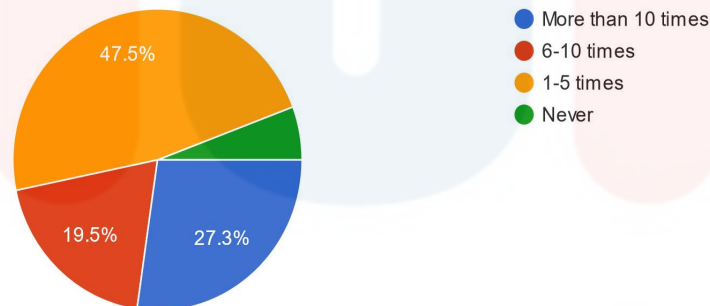


Figure 4.7: “How many times per month do you shop online?”

Table 4.7: “How many times per month do you shop online?”

How many times per month do you shop online?	Frequency N = 384	Percentage (%)
More than 10 times	105	27.3
6-10 times	74	19.3
1-5 times	183	47.7
Total	384	100

The Figure and Table 4.7 above shows that the majority with 47.7% or frequency at 183 respondents is only 1-5 times shop online per month. Then, there are 27.3% or 105 respondents

are more than 10 times shop online per month and 19.3% or 74 respondents from shop online per month with 6-10 times.

8. Do you have access to reliable and timely transportation ? / Adakah anda mempunyai akses kepada pengangkutan yang boleh dipercayai dan tepat pada masanya?

385 responses

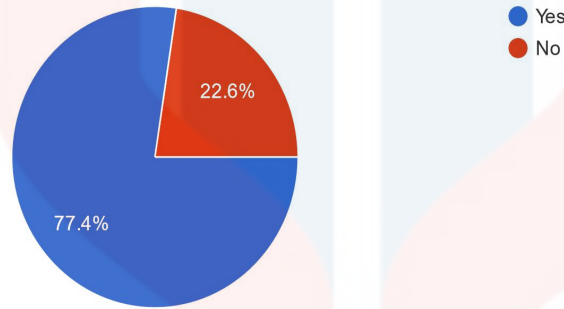


Figure 4.8: “Do you have access to reliable and timely transportation?”

Table 4.8: “Do you have access to reliable and timely transportation?”

Do You Have Access to Reliable and Timely Transportation?	Frequency N = 384	Percentage (%)
Yes	298	77.6
No	86	22.4
Total	384	100

There is 77.6% or the frequency at 298 respondents’ response “Yes” to the question of “do you have access to reliable and timely transportation” and the rest at 22.4% or 86 respondents’ response “No”.

9. Have you ever heard the noise levels of drones ? / Pernahkah anda mendengar tahap bunyi dron ?

385 responses

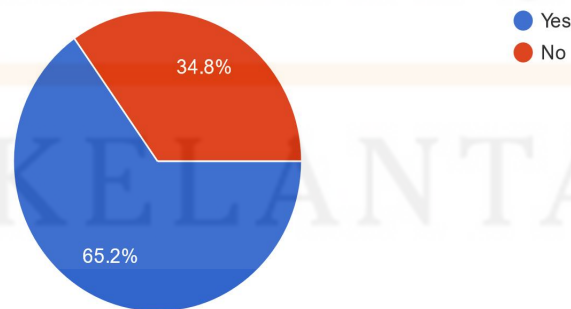


Figure 4.9: “Have you ever heard the noise levels of drones?”

Table 4.9: “Have you ever heard the noise levels of drones?”

Have You Ever Heard the Noise Levels of Drones?	Frequency N = 384	Percentage (%)
Yes	251	65.4
No	133	34.6
Total	384	100

The Figure and Table above shows the percentage and frequency of the respondents' responded to the questions “have you ever heard the noise levels of drones?”. There is 65.4% (N=251) responded “Yes” and the rest with 34.6% (N=133) responded “No”.

10. Have you ever been in close proximity to a flying drone ?/ Pernahkah anda berada berdekatan dengan dron terbang?
385 responses

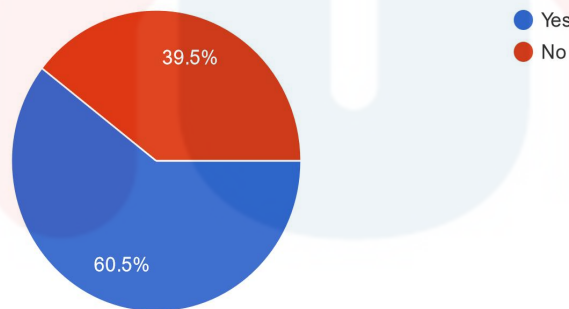


Figure 4.10: “Have You Ever Been in Close Proximity to a Flying Drone?”

Table 4.10: “Have You Ever Been in Close Proximity to a Flying Drone?”

Have You Ever Been in Close Proximity to a Flying Drone?	Frequency N = 384	Percentage (%)
Yes	232	60.4
No	152	39.6
Total	384	100

Figure and Table 4.10 shows the percentage and frequency of the respondents' responded to the questions “have you ever been in close proximity to a flying drone”. From 384 respondents, there is 60.4% (N=232) responded “Yes” and the rest of 39.6% (N=152) responded “No”.

4.2 UNVARIATE ANALYSIS

A dependent variable (Consumer Acceptance Factors) and independent variables were used in the investigation (the perceived ease to use, the perceived risk and the social influence). The mean for each variable was examined by the researcher. In this study, descriptive statistics are utilised to reveal the typical pattern of response, compile, and define the traits of the respondents. We'll utilise parametric statistics to characterise the properties of the interval data, including measures of mean, standard deviation, and variance.

4.2.1 Univariate Analysis for Independent Variable (Perceived Ease to Use)

Table 4.11: Descriptive Statistics of The Perceived Ease to Use

Items Description	N	Mean	Standard Deviation
The ease of use that consumers perceive by drone affects consumers' attitudes.	384	3.79	1.134
I find drone delivery services easy to use.	384	3.73	1.148
I find it easy to use drone delivery services to do what to do.	384	3.69	1.152
It is easy for me to learn to use drone delivery services.	384	3.70	1.171
It is easy for me to become skillful in using a drone delivery services.	384	3.72	1.159
Valid N (listwise)	384		

Table 4.11 showed that the mean and standard deviation analysis of the independent variable which the perceived ease to use. The highest mean value was question 16 which is 3.79 (SD=1.134), where the respondent know that consumers perceive by drone affects consumers' attitudes. The lowest mean value was question 18 which was 3.69 (SD=1.152), where the respondent finds it easy to use drone delivery services to do what to do. Therefore, the average mean of perceived ease to use is 3.69 up to 3.79 indicating more neutral.

4.2.2 Univariate Analysis for Independent Variable (Perceived Risks)

Table 4.12: Descriptive Statistics of The Perceived Risk

Items Description	N	Mean	Standard Deviation
The public perceive drone to be riskier than traditional system	384	4.05	1.023
Consumers will see perceptions of the potential risks of using drone delivery services as they learn more about the capabilities of delivery	384	4.02	.993
There is a potential for loss of privacy associated with the use of drones for delivery services	384	3.97	1.040
There would be too much privacy uncertainty associated with using drones for delivery service	384	3.99	1.012
There are still concerns about privacy, security, and safety associated with drone deliveries among consumers	384	4.04	.991
Valid N (listwise)	384		

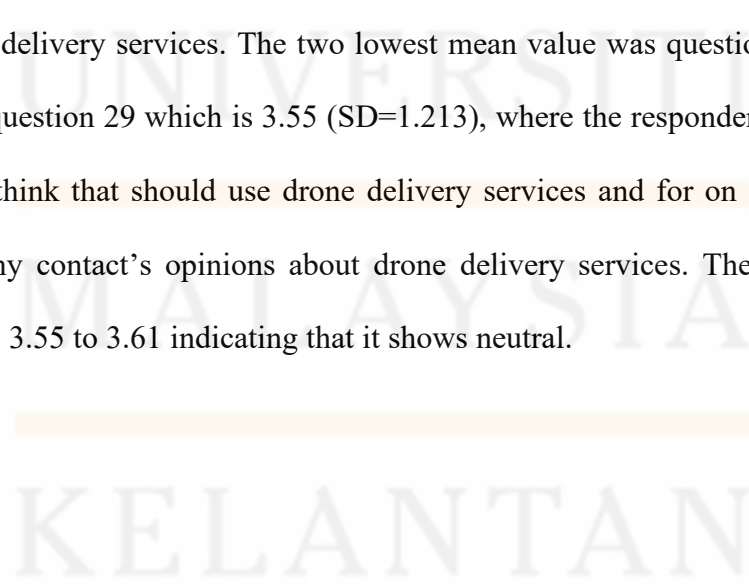
Table 4.12 showed that the mean and standard deviation analysis of the independent variable which is the perceived risk. The highest mean value was question 21 which is 4.05 (SD=1.023), where the respondent knows the public perceive drone to be riskier than traditional system. The lowest mean value was question 23 which was 3.97 (SD=1.040) where the respondent there is a potential for loss of privacy associated with the use of drones for delivery services. Therefore, the average of perceived risk is 3.97 to 4.05 indicating that the respondents see risk from an acceptable point of view.

4.2.3 Univariate Analysis for Independent Variable (Social Influence)

Table 4.13: Descriptive Statistics of Social Influence

Items Description	N	Mean	Standard Deviation
People that influence my behavior think that I should use drones parcel delivery services	384	3.55	1.223
People that are important to me think that I should use drone delivery services	384	3.60	1.224
People whose opinions I value, prefer me to use drone delivery services	384	3.60	1.196
On social networks, I often influence my contact's opinions about drone delivery services	384	3.55	1.213
People who are having me in their friend list think I should use drone delivery services	384	3.61	1.232
Valid N (listwise)	384		

Table 4.13 showed that the mean and standard deviation analysis of the independent variable which is social influence. The highest mean value was question 30 which is 3.61 (SD=1.232), where the respondent agrees people who are having me in their friend list think I should use drone delivery services. The two lowest mean value was question 26 which is 3.55 (SD=1.223) and question 29 which is 3.55 (SD=1.213), where the respondent know people that are important to think that should use drone delivery services and for on social networks, its often influence my contact's opinions about drone delivery services. Therefore, the average social influence is 3.55 to 3.61 indicating that it shows neutral.



4.2.4 Univariate Analysis for Dependent Variable

Table 4.14: Descriptive Statistics of Consumer Acceptance Factors

Items Description	N	Mean	Standard Deviation
I have the knowledge necessary to receive parcel by drone	384	3.41	1.339
Drone for parcel delivery would be compatible with other technologies (e.g., smartphones)	384	3.81	1.160
I might be persuaded by those who have the power to affect my behavior to accept drone delivery of packages	384	3.56	1.208
I intend to accept parcel delivery by drones in the future	384	3.84	1.177
I would always try to accept parcel delivery by drones in my daily life when available in the future	384	3.82	1.170
Valid N (listwise)	384		

Table 4.14 showed that the mean and standard deviation analyses on the dependent variable of consumer acceptance factors. The highest mean value was question 14 which was 3.84 (SD=1.177) the respondent agreed intend to accept parcel delivery by drones in the future. Other than that, the lowest men value was question 11 which was 3.41 (SD=1.339), where the respondents agreed on have the knowledge necessary to receive parcel by drone. Therefore, the average of consumer acceptance factors is 3.41 to 3.84 showing that the results are neutral.

4.3 CRONBACH’S ALPHA RELIABILITY ANALYSIS

The reliability coefficient represented the degree of variability acquired from the experiment as a whole. To validate the accuracy and consistency of the data, Cronbach's Alpha analysis was used to test the data. According to George and Mallery's (2016), Cronbach's Alpha Coefficient Range rules of thumb value of 0.4 or below was deemed unsatisfactory, while a value of more than 0.7 is typically considered to be acceptable. The item's internal consistency reliability increases as the value gets nearer to 1.

Table 4.15: Rules of Thumb of Cronbach’s Alpha

Cronbach’s Alpha	Internal Consistency
$\alpha > 0.9$	Excellent
$\alpha > 0.8$	Good
$\alpha > 0.7$	Acceptable
$\alpha > 0.6$	Questionable
$\alpha > 0.5$	Poor
$\alpha > 0.4$	Unacceptable

4.3.1 Pilot Test

Table 4.16: Reliability coefficient alpha From Overall Reliability (Pilot Test)

Variables	Number of Items	Cronbach’s Alpha
Consumer acceptance factors	5	0.832
Perceived ease to use	5	0.884
Perceived risk	5	0.939
Social influence	5	0.954
Overall variables	20	0.953

The illustrations of overall consistency (pilot test) for the dependent and independent variables were shown in Table 4.16 above. According to the Cronbach's alpha coefficient's general thumb rule, the overall reliability's Cronbach's alpha is 0.953, which is considered to be

respectable. The outcome of this study was good and trustworthy. The fact that the variables' Cronbach's alpha charge above 0.7 demonstrated the questionnaires' excellent reliability and allowed the study to move forward. Additionally, this indicates that the questionnaires have been approved for this study and that the responded clearly understood the questions that were asked.

4.3.2 Actual Reliability Test

Table 4.17 : Cronbach’s Alpha Actual Reliability Test

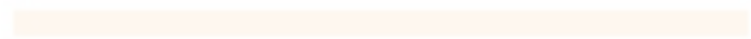
Variables	Cronbach’s Alpha	No of Items	Internal Consistency
Dependent Variable			
Consumer Acceptance Factor	0.834	5	Good
Independent Variables			
Perceived Ease to Use	0.961	5	Excellent
Perceived Risks	0.941	5	Excellent
Social Influence	0.968	5	Excellent

Table 4.17 is the Cronbach's Alpha Actual Reliability Test regarding the questions of dependent variable and independent variables that have been collected after conducting a survey to the respondents. A total of 384 respondents were obtained in showing factors that influence the drone usage in logistics services. In this study, the dependent variable is consumer acceptance factor and the independent variables are perceived ease of use, perceived risks and social influence. Each variable is presented with 5 questions in the questionnaire conducted. Therefore, the result of the Dependent Variable for the actual reliability test, which is the consumer acceptance factor, has shown a Cronbach’s Alpha reading value of 0.834 with good internal consistency. Next, the results of the Independent Variable showed excellent internal consistency readings with 0.961, 0.941 and 0.968. It was concluded that every questionnaire question displayed was at the good and excellent internal consistency. Overall of the Cronbach’s Alpha

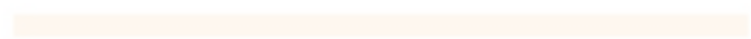
were more than 0.8 as preferred on a reference from “Chong, 2018), it states that Cronbach’s Alpha range above 0.8 means there us 80% consistency in the score and is considered good.



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4.4 NORMALITY TEST

The normality test determines whether a sample is regularly distributed or not, depending on its significance value. It refers to the study's sample size that can be concluded as normally or non-normally distributed. For example, if the sample size was greater than 50 respondents, Kolmogorov-Smirnov will be used, whereas Shapiro-Wilk will be used if the sample size was fewer than 50. If the significant value or p-value was less than 0.05, it showed normal and significant data.

Table 4.18: Normality Analysis for Independent Variables and Dependent Variable

		Test of Normality					
Dependent Variable	Independent Variables	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Customer Acceptance Factor	The Perceived Ease to Use	.387	85	.000	.671	85	.000
	The Perceived Risk	.238	111	.000	.748	111	.000
	Social Influence	.387	80	.000	.659	80	.000

Table 4.18 shows the normality test for dependent variable (Consumer satisfaction) and independent variable (reliability, affordability, safety, and security). Apart from that, Kolmogorov-Smirnov was being used in this study because of more than 50 respondents. Moreover, it can see that significance value was .000 which is less than 0.05. As the result, it was considered as a normal data and significant.

4.5 PEARSON CORRELATION

One correlation metric used to assess the strength of a linear relationship between two variables is the Pearson correlation. The researchers used Pearson Correlation Coefficients to determine the significance of the relationship between the dependent variable (consumer acceptance factors) and independent variables (Perceived ease to use, Perceived risks and Social influence). Table 4.19 displayed the Pearson Correlation value's magnitude relationship, whereas Table 4.20 displayed the outcome of the Pearson's Correlation Coefficient used to determine the hypotheses.

Table 4.19: The Magnitude Relationship of Pearson Correlation Value

Size of Correlation	Interpretation
.90 to 1.00 (-.90 to -1.00)	Very high positive (negative) correlation
.70 to .90 (-.70 to -.90)	High positive (negative) correlation
.50 to .70 (-.50 to -.70)	Moderate positive (negative) correlation
.30 to .50 (-.30 to -.50)	Low positive (negative) correlation
.00 to .30 (.00 to -.30)	negligible correlation

4.5.1 The Pearson Correlation Result

Table 4.20: The Pearson Correlation Result

		Customer Acceptance Factor	The Perceived Ease to Use	The Perceived Risk	Social Influence
Customer Acceptance Factor	Pearson Correlation	1	.848**	.418**	.762**
	Sig. (2-tailed)		.000	.000	.000
	N	384	384	384	384
The Perceived Ease to Use	Pearson Correlation	.848**	1	.440**	.846**
	Sig. (2-tailed)	.000		.000	.000
	N	384	384	384	384
The Perceived Risk	Pearson Correlation	.418**	.440**	1	.396**
	Sig. (2-tailed)	.000	.000		.000

	N	384	384	384	384
Social Influence	Pearson Correlation	.762**	.846**	.396**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	384	384	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the table 4.20 above, the correlation of significant is 0.01 level which is mean that there are less than one in a hundred chances can be wrong to test hypothesis. It showed that the relationship of three independent variables and dependent variable were significant. The highest correlation is 0.848 which is perceived ease to use and following with the second highest correlation is social influence with significant 0.762. Lastly, the small correlation that researchers received is 0.418 which is perceived risk. Even though, the small correlation is perceived risk, these three independent variables are Pearson because the significant is more than 0.05.

4.6 HYPOTHESIS TESTING

Table 4.21: Summary for Hypothesis Testing

	Hypothesis	Pearson Rank correlation results	
H1	There is a significant relationship between the perceived ease to use and consumer acceptance factor in Kuala Lumpur.	$r = 0.848, p < 0.01$	Supported
H2	There is a significant relationship between the perceived risk and consumer acceptance factor in Kuala Lumpur.	$r = 0.418, p < 0.01$	Supported
H3	There is a significant relationship between social influence and consumer acceptance factor in Kuala Lumpur.	$r = 0.762, p < 0.01$	Supported

Based on Table 4.21, the hypothesis on significant relationship between the factors (the perceived ease to use, perceived risk and social influence) influencing consumer acceptance factor in Kuala Lumpur, Malaysia were tested using Pearson’s Rank Correlation Coefficient. All the hypotheses were accepted at 0.01 significant levels.

4.8 CONCLUSION

Generally, all of the research's findings have been covered in this chapter. The researcher explained and demonstrated in detail the entire data analysis procedure, from distributing the questionnaires in the first stage through receiving the results. All findings will be identified from the data analysis, and many recommendations can be made. The findings of the demographic analysis, descriptive analysis, reliability analysis, MLR analysis, and Pearson correlation analysis were detailed in Chapter 4 of this study. To detect and assess the strength of the relationship between the dependent and independent variables, researchers employ Pearson correlation analysis. There will be a more thorough discussion of the findings, study implications, study limitations, recommendations for further research, and conclusion in Chapter 5.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.0 INTRODUCTION

The researcher will briefly explain all of the findings from this research in this chapter. Key findings and discussions of the hypothesis have been developed as the research has progressed to examine The Factors That Influence the Acceptance of Drone Usage In Logistics Services. Additionally, the researcher will have noted the implication and limitation of the study. At the same time, this chapter will make some recommendation for additional research. Finally, this chapter also covered the conclusion of the findings in light of the chapter's research purpose.

5.1 RECAPITULATION OF THE STUDY FINDINGS

Based on the research objectives, research questions and hypotheses, the following sections highlight the findings in chapter 5. All significant discoveries will be highlighted and explored in detail.

5.1.1 The Comparison of Relationship between The Perceived Ease To Use and Consumer Acceptance Factor.

Table 5.1 below shows the first research objective and research question of the study that address the relationship between the perceived ease to use and consumer acceptance factor.

Table 5.1 : Research Objective 1 and Research Question 1

Research Objective	Research Question
To study the relationship between perceived ease to use and consumer acceptance.	What is the relationship between perceived ease to use and consumer acceptance?

Based on the research objective and research question above, the result of the perceived ease to use with the variable is presented with 5 items for the reliability analysis has shown a Cronbach’s Alpha reading value of 0.961 with the excellent internal consistency. Then,

Kolmogorov-Smirnov was being used normality test with the significance value was .000 which is less than 0.05. As the result, it was considered as a normal data and significant. Next, the Pearson Correlation shown that there was a high positive correlation between the perceived ease to use and consumer acceptance factor with $r = 0.848$ at the significance level, $p < 0.01$ and therefore, the hypothesis 1 (H1) was supported. The result of high positive correlation between perceived ease to use and consumer acceptance factor because according to the Table 4.11 Descriptive Statistics of The Perceived Ease to Use (page 53), the average mean of perceived ease to use is 3.69 up to 3.79 indicating more neutral. According to previous research, compatibility and consumers' adoption of new technology are positively correlated (Min, So and Jeong, 2019). In conclusion, the ease of use that consumers perceive by drone, affects consumers' attitudes. The respondents in this study are also able to understand and believe that drone delivery is an easy and convenient way to receive goods so they should be more open.

5.1.2 The Comparison of Relationship between The Perceived Risks and Consumer Acceptance Factor.

Table 5.2 below shows the second research objective and research question of the study that address the relationship between the perceived risks and consumer acceptance factor.

Table 5.2 : Research Objectives 2 and Research Question 2

Research Objective	Research Question
To study the relationship between perceived risks and consumer acceptance.	What is the relationship between perceived risks and consumer acceptance?

Based on the research objective and research question at the table above, the result of the perceived risks with the variable is presented with 5 items for the reliability analysis has shown a Cronbach's Alpha reading value of 0.941 with the excellent internal consistency. Next, the normality test with used Kolmogorov-Smirnov showed the significance value was .000

which is less than 0.05. As the result, it was considered as a normal data and significant. For the Pearson Correlation, the result shown that there was a lowest correlation between the three independent variables with the moderate positive correlation between the perceived risks and consumer acceptance factor with $r = 0.418$ at the significance level, $p < 0.01$ and the hypothesis 2 (H2) was supported. The result of moderate positive correlation between perceived risks and consumer acceptance factor because according to the Table 4.12 Descriptive Statistics of The Perceived Risks (page 54), the average of perceived risk is 3.97 to 4.05 indicating that the respondents see risk from an acceptable point of view. The result obtained by previous study showed that risk has a significant correlation with attitude towards drone delivery, which is the strongest relationship in the model. (Valencia-Arias, A.; Rodriguez-Correa, P.A; Patino-Vanegas, J.C; Benjumea- Arias, M.; De La Cruz-Vargas, J.; Moreno- Lopez, G., 2022). So, that is the reason the lowest mean value was question 23 which was 3.97 (SD=1.040) where the respondent there is a potential for loss of privacy associated with the use of drones for delivery services.

5.1.3 The Comparison of Relationship between The Social Influence and Consumer Acceptance Factor.

The third research objective and research question of the study, which examines the relationship between the social influence and consumer acceptance factor, are shown in Table 5.3 below.

Table 5.3 : Research Objective 3 and Research Questions 3

Research Objective	Research Question
To study the relationship between social influence and consumer acceptance.	What is the relationship between social influence and consumer acceptance?

Based on the table above, the result of the social influence with the variable is presented with 5 items for the reliability analysis has shown a Cronbach’s Alpha reading value of 0.968 with the excellent internal consistency. Then for the normality test that was used Kolmogorov-

Smirnov showed the significance value was .000 which is less than 0.05. As the result, it was considered as a normal data and significant. Next, the Pearson Correlation result shown that there was a high positive correlation between the social influence and consumer acceptance factor with $r = 0.762$ at the significance level, $p < 0.01$. Therefore, the hypothesis 3 (H3) was supported. The result of high positive correlation between the social influence and consumer acceptance factor because according to the Table 4.13 Descriptive Statistics of The Social Influence (page 55), the average social influence is 3.55 to 3.61 indicating that it shows neutral. The highest mean value was question 30 which is 3.61 (SD=1.232), where the respondent agrees people who are having me in their friend list think I should use drone delivery services. This was related with the previous study of (Maness, 2020), a larger group can have an impact on a single person or small group through majority influence. As psychology concentrates on the individual, the majority of social influence studies in psychology deal with majority influence.

5.2 DISCUSSIONS

5.2.1 Perceived Ease to Use

The Pearson Correlation Coefficient for perceived ease to use in Table 4.20 shows a p-value of 0.01, which is smaller than alpha value (0.05) and $r = 0.848$ that indicating a high positive correlation between perceived ease of use and the consumer acceptance factor. It agrees with a previous study that identified perceived ease to use as one of the key characteristics of the suggested paradigm. A more general perception of their use as being less difficult would affect the preparedness of the adoption of drones for delivery, which would explain about consumers' preferences and the acceptance of drone usage in logistic services (Yoo, W. Yu, E. Jung, J. (2018). Additionally, the researchers think that Kuala Lumpur residents should be more receptive if they think that drone delivery is a simple method for receiving items and is easier to use.

5.2.2 Perceived Risks

The Pearson Correlation Coefficient of perceived risk has shown that the p-value of that factor is 0.01, which is less than the alpha value (0.05), while the p-value in the table 4.20 shown $r = 0.418$ that indicating a low positive correlation between perceived risk and the consumer acceptance factor. The above statements are supported by referers Given the anxiety and stress states that can be caused by high risk exposure (Martins, Oliveira, and Popovič 2014), it is important to examine the ultimate impact on attitudes and acceptance of drone use. In addition, customers may be concerned about the risks of drone delivery services and potential logistical obstacles. Normally established postal and delivery services are responsible for property damaged or stolen during the distribution process.

5.2.3. Social Influence

Based on the findings of the result at table 4.20, the Pearson Correlation Coefficient value of this factor showed the p-value of 0.762 which is greater than the alpha value (0.05).

This proved that social influence has a positive relationship and significant influence with the consumer acceptance factors among Kuala Lumpur citizens. The findings of previous studies state that it was discovered that social influence has a significant impact on behavioral views about drone delivery. This result is not unexpected given that people's attitudes about novel technologies, such as drones, are known to be significantly influenced by their assumptions about these technologies (Ho & Tsai, 2022). Along with the foregoing, this discovery strengthens the case for the significance of social motivation in the adoption of drone technology. Consumers' assessment scores for social drones are affected by their control type, demonstrating how human connection cues would affect satisfaction in a social drone environment (Shapira & Cauchard, 2022). Hence, the findings of this study match with the past study. So, the researchers observe that Kuala Lumpur citizens are influenced with people around them. Researchers consider that social influence are one of the factors that influence the acceptance of drone usage in logistics service.

5.3 CONCLUSION

The three factors that were chosen to influence consumer acceptance are perceived ease of use, perceived risk, and social influence. The targeted respondents filled out 384 questionnaires, which were gathered. 100 % (N = 384) of the 384 surveys had valid and complete data. The Pearson Correlation Coefficient was used to assess the relationship between the independent and dependent variables in order to find the factors influencing the acceptance of drone usage in logistics services. The results of this study's Pearson's Correlation Coefficient analysis showed that perceived ease of use, perceived risk, and social influence do have a relationship with the consumer acceptance factors.

5.4 IMPLICATIONS

The study is conducted to take off light on factors influencing acceptance of the use of drones in logistics services in Kuala Lumpur, Malaysia. This research will impact entrepreneurs, consumers and futurists. This allows us to refine our drone delivery system by taking into account factors that influence user preferences. Based on the results obtained, organizations can find ways to promote the use of this kind of service. This gives customers reason to believe that parcel delivery by drone is innovative, safe and environmentally friendly. We can also identify the risks perceived to cause the greatest concern among consumers so that we can take action and disseminate relevant information on the subject. Here's how you can reap these benefits and grow your drone business operations. In a pandemic, drone delivery services aim to increase convenience through proper packaging, tracking, smooth delivery, faster delivery times, lower costs (to attract more consumers), and environmental benefits is needed.

5.5 LIMITATION AND RECOMMENDATIONS

5.5.1 Limitation Of Study

The execution of this investigation is constrained by a few different factors. The limit on the amount of time comes first. After the completion of the proposal and the dissemination of the questionnaires, this study is required to be finished within a time frame of four months. Due to the limited amount of time, we have available, it has been more difficult for us to gain more knowledge from previous research that are analogous to the one that we are currently carrying out. Second, there are a variety of persons who each have their own unique opinion on the same topic or component. Their life experiences will give them a perspective that is singular to them. Because of this, several outcomes might be anticipated from the completion of the questionnaire. When it comes to the acceptance of drone delivery services by customers, there is a possibility that some customers will have a positive experience while others may have a negative one. In conclusion, there is a limitation to the online survey method based on Google Forms that was employed for this investigation. According to Bhatnagar and Ghose (2004), the

self-selection and self-reporting problems that can arise in a study make it difficult to use an online survey approach. This limitation is a result of the method's inherent nature. In most cases, assistance from interviewees is required to encourage self-selected respondents to fill out the survey. It is possible that the findings of this study will have an adverse impact on the responders since they will recommend the appropriate responses that will be acceptable to society (Bhatnagar and Ghose, 2004).

5.5.2 Recommendations For Future Study

Some suggestions are offered for future generations of researchers. The potential researcher can get a head start on improving the local context by concentrating their research on a certain location of Malaysia. This will allow the researcher to better understand the local environment. People from various states in Malaysia will bring their own unique cultures and points of view to the table. Researchers in the future will be able to learn more about the level of consumer acceptance of drone delivery services. Aside from that, the researcher can assess the amount of willingness of consumers who want to make use of drone delivery services in the area that is being researched. Then, the future researchers allot more time for the process of data collection. This will ensure that the researchers have sufficient time to find respondents who are more suited and eligible for the study. It is difficult to complete the process of data collection for sample sizes of 384 respondents within the allotted amount of time that is available. If the respondents are having any trouble answering to the questions, the researchers should next explain the goal of the study to them. It is essential that this be done to prevent respondents from responding to each question with only a single word. For researchers to give knowledge that is both comprehensive and credible, they will need to gain some clarity and improve their understanding. The final recommendation is for future researchers to completely comprehend the data analysis strategy that will be implemented in Chapter 4. In the future, researchers should become familiar with the SPSS statistical package. After the data have been collected, they need to be analysed so that conclusions may be drawn about the outcome. The next

generation of scientists needs to be trained on how to perform many types of experiments, such as pilot tests, descriptive analyses, reliability testing, hypothesis tests, and multiple regression analyses. Before beginning the research, itself, prospective researchers should first get a comprehensive knowledge of the analyses to ensure that they have a comprehensive and clear comprehension of the study flow.



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APPENDIX A- QUESTIONNAIRE

PART A / BAHAGIAN A: DEMOGRAPHIC/ DEMOGRAFIK

Please tick (/) on the appropriate answer.

Sila tandakan (/) pada jawapan yang sesuai.

GENDER/ JANTINA

Male/ Lelaki

Female/ Perempuan

AGE/ UMUR

19 Years and Below/ Tahun dan Kebawah

20-29 Years/ Tahun

30-39 Years/ Tahun

40-49 Years/ Tahun

50-59 Years/ Tahun

60 Years and Above/ Tahun dan Keatas

ACADEMIC QUALIFICATION/ KELAYAKAN AKADEMIK

SPM

STPM/Diploma

Degree/ Ijazah Sarjana Muda

Postgraduate (Master/Phd)

Others/ Lain-Lain

RACE/ KAUM

Malay/ Melayu

Chinese/ Cina

Indian/ India

Others/ Lain-lain

Occupation/ Perkerjaan

Student/ Pelajar

Government Sector/ Sektor Kerajaan

Private Sector/ Sektor Swasta

Self-Employed/ Bekerja Sendir
 Not Working/ Tidak Bekerja

Monthly Income/ Pendapatan Bulanan

RM 1000 Below/Kebawah
 RM 1000-RM1999
 RM 2000-2999
 RM 3000-3999
 RM 4000 and Above/ dan Keatas

How many times per month do you shop online ?/ Berapa kali sebulan anda membeli-belah dalam talian ?

More than 10 times/ Lebih daripada 10 kali
 6-10 Times/ Kali
 1-5 Times/ Kali
 Never/ Tidak

Do you have access to reliable and timely transportation ? / Adakah anda mempunyai akses kepada pengangkutan yang boleh dipercayai dan tepat pada masanya?

Yes/ Ya
 No/ Tidak

Have you ever heard the noise levels of drones ?/ Pernahkah anda mendengar tahap bunyi dron ?

Yes/ Ya
 No/ Tida

Have you ever been in close proximity to a flying done ?/ Pernahkah anda berada berdekatan dengan penerbangan yang dilakukan ?

Yes/ Ya
 No/ Tidak

PART B / BAHAGIAN B

Please indicate your degree of agreement on the following statements by circling the numbers given ranging :

Stongly Disagree/ Sangat Tidak Setuju	Disagree/ Tidak Setuju	Neutral/ Neutral	Agree/ Setuju	Strongly Agree/ Sangat Setuju
1	2	3	4	5

DEPENDENT VARIABLES : CONSUMER ACCEPTANCE FACTORS/ FAKTOR PENERIMAAN PENGGUNA

1.	I have the .knowledge necessary to receive parcel by drone./ Saya mempunyai pengetahuan yang diperlukan untuk menerima bungkusan melalui dron.	1	2	3	4	5
2.	Drone for parcel delivery would be compatible with other technologies (e.g., smartphones)/ Dron untuk penghantaran bungkusan akan serasi dengan teknologi lain (e.g., telefon pintar)	1	2	3	4	5
3.	I might be persuaded by those who have the power to affect my behavior to accept drone delivery of packages./ Saya mungkin dipujuk oleh mereka yang mempunyai kuasa untuk mempengaruhi tingkah laku saya untuk menerima penghantaran pakej dron.	1	2	3	4	5
4.	I intend to accept parcel delivery by drones in the future/ Saya berhasrat untuk menerima penghantaran bungkusan menggunakan dron pada masa hadapan.	1	2	3	4	5
5.	I would always try to accept parcel delivery by drones in my daily life when available in the future/ Saya akan sentiasa cuba menerima penghantaran bungkusan menggunakan dron dalam kehidupan seharian saya apabila tersedia	1	2	3	4	5

pada masa hadapan.					
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PART C/ BAHAGIAN C

INDEPENDENT VARIABLES :

I) PERCEIVED USE TO EASE/ KEMUDAHAN PENGGUNAAN YANG DIRASAI

1.	The ease of use that consumers perceive by drone affects consumers' attitudes. / Kemudahan penggunaan yang dilihat oleh pengguna melalui dron mempengaruhi sikap pengguna.	1	2	3	4	5
2.	I find drone delivery services easy to use./ Saya dapati perkhidmatan penghantaran dron mudah digunakan.	1	2	3	4	5
3.	I find it easy to use drone delivery services to do what I want to do./ Saya rasa mudah menggunakan perkhidmatan penghantaran dron untuk melakukan apa yang saya mahu lakukan.	1	2	3	4	5
4.	It is easy for me to learn to use drone delivery services./ Mudah untuk saya belajar menggunakan perkhidmatan penghantaran dron.	1	2	3	4	5
5.	It is easy for me to become skillful in using a drone delivery services./ Mudah untuk saya menjadi mahir dalam menggunakan perkhidmatan penghantaran dron.	1	2	3	4	5

II) PERCEIVED RISK/ RISIKO YANG DIPERHATIKAN

1.	The public perceive drones to be riskier than traditional system./ Orang ramai menganggap dron lebih berisiko daripada sistem tradisional.	1	2	3	4	5
2.	Consumers will see perceptions of the potential risks of using drone delivery services as they learn more about the capabilities of delivery drones./ Pengguna akan melihat persepsi tentang potensi risiko menggunakan perkhidmatan penghantaran dron apabila mereka mengetahui lebih lanjut tentang keupayaan dron penghantaran	1	2	3	4	5
3.	There is a potential for loss of privacy associated with the use of drones for delivery services./ Mempunyai potensi kehilangan privasi yang berkaitan dengan penggunaan dron untuk perkhidmatan penghantaran.	1	2	3	4	5
4.	There would be too much privacy uncertainty associated with using drones for delivery service./ Akan terdapat terlalu banyak ketidakpastian privasi yang berkaitan dengan penggunaan dron untuk perkhidmatan penghantaran.	1	2	3	4	5
5.	There are still concerns about privacy, security, and safety associated with drone deliveries among consumers./ Masih terdapat kebimbangan mengenai privasi, keselamatan dan kesejahteraan yang berkaitan dengan penghantaran dron dalam kalangan pengguna.	1	2	3	4	5

III) SOCIAL INFLUENCE/ PENGARUH SOSIAL

1.	People that influence my behaviour think that I should use drones parcel delivery services./ Orang yang mempengaruhi tingkah laku saya berfikir bahawa saya harus menggunakan perkhidmatan penghantaran bungkusan dron.	1	2	3	4	5
2.	People that are important to me think that I should use drone delivery services./ Orang yang penting bagi saya berpendapat bahawa saya harus menggunakan perkhidmatan penghantaran dron.	1	2	3	4	5
3.	People whose opinions I value, prefer me to use drone delivery services./Orang yang pendapatnya saya hargai, lebih suka saya menggunakan perkhidmatan penghantaran dron.	1	2	3	4	5
4.	On social networks, I often influence my contact's opinions about drone delivery services./ Di rangkaian sosial, saya sering mempengaruhi pendapat kenalan saya tentang perkhidmatan penghantaran dron.	1	2	3	4	5
5.	People who are having me in their friend list think I should use drone delivery services./ Orang yang memasukkan saya dalam senarai rakan mereka berpendapat saya harus menggunakan perkhidmatan penghantaran dron.	1	2	3	4	5

APPENDIX B - GANTT CHART

LOGBOOK PPTA SEMESTER SEPTEMBER SESI 2022/2023

GROUP NO. : SAL 7
TITLE : FACTORS THAT INFLUENCE THE ACCEPTANCE OF DRONE USAGE IN LOGISTICS SERVICES
GROUP MEMBER: 1. NURAZILA SUHAILA BINTI RAZALI (A19A0660)
 2. RAJES A/P SABAPATHIRAJU (A19A0810)
 3. AHMAD MU'IZ BIN MUHAMMAD (A19A0014)
 4. SHABIRAH BINTI NORASMAWI (A19A0829)

WEEK	DATE	NOTES	SUPERVISOR'S COMMENT	SUPERVISOR'S INITIAL/SIGNATURE
WEEK 1	16/10/22	i. First meeting with En Rooshihan Merican ii. Briefing about PPTA 1 En Rooshihan Merican		
WEEK 2	18/10/22	i. Students and SV meeting to pick a title for PPTA		
WEEK 3	23/10/22	i. Discussion about title ii. Discussion Chapter 1 - Introduction iii. SV give instructor to search article and view to the SV		
WEEK 4	27/10/22	i. Submit Chapter 1 to SV for check our work : 1.1 Introduction : 1.2 Problem Statement : 1.3 Research Question : 1.4 Research Objectives		
WEEK 5	-	-		
WEEK 6	-	-		
WEEK 7	-	-		

FACULTY ENTREPRENEURSHIP AND BUSINESS

WEEK 8	-	-		
WEEK 9	30/10/22 -3/11/22	i. Submit full draft chapter 1 to SV ii. Meeting with SV to check chapter 1 and do correction. iii. Also, SV briefing about chapter 2 - Literature Review		
WEEK 10	6/11/22- 10/11/22	i. Submit Chapter 2 to SV. : 2.1 Introduction : 2.2 Literature Review		
WEEK 11	13/11/22 - 17/11/22	i. Submit full draft Chapter 2 to SV. ii. SV give a instruction to do Chapter 3 iii. Do full writing for Chapter 3		
WEEK 12	20/11/22 - 24/11/22	i. Submit Full Chapter 3 to SV ii. SV will check and comment so students can make a correction.		
WEEK 13	29/11/22	i. Submission full report		
WEEK 14	30/11/22	i. Presentation week with examiner		

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APPENDIX C - RESULT OF TURNITIN

 Universiti Malaysia KELANTAN	REKOD PENGESAHAN PENYARINGAN <i>TURNITIN</i> VERIFICATION RECORD OF <i>TURNITIN</i> SCREENING
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Kod>Nama Kursus: ALS4113

Code/ Course Name: SAL

Sesi/Session: 2022/2023

Semester: 7

Nama Program/Name of Programme: SAK, SAB, SAL, SAR, SAP, SAH, SAW

Fakulti/Pusat/Faculty/Centre: Fakulti Keusahawanan Dan Perniagaan/ Faculty of Entrepreneurship and Business

Pengesahan Penyaringan Plagiat/ Verification of Plagiarism Screening

Saya, Nurazila Suhaila Binti Razali (A19A0660), Rajes A/P Sabapathiraju (A19A0810), Ahmad Mu'iz Bin Muhammad (A19A0014) & Shabirah Binti Norasmawi (A19A0829) dengan ini mengesahkan Kertas Projek Penyelidikan ini telah melalui saringan aplikasi turnitin. Bersama ini dilampirkan sesalinan laporan saringan Turnitin dengan skor persamaan sebanyak 30%.

I, Nurazila Suhaila Binti Razali (A19A0660), Rajes A/P Sabapathiraju (A19A0810), Ahmad Mu'iz Bin Muhammad (A19A0014) & Shabirah Binti Norasmawi (A19A0829) hereby declare that I have screen my thesis using Turnitin Software. Enclosed here with a copy of verification of Turnitin screening with similarity score of 30%.

Tajuk Kertas Kerja Penyelidikan/ The Tittle of Research Project Paper:-

FACTORS THAT INFLUENCE THE ACCEPTANCE OF DRONE USAGE IN LOGISTICS SERVICES

Tandatangan/Signature

.....SUHAILA.....

Nama Pelajar/Student Name: Nurazila Suhaila Binti Razali

No.Matrik/Matrix No: A19A0660

Tarikh/Date: 25 JANUARY 2023

Tandatangan/Signature

.....RAJES.....

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Tarikh/*Date*: 25 JANUARY 2023

Tandatangan/*Signature*

.....MUIZ.....

Nama Pelajar/*Student Name*: Ahmad Mu'iz Bin Muhammad
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Tarikh/*Date*: 25 JANUARY 2023

Tandatangan/*Signature*

.....SHABIRAH

Nama Pelajar/*Student Name*: Shabirah Binti Norasmawi
No.Matrik/*Matrix No*: A19A0829
Tarikh/*Date*: 25 JANUARY 2023

Pengesahan

Penyelia/*Supervisor*: ENCIK ROOSHIHAN MERICAN BIN ABDUL RAHIM MERICAN

Tandatangan/*Signature*:

Tarikh/*Date*:

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KELANTAN

**ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)**

Student's Name & Matric No: Nurazila Suhaila Binti Razali (A19A0660), Rajes A/P Sabapathiraju (A19A0810), Ahmad Mu'iz Bin Muhammad (A19A0014) & Shabirah Binti Norasmawi (A19A0829)

Name of Supervisor : Encik Rooshihan Merican Bin Abdul Rahim Merican **Name of Programme:** SAL

Research Topic: FACTORS THAT INFLUENCE THE ACCEPTANCE OF DRONE USAGE IN LOGISTICS SERVICES

NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)		
1.	<p align="center">Content (10 MARKS)</p> <p>(Research objective and Research Methodology in accordance to comprehensive literature review)</p> <p>Content of report is systematic and scientific (Systematic includes Background of study, Problem Statement, Research Objective, Research Question) (Scientific refers to researchable topic)</p>	<p>Poorly clarified and not focused on Research objective and Research Methodology in accordance to comprehensive literature review.</p>	<p>Fairly defined and fairly focused on Research objective and Research Methodology in accordance to comprehensive literature review.</p>	<p>Good and clear of Research objective and Research Methodology in accordance to comprehensive literature review with good facts.</p>	<p>Strong and very clear of Research objective and Research Methodology in accordance to comprehensive literature review with very good facts.</p>	<p>___ x 1.25</p> <p>(Max: 5)</p>	
		<p>Content of report is written unsystematic that not include Background of study, Problem Statement, Research Objective, Research Question and unscientific with unsearchable topic.</p>	<p>Content of report is written less systematic with include fairly Background of study, Problem Statement, Research Objective, Research Question and less scientific with fairly researchable topic.</p>	<p>Content of report is written systematic with include good Background of study, Problem Statement, Research Objective, Research Question and scientific with good researchable topic.</p>	<p>Content of report is written very systematic with excellent Background of study, Problem Statement, Research Objective, Research Question and scientific with very good researchable topic.</p>	<p>___ x 1.25</p> <p>(Max: 5)</p>	

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**ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)**

2.	Overall report format (5 MARKS)	Submit according to acquired format	The report is not produced according to the specified time and/ or according to the format	The report is produced according to the specified time but fails to adhere to the format.	The report is produced on time, adheres to the format but with few weaknesses.	The report is produced on time, adheres to the format without any weaknesses.	___ x 0.25 (Max: 1)
		Writing styles (clarity, expression of ideas and coherence)	The report is poorly written and difficult to read. Many points are not explained well. Flow of ideas is incoherent.	The report is adequately written; Some points lack clarity. Flow of ideas is less coherent.	The report is well written and easy to read; Majority of the points is well explained, and flow of ideas is coherent.	The report is written in an excellent manner and easy to read. All of the points made are crystal clear with coherent argument.	___ x 0.25 (Max: 1)
		Technicality (Grammar, theory, logic and reasoning)	The report is grammatically, theoretically, technically and logically incorrect.	There are many errors in the report, grammatically, theoretically, technically and logically.	The report is grammatically, theoretically, technically and logically correct in most of the chapters with few weaknesses.	The report is grammatically, theoretically, technically, and logically perfect in all chapters without any weaknesses.	___ x 0.25 (Max: 1)
		Reference list (APA Format)	No or incomplete reference list.	Incomplete reference list and/ or is not according to the format.	Complete reference list with few mistakes in format adherence.	Complete reference list according to format.	___ x 0.25 (Max: 1)
		Format organizing (cover page, spacing, alignment, format structure, etc.)	Writing is disorganized and underdeveloped with no transitions or closure.	Writing is confused and loosely organized. Transitions are weak and closure is ineffective.	Uses correct writing format. Incorporates a coherent closure.	Writing include a strong beginning, middle, and end with clear transitions and a focused closure.	___ x 0.25 (Max: 1)

**ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)**

3.	Research Findings and Discussion (20 MARKS)	Data is not adequate and irrelevant.	Data is fairly adequate and irrelevant.	Data is adequate and relevant.	Data is adequate and very relevant.	___ x 1 (Max: 4)
		Measurement is wrong and irrelevant	Measurement is suitable and relevant but need major adjustment.	Measurement is suitable and relevant but need minor adjustment.	Measurement is excellent and very relevant.	___ x 1 (Max: 4)
		Data analysis is inaccurate	Data analysis is fairly done but needs major modification.	Data analysis is satisfactory but needs minor modification.	Data analysis is correct and accurate.	___ x 1 (Max: 4)
		Data analysis is not supported with relevant output/figures/tables and etc.	Data analysis is fairly supported with relevant output/figures/tables and etc.	Data analysis is adequately supported with relevant output/figures/table and etc.	Data analysis is strongly supported with relevant output/figures/table and etc.	___ x 1 (Max: 4)
		Interpretation on analyzed data is wrong.	Interpretation on analyzed data is weak.	Interpretation on analyzed data is satisfactory.	Interpretation on analyzed data is excellent	___ x 1 (Max: 4)
4.	Conclusion and Recommendations (15 MARKS)	Implication of study is not stated.	Implication of study is weak.	Implication of study is good.	Implication of study is excellent	___ x 1.25 (Max: 5)
		Conclusion is not stated	Conclusion is weakly explained.	Conclusion is satisfactorily explained.	Conclusion is well explained.	___ x 1.25 (Max:5)
		Recommendation is not adequate and irrelevant.	Recommendation is fairly adequate and irrelevant.	Recommendation is adequate and relevant.	Recommendation is adequate and very relevant.	___ x 1.25 (Max:5)
TOTAL (50 MARKS)						