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# **FACTORS THAT INFLUENCE CUSTOMERS SATISFACTION TOWARDS ROBOTIC SERVICE RESTAURANT IN MALAYSIA**

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## ABSTRACT

The world has been presented with a variety of modernity and technological sophistication that can match human efficiency. robots are among the technologies that can replace humans in terms of daily work. But to what extent can these advanced robot capabilities meet and give satisfaction to humans in their use, especially in industrial sectors such as the hospitality industry where robots are now increasingly taking over all the tasks that were previously done by humans. Research has shown that there are several factors that influence customer satisfaction towards robotic service restaurants. The purpose of the study is to determine the four main factors in knowing customer satisfaction with robot restaurant services. These four factors are service efficiency, time saving, security and monetary value. For gathering information and data, an online questionnaire has been distributed through social media. Malaysian population is used, and samples have been taken to analyse the data to find answers to this study. scientific methods are also applied to obtain excellent results along with making this study more practical and useful.

**Keywords:** Robotic Service, Customer Satisfaction, Time Saving, Service Efficiency, Security, Monetary Value

## ABSTRAK

Dunia telah dipersembahkan dengan pelbagai kemodenan dan kecanggihan teknologi yang mampu menandingi kecekapan manusia. Robot adalah antara teknologi yang boleh menggantikan manusia dari segi kerja seharian. Namun sejauh manakah keupayaan robot canggih ini dapat memenuhi dan memberi kepuasan kepada manusia dalam penggunaannya terutama dalam sektor perindustrian seperti industri hospitaliti di mana robot kini semakin mengambil alih segala tugas yang sebelum ini dilakukan oleh manusia. Penyelidikan telah menunjukkan bahawa terdapat beberapa faktor yang mempengaruhi kepuasan pelanggan terhadap restoran perkhidmatan robotik. Tujuan kajian adalah untuk menentukan empat faktor utama dalam mengetahui kepuasan pelanggan terhadap perkhidmatan restoran robot. Empat faktor ini ialah kecekapan perkhidmatan, penjimatan masa, keselamatan dan nilai monetari. Untuk mengumpul maklumat dan data, soal selidik dalam talian telah diedarkan melalui media sosial. Populasi Malaysia digunakan, dan sampel telah diambil untuk menganalisis data untuk mencari jawapan kepada kajian ini. kaedah saintifik juga diaplikasikan untuk mendapatkan keputusan yang cemerlang seiring dengan menjadikan kajian ini lebih praktikal dan berguna.

**Kata Kunci:** Servis robotik, kepuasan pelanggan, penjimatan masa, kecekapan perkhidmatan, keselamatan, nilai monetari

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 INTRODUCTION**

This chapter explains the study and comprises the primary sections that explain the study's background, problem statement, research purpose, research question, study significance, explanation of terms, and summary.

#### **1.2 BACKGROUND OF STUDY**

Numerous sectors around the world use robots nowadays, particularly in the restaurant sector of the hospitality industry. Our daily lives now contain a large amount of robots (Ferreira, 2017). The hotel sector has embraced the robot trend in a similar way, with numerous hospitality organizations beginning to integrate robotic devices with artificial intelligence into their services, such as in hotels and restaurants (Lin, 2020). The restaurant sector makes use of several different kinds of robots. For instance, a cook robot oversees preparing various foods, and a host robot oversees welcome clients to the reception area and directing them to their tables (Lu, 2019). Customers place orders, and a waiter robot brings the food to the tables (Eksiri & Kimura, 2015). In 2014, Aloft Hotels debuted the A.L.O "robotic butler or Botlr" in its Cupertino location, making it the first hotel chain to use robot technology. The robot can deliver packages across the hotel. Its

major goal was to surprise the guest at their room (Socialtables, 2022). Robot service is already being used in the restaurant and hotel industries in Arabic. Due in part to the fact that concepts of mechanisation and self-administration are unquestionably playing a key role in the customer experience, restaurant hotel robots in Saudi Arabia have become a popular technological trend within the hospitality industry. The use of robots can lead to improvements in terms of speed, cost effectiveness, and even precision (Insureqlik, 2021). In the core of Dubai's city centre, at Umm Hurair 1, the restaurant known as "Drink and Spice Magic" is the first to employ the services of a robot server named Ruby which is entertains and increases customers satisfaction who visit his restaurant (AirTimes,2018). Chatbots, for example, enable hotels or travel agencies to provide assistance 24 hours a day, seven days a week via online chat or messaging services, even when staff is unavailable, resulting in incredibly fast response times. In the short term, using a robot throughout the registration process can help to speed up the procedure and alleviate congestion (Insureqlik et al., 2021).

Since robotic services are now available in restaurants around the world, such as the Robo Sushi restaurant in Toronto, the Hajime robot restaurant in Japan, and the Spyce restaurant in Boston, the restaurant industry is likely one of the forerunners in this field. Since it opened in 2018, Haidilao, a completely automated hotpot restaurant in China, has employed robot chefs and waiters, and many humanoid robots travel back and forth between the dining area and kitchen to serve guests. In the kitchen, a number of displays are automatically updated to facilitate effective cooking and inventory control (Wang, 2019). To bring food to diners, LG Electronics created the Cloi ServeBot in South Korea (Cho, 2020). The business also created the Cloi Chefbot, a robot that can prepare and serve noodles in Korean family-style buffet restaurants. The installation of the Chef robot has allowed the human crew to focus more on the clients, giving them more time and

valuable experiences (Malewar, 2019). Depending on the need and features of the restaurant, the service is either entirely automated or partially automated in robot restaurants (Hwang, 2020; Kuo, 2017) Robots in restaurants can serve, cook, clean dishes, greet customers, communicate with them, and even entertain them (Berezina, 2019). Another theory holds that using robots in restaurants can lower operating costs, boost productivity, decrease mistakes, and give customers cutting-edge experiences (Tristano, 2018).

Some fast food and restaurants in Malaysia currently employ the robot server service, which uses the robot to take orders and deliver food to the consumer. Because service robots can provide several foods and beverages in a short amount of time and obviously make their task easier, it can demonstrate that this robot can replace human labour (Harian Metro, 2021). The response of the patrons at the restaurant in Malaysia shows that using robot service has a favourable response. To reduce the risk of infection during the COVID-19 pandemic, use a meal delivery robot first. The typical client responded favourably to the service's novelty as well (Sinar Harian, 2021). Because certain restaurants do not match the requirements, particularly in terms of the size of the premises, only 50% of restaurants in Malaysia use robot services (Berita Harian, 2022). The adoption of this invention also lessens the workload on employees, particularly during peak hours, and contributes to the expediting and streamlining of the meal delivery process (Sinar Harian et al., 2021).

Robotics in the restaurant sector automates tasks that were previously done by restaurant workers. These jobs can range widely and may involve both front- and back-of-the-house duties at a restaurant. Robots can execute automated tasks more quickly, correctly, and efficiently than human employees since they are frequently too repetitious

or unsafe for them. Restaurant robots has a significant potential to save waste, boost productivity, and boost revenues for the sector (Savoreat, 2022).

### **1.3 PROBLEM STATEMENT**

The main problem in this research that there is still less use of robot service in Malaysian restaurants because it can have a negative impact on human employment opportunities. This study will look at whether Malaysians can adapt or not to robotic services in the restaurant business. There is still a scarcity of empirical research on robotic services in restaurants, particularly the effects of robotic services on customer experience, satisfaction, and subsequent behaviours (Tuomi, 2021).

Scholarly interest in robotic services has increased during the previous five years. Many hospitality scholars have given to this field by researching topics such as consumer views and adoption of robotic devices (Lin et al., 2020; Murphy, 2019), the role of robotic services on one's branding encounters (Chan & Tung, 2019), and so on.), and how to design and develop robotic services in hospitality (Berezina et al., 2019; Tuomi et al., 2021). Robot server is the best employee working at the 'Drink and Spice Magic' restaurant in Dubai because never tired, never disappointed, and never asks for a raise and increases the satisfaction of the customers who visit her restaurant (AirTimes et al., 2018). The need for these robots has been nothing short of spectacular. Pudu Robotics (the founder of BellaBot), for example, is one of China's top robotics companies, with a position in over 10,000 restaurants (TheStar et al., 2022). Robots are increasingly being used in the hospitality business across the world since they can speed up their everyday

work. Many hospitality firms will benefit from the use of robots. Different consumer segments will be more at ease with machines performing all or a portion of the service.

This may have seemed impossible to believe just two years ago, but since the COVID-19 pandemic, robot waiters have become an increasingly common sight in the Malaysian restaurant landscape, especially at chain eateries, fast-casual restaurants and even mamak haunts (TheStar, 2022). In Malaysia, the use of robot service in restaurants can be said to be very unsatisfactory because only some restaurants use the service. Only 50% of restaurants in Malaysia use robot services because some restaurants do not meet the criteria, especially in terms of the size of the premises (Berita Harian et al., 2022).

This means that every restaurant in Malaysia is no longer ready to employ people and must rely on human resources. Because robots do not function as flexibly as people, most restaurants continue to use human labor instead of robots. This is evident since robots were unable to perform tasks other than those programmed into their systems. There is no doubt that a substantial expense will be incurred if the company wishes to upgrade the old programmed to the new one and the implications in the future can affect employment opportunities. For example, if robots replace workers in restaurants and so on, job opportunities may decrease. Jobs using human skills will not last long in the future with the continuous use of robotic systems because robots taking human employment opportunities. This can be a concern and needs to be paid attention to by certain parties. Makes people lazy and unproductive because the existence of this robot technology was originally intended to help complete work in the home. However, if people are fully dependent on this tool, it can make people lazy and unproductive in living life to some extent. This is because robots are seen as unsuitable for carrying out tasks related to relationships, feelings, or psychology with humans. Using robot services is also at risk of damage. No matter how sophisticated electrical and electronic products are created by



humans, they still have the risk of breaking down. This is because every technology created uses a specific source of power (such as electricity, batteries, solar and so on). It includes other supporting materials such as wires, chips, and the like for the device to work properly. So, this risk will always be a challenge to humans because it is necessary to incur high costs to repair it (Getaran, 2022).

#### **1.4 RESEARCH OBJECTIVES**

The purpose of this research is to assess consumer satisfaction with robotic service in the restaurant industry. The following were the study's research objectives:

1. To examine the relationship between service efficiency towards customer satisfaction
2. To examine the relationship between time used towards customer satisfaction.
3. To examine the relationship between security towards customer satisfaction.
4. To examine the relationship between monetary value towards customer satisfaction.

## **1.5 RESEARCH QUESTIONS**

The following research questions provide a more detailed view of the elements that are the focus of this study:

1. Does service efficiency influence customer satisfaction?
2. Does the time used influence customer satisfaction?
3. Does security influence customer satisfaction?
4. Does monetary value influence customer satisfaction?

## **1.6 SIGNIFICANCE OF THE STUDY**

This study will offer details on the customer satisfaction with the robot service in restaurant industry that are currently popular and are expected to become more prevalent in the future. The impact of robot service in a restaurant industry that became as factor to customer satisfaction when a customer used it in the restaurant is also covered in this study.

**Practical**

This study will help hospitality sector entrepreneurs to build and sustain a good service with a right choice when they want to decide an appropriate service to their customer. In another practical aspect, it will open the eyes of hospitality sector operators to the use of advanced robots from a positive or negative point of view.

**Academic**

This study reopens the gap of lack of research resources carried out by researchers in matters related to this study and open space for their research to venture and deepen far in their research. Besides, with this study, an increase in related reference materials or similar searches can be accessed by researchers to carry out their future studies where this research will provide information on customer satisfaction and factor also related to the use of robot's service.

## 1.7 DEFINITION OF TERM

An extensive understanding of these terms will be useful for the reader because of this the operational definition is specific to customer satisfaction toward robot service. The following terms will be used practicably throughout the composition proposal practice.

Customer satisfaction: is estimate of how proficiently a company's or organizations service, product and comprehensive customer experience meet customer expectation. In this study, it more focuses on service sector that's joint to the customer satisfaction. It helps a company investigate the service quality for changes or improve more about that. (asq.org.2022).

Efficiency – the ability to do something or produce something without wasting, energy, time, and raw material. (Investopedia, Caroline Banton.2022).

Service - handling tasks for someone else from physical labour to providing information. It can tangible or intangible. (NaplesHotelGroup.com.2019).

Security – the management of security in hotels, lodging, entertainment facilities. Involves using proven methods of preventing and resolving challenges faced by the hospitality sector. (Umbrella Security Service. 2020).

Technology – The implementation of scientific knowledge to the practical goals of human life, or, as it is frequently referred as, the transformation and manipulation of the human environment. (Britannica, T. Editors of Encyclopaedia.2022).

## 1.8 SUMMARY

For this chapter, we identified that, there are many factors that affect to customer satisfaction towards robotic service in restaurant industry. We can see a good side or bad side of using robotic in restaurant sector. Other than that, we studied about the background of the study, problem statement, research objective, research question, significance of the study and definition of term. This is important for the researcher to analyse the factors for this research.



## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The purpose of this study is to discover customer behavior on customer satisfaction because the primary focus of this research is on customer satisfaction. Customer satisfaction with robotic service in the restaurant business will be covered in the first section of this chapter. This chapter concludes with robotic service, service efficiency, time-saving, and monetary value and determines the security of using robotic service in the restaurant industry.

#### **2.2 CUSTOMER SATISFACTION**

Customer satisfaction is defined as the degree to which customers are satisfied with a company's products, services, and capabilities. Customer satisfaction data, such as surveys and ratings, can help a company decide how to improve or modify its products and services. According to the Service robot acceptance model (sRAM) proposed by (Stefanie Palunh, Jochaen Wirtz, Werner H Kunz.2018), in addition to functional components like perceived ease of use and utility influencing customer satisfaction,

social-emotional and relational elements are also important factors forming customer satisfaction of service robots. (*Marketing Metrics*, Paul Farris.2010). The number of customers, or proportion of all customers, reporting positive experiences with a company, its goods, or services surpasses predetermined satisfaction goals. There are two implications to Farris' definition. It first establishes that customer pleasure is a concrete idea to which a value may be attached. Second, it talks about certain satisfaction objectives. It is up to us to decide what these satisfaction goals are, and as a result, they will differ from product to product or service to service, and both if you are a SaaS company.

As a result, humans and robots may and should complement one another to offer customers high-quality services (Baldwin 2019). Consumers' expectations for service quality and type shift as a result of service robots (Edvardsson, Tronvoll, Lars Witell. 2018; Lee and Lee 2019). Customer satisfaction as a 'person's emotion of joy or disappointment, which comes from measuring a product's perceived performance or outcome versus his/her expectations'. Although Kotler employs abstract concepts such as pleasure and disappointment, the notion is far from vague. (Philip Kotler.2018). However, in the case of hospitality, experts have proposed that additional criteria may be required to completely explain the adoption of robot technology (Go et al., 2020). Customers, for example, may be impressed by the faster service provided by robots (Lee, 2011). Similarly, the novelty of the robot service experience itself may boost client pleasure (Bello and Etzel, 1985; Duman and Mattila, 2005). Robots can complete things faster than humans. In restaurants, this means that order wait times can be significantly decreased, perhaps leading to higher customer satisfaction by (Stefanie Paluch, Jochen Wirtz, Werner H Kunz.2018). Experience novelty is defined as a customer's sense of having tried something new and different (Crompton, 1979).

### 2.3 ROBOTIC SERVICE VALUE

According to (K Tanaka, J Choi, Y Cao, G Stacey, 2014) Robots can be controlled remotely and require careful preparation to use robots in the future, namely behaviour, awareness and placing robots in the service sector. The researchers looked at how this robot works but there are problems and solutions that exist in robots. (Paulius & Sun, 2019). The materials used in producing robots service are still weak since the software on the robot is difficult to find and makes it difficult for engineers. (Iborra, Caceres, Ortiz, Franco, Palma and Alvarez. 2009). The use of robot service is produced in limited quantities due to many factors that are problematic and complicated but it also benefits humans.

After that, the importance of service robots gives a new perspective to customers, employees and this robot service is important to use in restaurants. (Kim, Park, Kwon, Sohn, Yoon and Seo. 2021). These robot services are compared to human characteristics and are almost like human behaviour. (Lu, Zhang and Zhang., 2021). There are many benefits of using robots service that benefit human civilization, besides this is only at the initial stage. (Pieska, Luimula, Jauhiaiien and Spiz., 2013). With this, we can see that these robots service have the same characteristics as humans and help humans in various sectors. This service robot also has a positive and negative impact on humans.

Robot service is seen to be able to increase work and labour productivity. (Shimmura, Ichikari, Okuma, Ito, Okada and Nonaka., 2020). Robot services are also important in the public sector other than restaurants and exchange energy between robots and humans. (Mishraa, Goyal, and Sharma, 2018). The COVID-19 pandemic was greatly helped by robot service to reduce the infection rate and test the effectiveness of these



robot's service. (El-Said & Al Hajri, 2022). The durability of robots is very suitable for use in service and various reactions are concluded. (Seyitoğlu, Ivanov, Atsiz, and Cifci., 2021). Robot service is used to deal with human problems or issues in improving the quality of human life. The results of the study found that robots service give advantages and disadvantages to humans, especially in services such as restaurants. (Pieska et al., 2013).

### **2.3.1 SERVICE EFFICIENCY**

Since the twenty-first century's technology has enabled individuals to perform a wide range of activities, robotic service has grown in favor among customers and organizations. Consumers have been drawn to these technological advancements due to their ease, speed, and precision. A serving robot, a sort of service robot built for the primary purpose of serving and utilized in the restaurant business, is a robot with a limited objective of "serving," as opposed to service robots with a broad range of applications (Jang & Lee, 2021). When the serving robot brings the requested meal to the front of the client's table, the customer places the food on the table himself. The serving robot substitutes the serving that the employee must do, allowing the person to deliver additional high-quality services while enhancing efficiency. It can also give clients with a robot serving attraction and advertising impacts such as "we lead future retailers" (Park, 2020). However, serving robots can only move food and cannot set food directly on the customer's table or clean up the customer's tableware. Furthermore, contact with clients has constraints, such as just sending one message rather than two (Namgung, 2020).

Service efficiency (total length and delay time) expectations were considerably different for service-related elements, with carry-out evaluated as the most efficient, followed by human delivery and finally robot delivery. In field observations, there were disparities in service efficiency, with a much shorter total length for carry-out than a robot and human delivery, with no significant difference between the two. Significant disparities in delay time were discovered among all three modalities, with robot delivery having the largest average delays and human delivery having the least average delays. Notably, despite the fact that the specific robot for each meal delivery attempt was not monitored, researchers and customer survey participants observed delivery robots frequently halting for significant periods of time. These seen, programmed safety procedures may have impacted consumers' expectations of robot delivery and contributed to lengthier robot delivery times than other service options. The results have been impressive: not only do the robots increase productivity by delivering meals faster, but they also provide a pleasant and exciting aspect for guests. Anything that can provide a firm an advantage in a competitive sector, such as the restaurant industry, is worth examining. Restaurants may benefit from robotics in a variety of ways, including greater efficiency and production, improved safety and sanitation, and improved customer service. Furthermore, robots can help free up humans for other activities or even allow organizations to run with fewer personnel. Robots can prepare meals more uniformly and swiftly than humans, and they do not require breaks or vacations. Furthermore, robots may be trained to do things like take orders, wipe tables, and even greet customers. These robots have even been able to deliver a more customized experience in some circumstances by communicating with consumers and addressing menu inquiries. The results have been astounding, with many eateries reporting greater customer satisfaction and revenue.

### 2.3.2 TIME SAVING

Since the advent of robot technology, a growing number of sectors have benefited from their services, including the restaurant sector of the hospitality industry. Robots produce various benefits over human labour, one of which is time savings. Reducing the amount of time required to complete a task, particularly in restaurants where customer happiness is highly impacted, is known as time saving. Robots can work continuously for 7 days a week, providing customers with any services in restaurants without becoming weary. Due to their ability to work continuously and incredibly effectively, robots do not require breaks or vacation days because robots are created to help human jobs (Robotworx, 2021). This allows businesses like restaurants to save time and money while also enhancing the quality and value of their business. With the presence of this robot, it can indirectly reduce the amount of time it takes for human labour to deliver and collect each order from clients by a short amount of time. Given the rise in orders, most restaurants currently employ robot labour since it saves time and gives the establishment an advantage over human labour, which requires more time to move about while performing work in restaurants. As a result, this robot can reduce delivery times overall and may even enable the restaurant to expand. Collaboration between humans and robots can save time and resources on specific jobs, such as when a human looks like a chef in the kitchen and a robot as waiter who takes and deliver orders to customers because this is very effective (Amanz, 2021).

Robots are also capable of offering customers consistently high-quality services. Staff personnel may occasionally mistakes, for instance, by delivering a dish to the incorrect table. The delivery of orders for clients may take a little longer because of these errors, but robots won't mix up table numbers because they have a powerful memory that

can accurately store a variety of data. Because clients won't have to wait a long time to receive their orders, this can speed up delivery of customer orders. Being able to save time while conducting business is a worry shared by many restaurant owners because it has a significant impact on their ability to satisfy customers. Due to the high number of robot employees, many managers of restaurant use them as staff because there are many advantages obtained from human labour, especially in terms of time saving (Soyacincau, 2021).

### **2.3.3 MONETARY VALUE**

According to Pizzol et al. (2015) stated that financial value is also an exchange of measurement of social impact and physical impact in measuring the economic value of certain goods and services. Financial value can also be linked to an agreement in the payment of goods and services according to economic value. (Lo & Spash, 2013). Investing in something affects the decision in the portfolio for monetary value. (Amendinger et al., 2003). Social impact and physical impact will also affect the economic value of something and change investment decisions.

The use of this robot focuses on the customer's reaction as a service value with the advanced technology available on the robot. Blanche et al. (2021). This robot becomes a communication between humans and robots in creating society and giving sociotechnical implications. (Cardenas & Kim, 2020). Telemedicine is successfully addressed with the help of robots and robots become an economic option in terms of telemedicine consultation systems. (Jang et al., 2020). This causes telemedicine to affect the demand for the value of money to meet human needs.

According to Park and Yi (2022), the use of service robots gives a new perception in the interaction with the way of giving and receiving gifts compared to salesperson services. The use of robots in the tourism and hospitality industry indicates a less than satisfactory interaction between robots and humans. (Choi et al., 2021). Robots dominate the market in 2021 and accelerate the service robot business when the COVID-19 pandemic occurs. (Gonzalez-Aguirre et al., 2021). This robot will also accelerate economic growth through business operations. This robot service is also able to reduce the covid-19 infection for the process of economic recovery to the value of money. This causes humans and robots not to cooperate well for the industry due to humans' awareness of the use of robots.

According to (Jain et al., 2021) the use of robots can improve the quality of work and customer satisfaction in restaurants. The expertise of the robot is used as the front line to welcome customers without the feeling of anxiety and efficiency in the robot. (Reig et al., 2021). Healthcare provides for the use of surgical robots in future economic evaluations. (Wang et al., 2008). The service sector contributes to the economy in monetary value, especially in restaurants with good work results. The use of robots service as surgical robots can generate income for the health tourism sector. The results of the previous study found that there is a significant relationship between financial value and robot services in meeting human needs for the tourism and nutrition sectors for a place (Choi et al., 2021).

### 2.3.4 SECURITY

Security is the state of being or feeling secure, free of fear, anxiety, danger, and uncertainty. Something that provides or guarantees safety, tranquillity, or certainty, such as protection or safeguard. Security is an outsourced service in which an outside company handles and manages your security because robots can directly perceive and affect the physical world (Webster's New World College. Houghton Mifflin. 2014). Besides, security is especially important in robotics. As autonomous systems interact with humans and robotic systems grow more widespread, the necessity to safeguard these systems becomes crucial. Historically, industrial robots were mostly used in production areas that had walls and closed networks to keep them secure. As robots gain popularity in a wide range of disciplines and applications, increasing emphasis is being placed on the safety and security aspects of robotic performance. Autonomous robots are cyber-physical devices capable of operating in virtual, physical, and human settings (Quarta D, Pogliani M, Polino, F Maggi, AM Zanchettin, S Zanero. 2017).

As a result, protecting autonomous robot operations necessitates not only securing their data (e.g., sensor inputs and mission orders), but also ensuring their interactions with their surroundings (Quarta D, Pogliani M, Polino M, et al.2017). There are currently no ways for robots to safely ensure their sensors and actuators are operating properly in the absence of external feedback. The term "safety" typically relates to human-robot interaction or the protection of the robot from physical injury (Jorge Pea Queralt, Qingqing Li, and Tomi Westerlund. 2021). What is commonly overlooked is that the safe operation of an autonomous robot is closely tied to the rigorous security of the data involved, which includes sensor data and mission order data. The need of security in robotic services is stressed because it might contribute to any incident and cause harm to

people. Despite the presence of numerous fences and safety measures, tragic accidents continue to occur. Industrial robots were to blame for at least 33 workplace fatalities and injuries in 2014. Industrial robots were to blame for at least 33 workplace fatalities and injuries in 2014, according to data from the Occupational Safety and Health Administration of the United States of America (John Markoff, and Claire Cain Miller.2014). As opposed to that, IT components like the cloud, mobile technology, and the Internet of Things are getting more and more entwined with robotics (IoT). There is a new worry regarding these contacts that goes beyond simply considering how the machine might affect the environment safety. How outside influences might impact a machine's behaviour, which in turn can cause a situation where a robot might react negatively. "A hacked robot, used for instance in a private home or even worse in a public space, like an airport, can have tremendous consequences for the safety of humans," according to (Giaretta, De Dono and Dragoni. 2018), "especially when it is easy to remotely turn it into a 'cyber and physical weapon,' exposing malicious behaviour.

## **2.4 HYPOTHESES**

The hypotheses of this research are:

1st Hypotheses:

H (1): There is relationship between service efficiency with customers satisfaction towards robotic service restaurant in Malaysia.

2nd Hypotheses:

H (2): There is relationship between time saving with customers satisfaction towards robotic service restaurant in Malaysia.

3rd Hypotheses:

H (3): There is relationship between monetary value with customers satisfaction towards robotic service restaurant in Malaysia.

4th Hypotheses:

H (4): There is relationship between security with customers satisfaction towards robotic service restaurant in Malaysia.



## 2.5 CONCEPTUAL FRAMEWORK

For this study, the research model will be as “FACTOR THAT AFFECT CUSTOMERS SATISFACTION TOWARDS ROBOTIC SERVICE IN HOSPITALITY INDUSTRY.” For hypothesis, this study will use service efficiency, time saving, monetary value and security affect customer satisfaction.

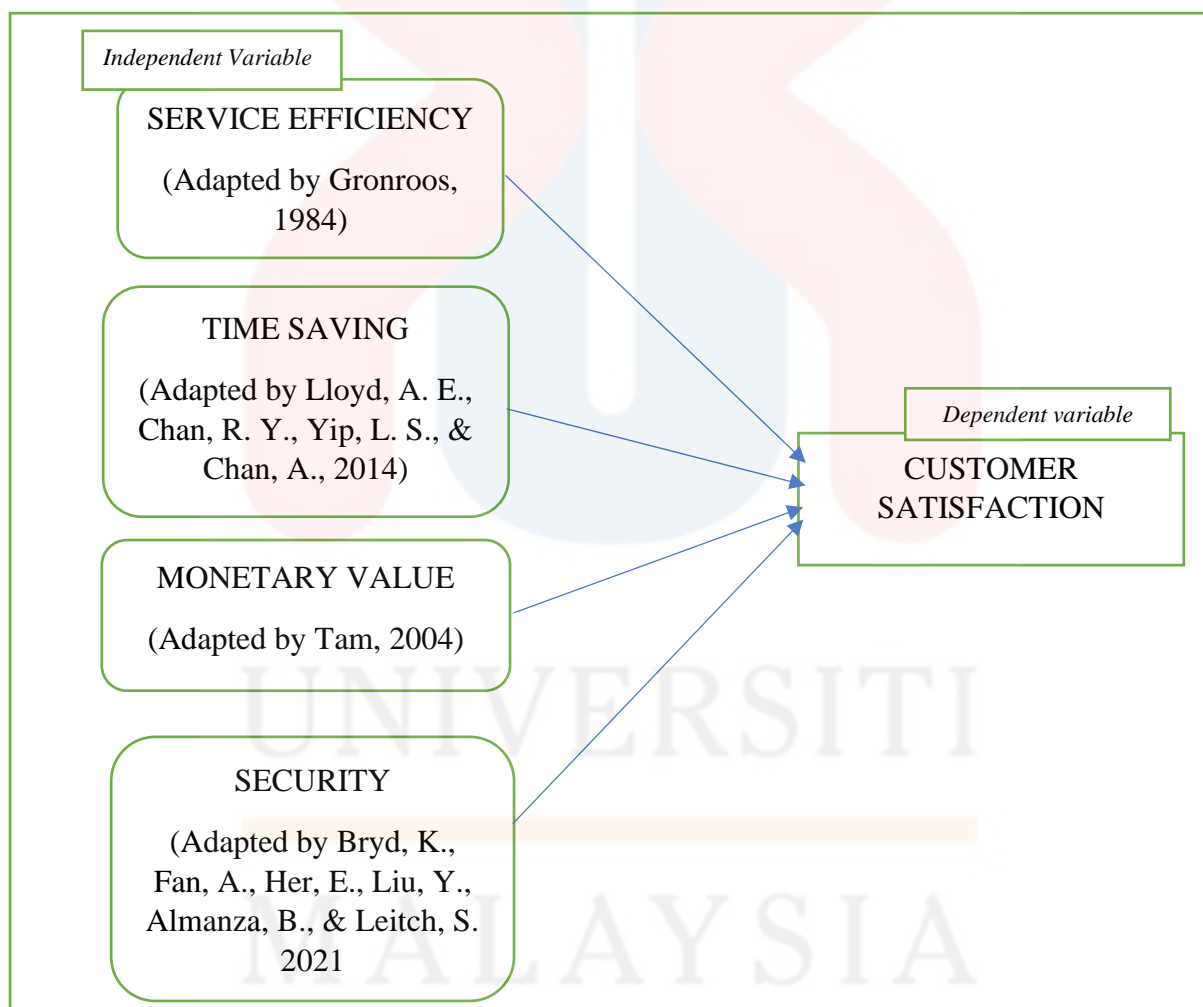


Figure 1 : Conceptual Framework Adapted From Gronroos (1984), (Lloyd, , A. E., Chan, R. Y., Yip, L. S., & Chan, A., 2014), (Tam, 2004), (Byrd, K., Fan, A., Her, E., Liu, Y., Almanza, B., & Leitch, S., 2021)

Based on the figure 1, The relationship between the independent and dependent variables will be identified by the researcher. The independent variable is service efficiency, time saving, monetary value and security. Then, dependent variable is customer satisfaction. This conceptual framework shows that service efficiency, time saving, monetary value and security are factor that affect customer satisfaction.

## **2.6 SUMMARY**

In conclusion, this chapter focuses the independent service efficiency, time saving, monetary value and security. According to the findings, the four independent variables would have a significant impact on customer satisfaction in Malaysian robotic service restaurants. Then, service efficiency, time savings, monetary value, and security are critical factors that determine customer satisfaction. Moreover, the contents provided are very clear and provided effective information to the customers about the factors that influence customer satisfaction towards robotic service restaurant in Malaysia.

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.1 INTRODUCTION**

The procedures employed in the research will be highlighted in this chapter. The research design, target population, sample size, sampling method and procedures, data collecting, research equipment design, and data analysis are all covered in this chapter. It essentially provides a summary of each operation as well as statistical data. The researchers will conduct a survey to collect information, and then use analytical techniques to discover the arrangement of that data in order to evaluate the study hypotheses. This chapter will also establish the most effective strategy of data collecting to use. The survey data will be used to put the study's premise to the test. The procedures contained in the research will be highlighted in this chapter.

#### **3.2 RESEARCH DESIGN**

The strategy for responding to the research question can be referred to as the study design. It covers the examination of numerical data using statistical approaches to

respond to questions like who, how much, where, what, how many, and how many. Science, social science, and numerous other fields all place a high priority on research design (Abutabenjeh et. al, 2018). In this study, a quantitative method will be used to gain all the data through questionnaires.

A good research design aids in the resolution of the research topic. According to Abutabenjeh and Jadara (2018), Babbie (2004) stated that the study design is a plan for the researcher to determine what to observe and analyse, why, and how. To collect all of the data for this investigation, a quantitative method is used. The quantitative research method comprises a variety of techniques for conducting systematic investigations of social issues using statistical or numerical data. As a result, quantitative research entails measuring and assumes that the phenomena under study can be measured. It intends to analyse the data for trends and relationships, as well as to validate the measures created (Watson, 2015). According to Rahi (2017), to conduct research utilising a survey form, a quantitative strategy for data research, pre-defined techniques, and sorting out for samples to concentrate populations are utilised. During this study, the researcher will identify the factors that influence consumer satisfaction with robot service in restaurants.

The descriptive study is used to collect data from customers using a questionnaire, which may then be used to justify the data. A research design's objective is to ensure that evidence obtained from data can answer the research question and determine customer acceptability of robot service in restaurants. This quantitative method is important for determining consumer attitudes, authenticity, and perceptions of robot service in the restaurant industry

### 3.3 POPULATION

A population is a group of items or occurrences that researchers can use to gain knowledge or information about specific topic (Allen, 2017). Additionally, a population is an identifiable group or entity identified by at least one shared characteristic for data gathering and analysis. From this meaning, a population can be stated as the target society or group of citizens implicated or chosen for the research.

The target population of this research focuses on customers satisfaction towards robotic service restaurant in Malaysia. Robotic service adaptable interfaces that interact, communicate, and deliver services to an organization customer (Wirtz, 2018,). Adults aged 18 and above were chosen to participate in the survey as potential respondents. This population is selected because they are customers Malaysian that are experiencing visit restaurant.

This research examine how robotic service restaurant in Malaysia can influence customer satisfaction. To collect information on a large population, data is usually collected based on a sample conduct a study on service efficiency, time saving, monetary value and security towards robotic service restaurant in Malaysia. The study population could help achieve the study objectives in determining service efficiency, time saving, monetary value and security towards robotic.

### 3.4 SAMPLE SIZE

The sample size is usually determined by number of populations. For this research, the sample of this study would be customer satisfaction towards robotic service restaurant in Malaysia. Since this research involves a broad a population and because the total number of customers satisfaction towards robotic service restaurant in Malaysia is uncertain, according to Krejcie and Morgan (1970), for population of more than 1000000 people, a sample size of 384 people is required.

Table 3.4.1 Table for determining sample size of a known population

<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	3200	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.

Source: Krejcie & Morgan, 1970

Figure 3.2 shows the formula used by Krejcie and Morgan to determine the sample size for a given population shown in Table 3.4.1

$$n = \frac{X^2 * N * P * (1-P)}{(ME^2 * (N-1)) + (X^2 * P * (1-P))}$$

Where:  
 n = sample size  
 $X^2$  = Chi – square for the specified confidence level at 1 degree of freedom  
 N = Population Size  
 P = population proportion (.50 in this table)  
 ME = desired Margin of Error (expressed as a proportion)

Figure 3.2: Sample size formula

### 3.5 SAMPLING METHOD

The sampling method is the procedure by which a certain number of observations are chosen from a population group for the statistical analysis. The entire group of people, situations, or something that the researcher is interested in studying in a research study is referred as the population. Sampling is the method used to choose this subgroup from the population, and this subgroup is called as a sample. In this research, sampling method have two type of sampling strategies which are probability sampling technique and non-probability technique.

Probability sampling technique have many techniques, but simple random sampling is suitable for this research. A subset of participants is randomly chosen from a population by the research using simple random sampling, one of the types of probability sampling. The population is adult because majority customers of the restaurant from the adult and respondent are selected randomly. So, in this case the researcher use questionnaire using social platform is Google Form and research give the questionnaire through social media such as WhatsApp, Facebook, Instagram and more. This way is

easier because of people nowadays use smartphone to communicate. This method is helpful and suitable by using simple random sampling.

### **3.6 DATA COLLECTION PROCEDURE**

For this section, data collection defines refer to collection, measurement, and analysis from any sources to solve problems in research, provide answers to common questions, identify potential problems, and make predictions and more. This research must clarify the data sources, data types, and methodology used during data collections. Data collection procedure has two method which are primary data and secondary data. Primary data is more to the first-hand data collection. Secondary data is information that was gathered earlier by another source. This purpose is to collect data related to our research.

For this research, before data can be measured, it could be necessary to analysed once it is collected. For examples, it might be required to change questionnaire and survey results from words to numbers. In this research use Google Form because it easy to obtain responses without to ask face to face. There are random respondents who were chosen to complete the questionnaires or survey were used to collect the data. The questionnaires will be divided into Sections A and B, and they will each be represented in both English and Malay. This questionnaire is about how customers can give answer or perspective about customers satisfaction toward robotics in the restaurant. This way, respondent easier and more interested to answer the questionnaires or survey that researcher given. Respondent can respond anytime they want as long they want to answer the questionnaire.



### 3.7 RESEARCH INSTRUMENT

The goal of this quantitative study is to gather numerical data and generalize it across groups of individuals or to express a single occurrence. Malaysians from all throughout the country are the intended audience for this poll. When respondents participate and answer all the questions on the questionnaire, data is collected. The three sections of the questionnaire will be Section A, Section B, and Section C. On the questionnaire, respondents can choose whether to answer closed-ended or open-ended questions. The questionnaire method is employed in quantitative research, which focuses on statistically analyzing numerical data obtained from large-scale survey research. Section A will be completed by respondents with demographic information such as gender, age, race, occupation, education level, income level and state. In this section, the nominal scale will be utilized. A nominal scale is used to classify data that lacks a numerical value. Sections B and C examine the ordinal scale. Ordinal scales are used to assess a respondent's level of satisfaction, agreement or disagreement with a statement, and other factors. Section B comprises related questions about service efficiency, time saving, security and monetary value. 10 questions will be included in each component. Section C also have 10 questions about dependent variables.

The 5-point Likert scale includes strongly agree, agree, neutral, disagree and strongly disagree. There will be 5 options: strongly agree, agree, strongly disagree, disagree and neutral.

Rensis Likert, a psychologist interested in gauging people's thoughts or attitudes on several topics, created the first Likert scale in 1932. Likert scales are now often utilized in social and educational research.

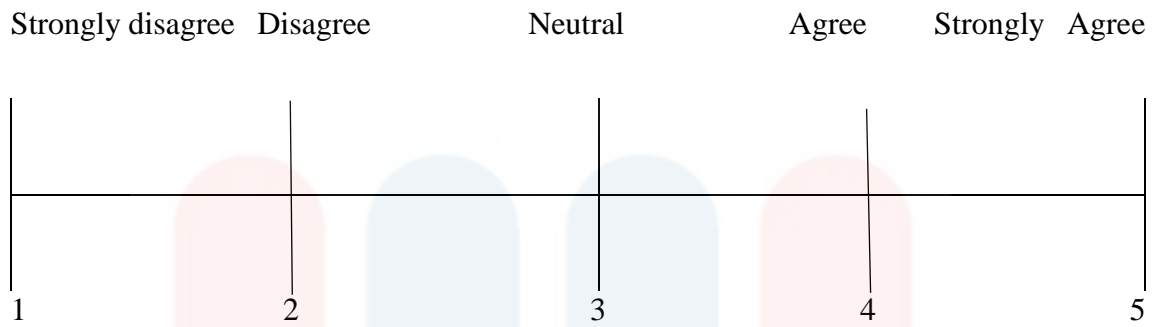


Figure 3.7.1: Measurement of Likert Scale.

### 3.7.1 Questions used in Section (A) of the Questionnaire

In section A, the question focuses on the respondent’s demographic section. It will consist of gender, race, age, occupation, education level, level income and state. Therefore, the researcher also provides multiple choice for the respondents, where the respondent only needs to select the answer listed as the example below:

Table 3.2: Demographic Factors

Items	Measures
Gender	Male
	Female
Age	18 – 25 years old
	25 – 30 years old
	30 – 45 years old
	45 years old and above
Race	Malay
	Chinese
	Indian
	Others

Occupation	<ul style="list-style-type: none"> <li>Student</li> <li>Self-Employee</li> <li>Government Staff</li> <li>Private Staff</li> <li>Others</li> </ul>
Education Level	<ul style="list-style-type: none"> <li>Primary School</li> <li>Secondary School</li> <li>Stpm / Diploma</li> <li>Bachelor of Degree</li> <li>Masters</li> <li>PHD</li> <li>Others</li> </ul>
Income Level	<ul style="list-style-type: none"> <li>No income</li> <li>Below RM 1000</li> <li>RM 1000 – RM 3000</li> <li>RM 3000 – RM 5000</li> <li>RM 5000 and above</li> </ul>
State	<ul style="list-style-type: none"> <li>Kelantan</li> <li>Terengganu</li> <li>Pahang</li> <li>Johor</li> <li>Melaka</li> <li>Kuala Lumpur</li> <li>Selangor</li> <li>Negeri Sembilan</li> <li>Perak</li> <li>Kedah</li> <li>Pulau Pinang</li> <li>Perlis</li> <li>Sabah</li> <li>Sarawak</li> </ul>

### 3.7.2 Questions used in Section (B) of the Questionnaire

In Sections B, the researcher lists the questions in a 5-Likert Scale method. The 5-Likert Scale is used in this questionnaire because the feedbacks from the respondent are effectively quantifiable and abstract to the calculation of some scientific investigation. According to Rensis Likert (1903 – 1981), Likert type has become a method to measure's people thoughts and feelings from opinion surveys to personality test. Likert's contributions in psychometrics, research samples and open-ended interviewing have helped form and shape social and organizational psychology. Besides that, measurements on the 5-Likert Scale consist of 1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, and 5- Strongly agree. The researcher distributed the questionnaire to customers towards robotic service restaurant in Malaysia.

This section is focused on the factors that influence customer satisfaction towards robotic service restaurant in Malaysia. There were ten statements regarding the factors that influence customer satisfaction towards robotic service restaurant in Malaysia which adapted from Osman El-Said et al., (2022), Kyung Hwa Seo & Jee Hye Lee, (2021), Newsha Emaminejad & Reza Akhavian, (2022) and Min-Kyu Kwak & JeungSun Lee, (2021). The 5-point Likert Scale statements were illustrated below:

Table 3.3: Customers Satisfaction based Service Efficiency factors

No	Items	Sources
1	Did you satisfied with the speed and efficiency of the robot service you received?	
2	Did the efficiency of the robotic service at the restaurant impact your overall satisfaction with the dining experience?	
3	The robot service was efficient in meeting my needs.	
4	The robot service was easy to use and navigate.	
5	Did you satisfied with the accuracy of robotic service provided?	Adapted from Osman El-Said et al., (2022)
6	Did robotic service functionable to you nicely?	
7	The robotic service responded quickly to my queries.	
8	I would use the robotic service again in future.	
9	The robotic service met my expectations.	
10	Overall, I am satisfied with the efficiency of the robot service.	

Table 3.4: Customer Satisfaction based on Time Saving factors

No	Items	Sources
1	The time saving benefits of robotic service in restaurant are more important to me than the novelty of using a robot.	
2	Did the robotic service save your time?	
3	Did the robotic service reduce your waiting time in the restaurant?	
4	Are you satisfied with the time it takes to receive your order when using robotic service in a restaurant?	
5	Did you satisfied with the time it took for your food to be prepared and served by the robotic system?	Adapted from Kyung Hwa Seo & Jee Hye Lee, (2021)
6	Did the robotic service save your time compared to traditional service methods?	
7	The time saving benefits of robotic service in a restaurant make me more satisfied with the value of the food and service.	

- 8 The speed of robotic service in a restaurant is more important to me than personalized service from a human server.
- 9 I am willing to use a robot server for faster service than a human server in restaurant.
- 10 I believed that the speed and efficiency of robotic service in a restaurant enhances my overall dining experience.

Table 3.5 Customer Satisfaction based on Security factors

No	Items	Sources
1	I believe the robotic service is reliable and trustworthy.	
2	I feel comfortable interacting with the robotic service.	
3	The robotic service provides clear instructions on how to use it safely.	
4	Did you satisfied with the security measures of the robotic service you have used?	
5	I am confident that the security measures in place for robotic services are effective.	Adapted from Newsha Emaminejad & Reza Akhvian, (2022)
6	Did you satisfied with the security measures in place for the robotic service in restaurant?	
7	Are you satisfied with the level of training and knowledge displayed by the restaurant staff in regards to the robotic service?	
8	I trust the security measures implemented by the restaurant for the use of robotic service.	
9	I would recommend the restaurant's robotic service to others based on its security measures.	
10	The presence of security measures for robotic service in restaurant enhances my overall dining experience.	

Table 3.6: Customer Satisfaction based on Monetary Value factors

No	Items	Sources
1	The cost of robotic service in the restaurant was reasonable.	
2	I received good value for the price I paid for the robotic service.	
3	Have you ever felt that the cost of the robotic service in the restaurant was too high for the benefits?	
4	Did you will recommend the restaurant to others based on cost or money value for the robotic service?	
5	Would you be willing to pay more for a restaurant that offers a wider range of robotic service options such as automated ordering, robotic food delivery and automated payment?	Adapted from Min-Kyu Kwak & JeungSun Lee, (2021)
6	Would you be more likely to visit a restaurant that offered a discount or promotion for the use of robotic service?	
7	Do you agree that the cost of the robotic service in restaurant is fair compared to the cost of traditional human service?	
8	Did the cost of the robotic service affect your decision to dine in at the restaurant?	
9	Did the price of the robotic service influence your decision to order more or less food or drinks than you would have otherwise?	
10	The cost of the robotic service did not negatively impact on my overall satisfaction.	

### 3.7.3 Questions used in Section (C) of the Questionnaire

In Section (C), there were ten (10) items measuring factors that influence customer satisfaction towards robotic service restaurant in Malaysia. Ten statements were used to measures the robotic service influence customer satisfaction in restaurant. All the statements were adapted from Jain, N.R.K., Liu-Lastres, B., & Wen, H. (2021).

Table 3.7 Measure Robotic Service towards Customer Satisfaction

No	Items	Sources
1	Robotic service in a restaurant improves the efficiency of my dining experience.	
2	Robotic service in a restaurant increases my overall satisfaction with my dining experience.	
3	I find robotic service in a restaurant to be impersonal.	
4	Overall, robotic service in a restaurant is more accurate than human service.	
5	I believe that a restaurant using robotic service cares less about its customers.	Adapted from Jain, N.R.K., Liu-Lastres, B., & Wen, H. (2021)
6	Overall, robotic service in a restaurant reduces the amount of time I need to wait for my food.	
7	I feel comfortable interacting with a robot in a restaurant setting.	
8	Overall, robotic service in a restaurant increases the quality of my dining experience.	
9	I am willing to pay more for a restaurant that uses robotic service.	
10	The availability of robotic service in a restaurant increases my overall satisfaction with the dining experience.	

### 3.8 DATA ANALYSIS

Data analysis is the process of organising, summarising, expressing, evaluating, and interpreting data using statistical techniques. Before beginning the analysis, it is critical to grasp the purpose of this study. The data in this study was analysed using the Statistical Package for Social Science (SPSS), version 28. SPSS is a piece of software that can utilise descriptive analysis and correlation to describe the relationship between independent and dependent variables. SPSS can convert data from Malaysian respondents into meaningful information. The tool processes enormous datasets fast and assists



academics with difficult statistical analyses. As a result, the researcher benefits, and the reliability analysis aids in data interpretation. There are three types of data analysis: reliability analysis, descriptive analysis, and Pearson's Correlation Coefficient.

### **3.9 CONCLUSION**

In conclusion, ultimately, the researcher chose an appropriate sampling size of 384 respondents from the population since it is simple and typical of the total Malaysian population.

## CHAPTER 4

### RESULTS AND DISCUSSION

#### 4.1 INTRODUCTION

This chapter will discuss the conclusions of a study using data acquired from surveys sent through social media platforms such as WhatsApp, Telegram, and Instagram. The Statistical Package for the Social Sciences (SPSS) software tool was used to examine the questionnaire data. A pilot test with a total of 30 respondents was undertaken prior to administering the actual questionnaire, and a reliability test was used to determine the acceptability of the variables.

#### 4.2 RESULT OF DESCRIPTIVE ANALYSIS

Descriptive analysis is utilised in section A of the questionnaire to describe the demographic profiles, as well as the mean and average mean of the dependent variable and independent variables in section B. It is possible to construct a description or a simple quantitative summary of the obtained data set. The data collected can be put into context and used to help the study be better understood with this summarisation.

#### 4.2.1 DEMOGRAPHIC PROFILE

Table 4.1: Respondents' Gender

		Gender			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	Male	192	50.0	50.0	50.0
	Female	192	50.0	50.0	100.0
Total		384	100.0	100.0	

The frequency and proportion of respondents' gender is shown in Table 4.1 above. A total of 384 responders are female, with a ratio of 50.0%. The total number of male responders is 192, representing a ratio of 50.0%.

Table 4.2: Respondents' Age

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 25 year old	181	47.1	47.1	47.1
	25 - 30 year old	104	27.1	27.1	74.2
	30 - 45 year old	77	20.1	20.1	94.3
	45 year old and above	22	5.7	5.7	100.0
Total	384	100.0	100.0		

Table 4.2 shows the age of respondents which have been categorized into 4 levels. There is a total of 181 (47.1%) respondents with the age 18 – 25-year-old. The next highest frequency is 104 (27.1%) respondents with age 25 – 30 years old and 30 – 45 years old with 77 (20.1%) respondents. The age with the lowest frequency is 45 years old and above with only 22 (5.7%) respondents.

Table 4.3: Respondents' Race

		Race			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	220	57.3	57.3	57.3
	Chinese	94	24.5	24.5	81.8
	India	64	16.7	16.7	98.4
	Other	6	1.6	1.6	100.0
	Total	384	100.0	100.0	

The race of the respondents for this study is represented in Table 4.3. The race has been divided into four classes. 220 (57.3%) of the 384 responders are Malay. This is the highest of the four classes. The second class, with a frequency of 94 (24.5%), is Chinese. There are 64 (16.7%) responses for the India race, and just 6 (1.6%) respondents for the last race, which is others.

Table 4.4: Respondents' Education Level

		Education Level		Valid	Cumulative
		Frequency	Percent	Percent	Percent
Valid	Primary School	3	.8	.8	.8
	Secondary School	69	18.0	18.0	18.8
	Stpm / Diploma	139	36.2	36.2	54.9
	Bachelor Of Degree	161	41.9	41.9	96.9
	Masters	12	3.1	3.1	100.0

Table 4.4 displays the education level of respondents, which has been classified into five levels. A total of 161 (41.9%) respondents have a Bachelor's degree as their greatest level of education. The next largest frequency is 139 (36.2%) respondents with STPM/Diploma, followed by 69 (18.0%) respondents with Secondary School and 12 (3.1%) respondents with Masters. Primary School has the lowest frequency of respondents, with only three (0.8%)

Table 4.5: Respondents' Occupation

		Occupation		Valid	Cumulative
		Frequency	Percent	Percent	Percent
Valid	Student	143	37.2	37.2	37.2
	Self Employee	92	24.0	24.0	61.2
	Government Staff	89	23.2	23.2	84.4
	Private Staff	56	14.6	14.6	99.0
	Other	4	1.0	1.0	100.0
	Total	384	100.0	100.0	

The occupations of the respondents are shown in Table 4.5. The questionnaire enquired about respondents' occupations, and replies were categorised into five categories. With 143 (37.2%) responders, the occupation with the highest frequency is

student. The second biggest frequency is self-employment, with 92 (24.0%) respondents. The frequency of government employees was 89 (23.2%). The second-lowest frequent occupation is private staff, with 56 (14.6%) respondents, followed by others with 4 (1.0%) respondents.

Table 4.6: Respondents' Income Level

		Income Level		Valid	Cumulative
		Frequency	Percent	Percent	Percent
Valid	No Income	134	34.9	34.9	34.9
	Below RM 1000	9	2.3	2.3	37.2
	RM 1000 - RM 3000	182	47.4	47.4	84.6
	RM 3000 - RM 5000	54	14.1	14.1	98.7
	RM 5000 and above	5	1.3	1.3	100.0
	Total	384	100.0	100.0	

Table 4.6 presents the income level of respondents. In this classification, there are 5 classes in which respondents can be divided into. The majority of respondents are not earning with a frequency of 134 (34.9%) respondents. The next highest frequency is 182 (47.4%) respondents with an income level of < RM1000-RM3000 followed by RM3000 – RM5000 with 54 (14,1%) respondents. The lowest frequency is 9 (2.3%) respondents with an income level of below RM1000 followed by 5 (1.3) with an income level of RM5000 and above.

Table 4.7: Respondents' State

	State	State			Cumulative Percent
		Frequency	Percent	Valid Percent	
Valid	Kelantan	54	14.1	14.1	14.1
	Terengganu	27	7.0	7.0	21.1
	Pahang	37	9.6	9.6	30.7
	Johor	58	15.1	15.1	45.8
	Melaka	8	2.1	2.1	47.9
	Kuala Lumpur	24	6.3	6.3	54.2
	Selangor	31	8.1	8.1	62.2
	Negeri Sembilan	18	4.7	4.7	66.9
	Perak	30	7.8	7.8	74.7
	Kedah	26	6.8	6.8	81.5
	Perlis	21	5.5	5.5	87.0
	Pulau Pinang	11	2.9	2.9	89.8
	Sabah	19	4.9	4.9	94.8
	Sarawak	20	5.2	5.2	100.0
	Total	384	100.0	100.0	

The data provided represents the frequency and percentage distribution of different states in Malaysia. The table shows the number of occurrences (frequency) and the corresponding percentage values for each state.

Here's an explanation of the data:

1. Kelantan: There are 54 occurrences of Kelantan, which accounts for 14.1% of the total.
2. Terengganu: There are 27 occurrences of Terengganu, representing 7.0% of the total.
3. Pahang: Pahang appears 37 times, accounting for 9.6% of the total.
4. Johor: There are 58 occurrences of Johor, which make up 15.1% of the total.

5. Melaka: Melaka appears 8 times, representing 2.1% of the total.
6. Kuala Lumpur: There are 24 occurrences of Kuala Lumpur, accounting for 6.3% of the total.
7. Selangor: Selangor appears 31 times, representing 8.1% of the total.
8. Negeri Sembilan: There are 18 occurrences of Negeri Sembilan, making up 4.7% of the total.
9. Perak: Perak appears 30 times, representing 7.8% of the total.
10. Kedah: There are 26 occurrences of Kedah, accounting for 6.8% of the total.
11. Perlis: Perlis appears 21 times, representing 5.5% of the total.
12. Pulau Pinang: There are 11 occurrences of Pulau Pinang, making up 2.9% of the total.
13. Sabah: Sabah appears 19 times, representing 4.9% of the total.
14. Sarawak: There are 20 occurrences of Sarawak, accounting for 5.2% of the total.
15. Total: The total number of occurrences is 384, which represents 100% of the data.

The "Valid Percent" column provides the percentage of occurrences out of the total valid responses, while the "Cumulative Percent" column shows the cumulative percentage up to each state, indicating the progressive distribution as each state is added.

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#### 4.2.2 MEAN AND AVERAGE MEAN OF INDEPENDENT AND DEPENDENT VARIABLES

Descriptive analysis has been linked to demonstrating mean and average of mean, which pertain to dependent variables and independent variables, respectively. The mean of each statement is calculated and examined depending on the levels of agreement.

Range of mean	Level of Agreement
4.21 - 5.00	Strongly Agree
3.41 - 4.20	Agree
2.61 - 3.40	Neutral
1.81 - 2.60	Disagree
1.00 - 1.80	Strongly Disagree

Table 4.8: Range of Mean and Level of Agreement by Sözen & Güven (2019)

Table 4.8 displays five mean ranges and their level of agreement. The range for strongly agree is 1.00 - 1.80, whereas the range for disagree is 1.81 - 2.60. The neutral level of agreement is 2.61 - 3.40 in the mean range. The second highest level of agreement is reached between 3.41 and 4.20, while the highest level of agreement is reached between 4.21 and 5.00.

### Service efficiency

NO.	Item Description	N	Mean	Level Of Agreement
1.	Did you satisfied did with the speed and efficiency of the robot service you received?	384	3.90	Agree
2.	Did the efficiency of the robotic service at the restaurant impact your overall satisfaction with the dining experience?	384	3.62	Agree
3.	The robot service was efficient in meeting my needs.	384	3.88	Agree
4.	The robot service was easy to use and navigate.	384	3.98	Agree
5.	Did you satisfied with the accuracy of robotic service provided.	384	3.93	Agree
6.	Did robotic service function-able to you nicely?	384	3.99	Agree
7.	The robotic service responded quickly to my queries.	384	3.91	Agree
8.	I would use the robotic service again in the future.	384	3.99	Agree
9.	The robotic service met my expectations.	384	4.00	Agree
10.	Overall, I am satisfied with the efficiency of the robot service.	384	4.00	Agree

	Average Mean	384	3.92	Agree
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Table 4.9 Descriptive Analysis of Service Efficiency

Table 4.9 show that the mean values for independent variables, service efficiency. The mean value is 4.00 which is for item “The robotic service met my expectations” and “Overall, I am satisfied with the efficiency of the robot service” refer to agree on level of agreement. Next is “Did robotic service function-able to you nicely?” and “I would use the robotic service again in the future” share the same mean value which is 3.99 refer to agree in level of agreement. For “The robot service was easy to use and navigate” in range of mean 3.98 refer to agree. Next is “Did you satisfied with the accuracy of robotic service provided” in range of mean 3.93 also refer to agree. 3.91 mean value refer to item “The robotic service responded quickly to my queries” and follow with 3.90 refer to item “Did you satisfied did with the speed and efficiency of the robot service you received”. Both item in the same range of mean that is agree. The second lowest mean is 3.88 refer to item “The robot service was efficient in meeting my needs” belong to agree in level of agreement. The last one is the lowest mean in table 4.9 is 3.62 refer to item “Did the efficiency of the robotic service at the restaurant impact your overall satisfaction with the dining experience?” also agree for level of agreement.

For the average mean in service efficiency, there are 3.92 which is agree in level of agreement. The majority mean from respondents chooses to agree in independent variable for service efficiency. Service efficiency important in related to robotic services restaurant in Malaysia. For service efficiency, customers want a fast service, but robotic services also have advantages and disadvantages.

## Time saving

NO.	Item Description	N	Mean	Level of Agreement
1.	The time-saving benefits of robotic service in a restaurant are more important to me than the novelty of using a robot.	384	3.97	Agree
2.	Did the robotic service save your time?	384	3.79	Agree
3.	Did the robotic service reduce your waiting time in the restaurant?	384	3.91	Agree
4.	Are you satisfied with the time it takes to receive your order when using robotic service in a restaurant?	384	3.91	Agree
5.	Did you satisfied with the time it took for your food to be prepared and served by the robotic system?	384	3.95	Agree
6.	Did the robotic service save your time compared to traditional service methods?	384	3.94	Agree
7.	The time-saving benefits of robotic service in a restaurant make me more satisfied with the value of the food and service.	384	3.89	Agree
8.	The speed of robotic service in a restaurant is more important to me than personalized service from a human server.	384	3.89	Agree
9.	I am willing to use a robot server for faster service	384	3.92	Agree

	than a human server in a restaurant.			
10.	I believed that the speed and efficiency of robotic service in a restaurant enhances my overall dining.	384	3.98	Agree
	Average Mean		3.96	Agree

Table 4.10 Descriptive Analysis of Time Saving

Table 4.10 displays the mean values for independent variables, such as time savings. "I believed that the speed and efficiency of robotic service in a restaurant enhances my overall dining." In this table, the highest mean in the range of means is 3.98, and their level of agreement is agreed. For the second highest mean, there is a degree of agreement of 3.97 for the item "The time-saving benefits of robotic service in a restaurant are more important to me than the novelty of using a robot". Then, item "Did you satisfied with the time it took for your food to be prepared and served by the robotic system?" with mean 3.95 and level of agreement is agreed. For mean 3.94 refer to item "Did the robotic service save your time compared to traditional service methods?" and level of agreement is agree. Item "I am willing to use a robot server for faster service than a human server in a restaurant" refer to mean 3.92 with agree. For item "Did the robotic service reduce your waiting time in the restaurant?" and "Are you satisfied with the time it takes to receive your order when using robotic service in a restaurant?" both are share the same mean are 3.91 with level of agreement is agree. There are two items with same mean 3.89 "The time-saving benefits of robotic service in a restaurant make me more satisfied with the value of the food and service" and "The speed of robotic service in a restaurant is more important to me than personalized service from a human server" with level of agreement

is agree. The last one, the lowest mean is 3.79 refer to item “Did the robotic service save your time?” with agree level of agreement.

For the average mean in time saving, there are 3.96 which is agree in level of agreement. The majority mean from respondents chooses to agree in independent variable for time saving. Time saving important in related to robotic services restaurant in Malaysia. Time saving need to show how good either robotic services or human services, so customers can choose which are their opinion.

### Security

No.	Item Description	N	Mean	Level Of Agreement
1.	I believe the robotic service is reliable and trustworthy.	384	3.96	Agree
2.	I feel comfortable interacting with the robotic service.	384	3.74	Agree
3.	The robotic service provides clear instructions on how to use it safely.	384	3.97	Agree
4.	Did you satisfied with the security measures of the robotic service you have used.	384	3.99	Agree
5.	I am confident that the security measures in place for robotic services are effective.	384	4.02	Agree
6.	Did you satisfied the security measures in place for the robotic service in the restaurant.	384	4.00	Agree
7.	Are you satisfied with the level of training and	384	3.92	Agree

	knowledge displayed by the restaurant staff in regard to the robotic service.			
8.	I trust the security measures implemented by the restaurant for the use of robotic service.	384	3.99	Agree
9.	I would recommend the restaurant's robotic service to others based on its security measures.	384	4.02	Agree
10.	The presence of security measures for robotic service in restaurant enhances my overall dining experience.	384	4.01	Agree
	Average Mean	384	3.96	Agree

Table 4.11 Descriptive Analysis of Security

Table 4.11 show that the mean values for independent variables, security. The highest range of mean in this table is 4.02 which are for item “Are you the security measures in place for the robotic service in the restaurant” and “I would recommend the restaurant's robotic service to others based on its security measures”. Both are agree in the level of agreement. The second highest mean is 4.01 which is for item “The presence of security measures for robotic service in restaurant enhances my overall dining experience” and level of agreement is agree. For item “Are you the security measures in place for the robotic service in the restaurant” the mean is 4.00 with agree level of agreement. For mean 3.99, there are two items which are “Are you with the security measures of the robotic service you have used” and “I trust the security measures implemented by the restaurant for the use of robotic service”. Level of agreement is agree. Next is for item “The robotic service provides clear instructions on how to use it safely”

with mean 3.97 and agree level of agreement. For item “I believe the robotic service is reliable and trustworthy” refer to 3.96 and level of agreement is agree. For 3.92 mean and agree were mentioned in this table which is the item from “Are you with the level of training and knowledge displayed by the restaurant staff in regard to the robotic service”. The lowest mean is 3.74 for item “I feel comfortable interacting with the robotic service” and agree were mentioned.

For the average mean in security, there are 3.96 which is agree in level of agreement. The majority mean from respondents chooses to agree in independent variable for security. Security important in related to robotic services restaurant in Malaysia. Security is one of why customers need to look up to these robotic services.

#### Monetary Value

No.	Item Description	N	Mean	Level of Agreement
1.	The cost of the robotic service in the restaurant was reasonable.	384	3.91	Agree
2.	I received good value for the price I paid for the robotic service.	384	3.75	Agree
3.	Have you ever felt that the cost of the robotic service in the restaurant was too high for the benefits it provides.	384	3.87	Agree
4.	Did you will recommend the restaurant to others based on its cost or value for money for the robotic service.	384	3.96	Agree
5.	Would you be willing to pay more for a restaurant that offers a wider range	384	3.78	Agree



	of robotic service options, such as automated ordering, robotic food delivery, and automated payment.			
6.	Would you be more likely to visit a restaurant that offered a discount or promotion for the use of robotic service.	384	4.02	Agree
7.	Do you agree that the cost of the robotic service in the restaurant is fair compared to the cost of traditional human service.	384	3.93	Agree
8.	Did the cost of the robotic service affect your decision to dine at this restaurant.	384	3.97	Agree
9.	Did the price of the robotic service influence your decision to order more or less food or drinks than you would have otherwise.	384	3.91	Agree
10.	The cost of the robotic service did not negatively impact my overall satisfaction.	384	3.94	Agree
	Average Mean	384	3.90	Agree

Table 4.12 Descriptive Analysis of Monetary Value

Table 4.12 show that the mean values for independent variables, monetary value. For the highest mean is 4.02 with agree level of agreement for item “Would you be more likely to visit a restaurant that offered a discount or promotion for the use of robotic service”. The second highest mean is 3.97 with agree level of agreement for item “Did the cost of the robotic service affect your decision to dine at this restaurant”. Next is, for

item “Are you to recommend the restaurant to others based on its cost or value for money for the robotic service” with agree level of agreement and the mean is 3.96. For item “The cost of the robotic service did not negatively impact my overall satisfaction” with agree and the mean is 3.94. For mean 3.93 the item “Do you agree that the cost of the robotic service in the restaurant is fair compared to the cost of traditional human service” and agree of level of agreement. There are two mean that same is 3.91 and agree level of agreement for item “The cost of the robotic service in the restaurant was reasonable” and “Did the price of the robotic service influence your decision to order more or less food or drinks than you would have otherwise”. For item “Have you ever felt that the cost of the robotic service in the restaurant was too high for the benefits it provides” the mean is 3.87 and agree were mentioned in this table. The second lowest mean is 3.78 and agree level of agreement for item “Would you be willing to pay more for a restaurant that offers a wider range of robotic service options, such as automated ordering, robotic food delivery, and automated payment”. For the lowest mean is 3.75 with agree level of agreement for item “I received good value for the price I paid for the robotic service”.

For the average mean in monetary value, there are 3.90 which is agree in level of agreement. The majority mean from respondents chooses to agree in independent variable for monetary value. Monetary value important in related to robotic services restaurant in Malaysia.

Customers satisfaction

No.	Item Description	N	Mean	Level of Agreement
1.	Robotic service in a restaurant improves the efficiency of my dining experience.	384	3.90	Agree
2.	Robotic service in a restaurant increases my overall satisfaction with my dining experience.	384	3.70	Agree
3.	I find robotic service in a restaurant to be impersonal.	384	3.83	Agree
4.	Overall, robotic service in a restaurant is more accurate than human service.	384	3.65	Agree
5.	I believe that a restaurant using robotic service cares less about its customers.	384	3.12	Neutral
6.	I believe that a restaurant using robotic service cares less about its customers.	384	3.72	Agree
7.	I feel comfortable interacting with a robot in a restaurant setting.	384	3.86	Agree
8.	Overall, robotic service in a restaurant increases the quality of my dining experience.	384	3.84	Agree

9.	I am willing to pay more for a restaurant that uses robotic service.	384	3.86	Agree
10.	The availability of robotic service in a restaurant increases my overall satisfaction with the dining experience.	384	3.90	Agree
	Average Mean	384	3.74	Agree

Table 4.13 Descriptive Analysis of Customer Satisfaction

Table 4.13 show that the mean values for dependent variable, customer satisfaction. The highest mean in the table is 3.90 and agree level of agreement which have two item “Robotic service in a restaurant improves the efficiency of my dining experience” and “The availability of robotic service in a restaurant increases my overall satisfaction with the dining experience”. The second highest also have two mean that same which are 3.86 and agree for level of agreement for item “I feel comfortable interacting with a robot in a restaurant setting” and “I am willing to pay more for a restaurant that uses robotic service”. For mean 3.84 and agree level of agreement for item “Overall, robotic service in a restaurant increases the quality of my dining experience”. For item “I find robotic service in a restaurant to be impersonal” the mean is 3.83 and their level of agreement is agree. Next is the mean is 3.72 and level of agreement is agree for item “I believe that a restaurant using robotic service cares less about its customers”. For the mean 3.70 and agree were mentioned on the table for item “Robotic service in a restaurant increases my overall satisfaction with my dining experience”. For the second lowest of mean is 3.65 for item “Overall, robotic service in a restaurant is more accurate than human service” with level of agreement is agree. The lowest mean is 3.12 and the

level of agreement is neutral for this item “I believe that a restaurant using robotic service cares less about its customers”. This item only neutral compared to others.

For the average mean in customer satisfaction, there are 3.74 which is agree in level of agreement. The majority mean from respondents chooses to agree in dependent variable for customer satisfaction. Customer satisfaction influence to look towards to robotic services restaurant in Malaysia and be as dependent variable.

### 4.3 RELIABILITY TEST

Reliability can be defined as a measurement of a certain spectacle that is stable and produces consistent results. It can also be associated to repeated events. If repeated measurements with constant variables provide the same results, a test or study is called dependable. Cronbach’s alpha was utilized to assess the study's reliability. Cronbach's alpha is an internal consistency metric that is given as a value between 0 and 1. The validity and reliability of the study's questionnaire can be verified using this method.

Table 4.14: Cronbach’s Alpha Coefficient Values

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

Cronbach's alpha coefficient values are shown in Table 4.14. When the value is 0.9 or above, with a maximum value of 1, the internal consistency is regarded outstanding. Cronbach's alpha values less than 0.5, on the other hand, are regarded undesirable.

Table 4.15: Results for Reliability Analysis

Item Description	N.	No. of items	Cronbach's Alpha
Service Efficiency	384	10	0.810
Time Saving	384	10	0.795
Security	384	10	0.765
Monetary Value	384	10	0.752
Customers Satisfaction	384	10	0.779

Table 4.15 shows the results of the reliability analysis by Cronbach's alpha for each independent and dependent variable. There is a total of 4 independent variables and the first one is service efficiency. The variable had a total of 10 items under it with Cronbach's alpha value of 0.810 with the internal consistency of good ( $0.9 > \alpha \geq 0.8$ ).

The next independent variable is time saving with 10 items used to test its reliability and validity. The Cronbach's alpha value for this variable is 0.795. These values fall under the internal consistency of acceptable ( $0.8 > \alpha \geq 0.7$ ).

The third independent variable used in this study is security. This variable had 10 items as well under it and Cronbach's alpha value for it is 0.765. This value also falls under the internal consistency of acceptable ( $0.8 > \alpha \geq 0.7$ ).

The last independent variable is monetary value, also with 10 items used as well under it and Cronbach's alpha value for this variable is 0.752. This value fall under the internal consistency of acceptable ( $0.8 > \alpha \geq 0.7$ ).

The dependent variable which is the customers satisfaction also had 10 items under it to question its reliability. The Cronbach's alpha result for this variable is 0.779 which is considered as acceptable in term of the internal consistency ( $0.8 > \alpha \geq 0.7$ ).

In this study, all independent and dependent variables are considered reliable as they ranged in between acceptable ( $0.8 > \alpha \geq 0.7$ ) and good ( $0.9 > \alpha \geq 0.8$ ).

#### **4.4 RESULT OF INFERENTIAL ANALYSIS**

Inferential statistics are commonly used in research and studies to detect differences or connections between existing variables. The independent factors include service efficiency, time savings, security, and monetary value, while customer pleasure is the dependent variable. Pearson Correlation The coefficient will be used in this study to examine the strength of the relationship between the independent and dependent variables. The table below provides a guideline for the coefficient correlations and the strength of the association based on the values.

Table 4.16: Coefficient Correlation and Strength of Relationship

Range of correlation	Interpretation
0.90 – 1.00 (-0.90 to -1.00)	Very high positive (negative) correlation
0.70 – 0.90 (-0.70 to -0.90)	High positive (negative) correlation
0.50 – 0.70 (-0.50 to -0.70)	Moderate positive (negative) correlation
0.30 – 0.50 (-0.30 to -0.50)	Low positive (negative) correlation
0.00 – 0.30 (0.00 to -0.30)	Negligible correlation

#### Hypothesis 1

$H_{0a}$  – There is no relationship between service efficiency and the customer satisfaction towards robotic service in restaurant

$H_{1a}$  – There is a relationship between service efficiency and the customer satisfaction towards robotic service in restaurant

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Table 4.17: Relationship between service efficiency and Customer satisfaction

		Service Efficiency	Customer Satisfaction
Service Efficiency	Pearson Correlation	1	.592**
	Sig. (2-tailed)		.000
	N	384	384
Customer satisfaction	Pearson Correlation	.592**	1
	Sig. (2-tailed)	.001	
	N	384	384

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

Table 4.17 shows the relationship between service efficiency and customer satisfaction toward robotic service in restaurant. The interpretation of the value 0.592 means that the relationship between those two variables is moderate positive correlation.

Hypothesis 2

H<sub>0b</sub> – There is no relationship time saving and the customer satisfaction toward robotic service in restaurant

H<sub>1b</sub> – There is a relationship between time saving and the customer satisfaction toward robotic service in restaurant

Table 4.18: Relationship between Time Saving and Customer satisfaction

		Time Saving	Customer Satisfaction
Time saving	Pearson Correlation	1	.689**
	Sig. (2-tailed)		.000
	N	384	384
Customer satisfaction	Pearson Correlation	.689**	1
	Sig. (2-tailed)	.001	
	N	384	384

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

Table 4.18 shows the relationship between Time Saving and customer satisfaction toward robotic service in restaurant. The interpretation of the value 0.689 means that the relationship between those two variables is moderate positive correlation.

### Hypothesis 3

H<sub>0b</sub> – There is no relationship security and the customer satisfaction toward robotic service in restaurant

H<sub>1b</sub> – There is a relationship between security and the customer satisfaction toward robotic service in restaurant

Table 4.19: Relationship between Security and Customer satisfaction

		Security	Customer Satisfaction
Security	Pearson Correlation	1	.703**
	Sig. (2-tailed)		.000
	N	384	384
Customer satisfaction	Pearson Correlation	.703**	1
	Sig. (2-tailed)	.001	
	N	384	384

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

Table 4.19 shows the relationship between Security and customer satisfaction toward robotic service in restaurant. The interpretation of the value 0.703 means that the relationship between those two variables is moderate positive correlation.

#### Hypothesis 4

$H_{0b}$  – There is no relationship between Monetary value and the customer satisfaction toward robotic service in restaurant

$H_{1b}$  – There is a relationship between Monetary value and the customer satisfaction toward robotic service in restaurant

Table 4.20: Relationship between Monetary Value and Customer satisfaction

		Monetary Value	Customer Satisfaction
Monetary Value	Pearson Correlation	1	.677**
	Sig. (2-tailed)		.000
	N	384	384
Customer satisfaction	Pearson Correlation	.677**	1
	Sig. (2-tailed)	.001	
	N	384	384

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

Table 4.20 shows the relationship between Security and customer satisfaction toward robotic service in restaurant. The interpretation of the value 0.677 means that the relationship between those two variables is moderate positive correlation.

Table 4.21: Relationship of factors that influence customers satisfaction towards robotic in restaurant

		CS	SE	TS	S	MV
CS	Pearson	1	.529**	.642**	.552**	.677**
	Correlation					
	Sig. (2-tailed)		.001	.001	.001	.001
	N	384	384	384	384	384
SE	Pearson	.529**	1	.788**	.746**	.682**
	Correlation					
	Sig. (2-tailed)	.001		.001	.001	.001
	N	384	384	384	384	384
TS	Pearson	.689**	.788**	1	.796**	.746**
	Correlation					
	Sig. (2-tailed)	.001	.001		.001	.001
	N	384	384	384	384	384
S	Pearson	.703**	.746**	.796**	1	.772**
	Correlation					
	Sig. (2-tailed)	.001	.001	.001		.001
	N	384	384	384	384	384
MV	Pearson	.677**	.682**	.762**	.772**	1
	Correlation					
	Sig. (2-tailed)	.001	.001	.001	.001	
	N	384	384	384	384	384

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

Table 4.21 shows the relationship between the dependent variable which is customer satisfaction and the four independent variables which are service efficiency (SE), time saving (TS), security (S) and monetary value (MV). The relationships between service efficiency and time saving with customer satisfaction is positive and has moderate correlation. The relationship between security and monetary value with customer satisfaction is quite high positive and moderate correlation respectively.

#### **4.5 SUMMARY**

The data collected in this study highlight the factors that influence customers satisfaction towards robotic service restaurant in Malaysia. There are 384 respondents that are involved in this study. According to the results, majority of respondents are between 18 – 25 years old while minority of the respondents between 45 years old and above.

According to the data analyzed, there is a higher mean score is 3.96 which is descriptive analysis statistic of security while the second highest mean score are 3.92 which is descriptive analysis statistic of service efficiency and time saving. The third highest mean score is 3.90 which is descriptive analysis statistic of monetary value, and the last highest mean score is 3.74 which is descriptive analysis statistic of customer satisfaction.

## **CHAPTER 5**

### **DISSCUSION**

#### **5.1 INTRODUCTION**

This chapter discusses the outcomes of Chapter 4. Aside from that, this chapter discusses future recommendations for this study, and it finishes with the dissemination of study findings to the general public.

#### **5.2 RECAPITULATION OF THE FINDINGS**

This section of the chapter provides a discussion of recapitulation based on the research purpose, research questions, and hypothesis for this study.

### 5.2.1 RELATIONSHIP BETWEEN SERVICE EFFICIENCY AND CUSTOMERS SATISFACTION TOWARDS ROBOTIC SERVICE IN THE RESTAURANT INDUSTRY

Research question 1 of this study asked about the relationship between service efficiency and customer satisfaction towards robotic service in the restaurant industry. This is to also answer the first objective and hypothesis. Table 5.1 shows the research objectives, questions, and hypothesis.

Table 5.1: Research Objective 1 and Research Question 1

No	Research Objective (RO)	Research Question (RQ)
1	To examine the relationship between service efficiency towards customer satisfaction.	Does service efficiency influence customer satisfaction?

H1: There is relationship between service efficiency with customer satisfaction towards robotic service in the restaurant in Malaysia.

The results of hypothesis H1 in Chapter 4 were reviewed to answer RQ1. H1 stated that there is a significant relationship between service efficiency and customer satisfaction toward robotic service in the restaurant industry. From the findings, it shows that it is moderately positive with a correlation coefficient of 0.592 at a p-value of 0.00 which is less than the highly significant level of 0.1. Therefore, H1 is accepted. A serving robot, a sort of service robot built for the primary purpose of serving and utilized in the restaurant business, is a robot with a limited objective of "serving," as opposed to service



robots with a broad range of applications. To begin with, here are a few reasons that make service efficiency with robotic service so popular. Anything that might provide a company an advantage in a competitive market, such as the restaurant business, is worth investigating. Robotics may assist restaurants in a variety of ways, including increased efficiency and production, enhanced safety and cleanliness, and improved customer service. Furthermore, robots can free up humans for other tasks or even allow organizations to operate with fewer employees. Robots can make meals faster and more consistently than people, and they don't need breaks or vacations. Furthermore, robots may be programmed to do tasks like taking orders, wiping tables, and even greeting clients. In certain cases, these robots have even been able to provide a more personalized experience by chatting with customers and answering menu queries. The results have been spectacular, with many restaurants reporting increased customer happiness and income.

### **5.2.2 RELATIONSHIP BETWEEN TIME SAVING AND CUSTOMERS SATISFACTION TOWARDS ROBOTIC SERVICE IN THE RESTAURANT INDUSTRY**

Research question 2 of this study asked about the relationship between time-saving customers' satisfaction towards robotic service in the restaurant industry. This is also to answer the second objective and hypothesis. Table 5.2 shows the research objectives, questions, and hypothesis.

Table 5.2: Research Objective 2 and Research Question 2

No	Research Objective (RO)	Research Question (RQ)
2	To examine the relationship between time-saving towards customer satisfaction.	Does time-saving influence customers' satisfaction?

H2: There is a relationship between time-saving with customers satisfaction towards robotic service in the restaurant in Malaysia.

RQ2 was answered by reviewing the outcomes of hypothesis H2. According to H2, there is a significant association between perceived trust and adoption of online meal delivery apps. According to the findings, the correlation coefficient is 0.689, and the p-value is 0.00, which is less than the highly significant level of 0.1. Therefore, H2 is accepted. Time saving can be defined reducing the amount of time needed for doing something. Since the emergence of robot technology, a rising number of industries, including the restaurant sector of the hospitality business, have profited from their services. Robots have several advantages over human employment, one of which is time savings. Time saving is defined as reducing the amount of time necessary to accomplish a task, notably in restaurants where customer satisfaction is heavily influenced. Robots may operate constantly for 7 days a week, offering any service to consumers in restaurants without tiring. Robots do not require breaks or vacation days due to their ability to perform constantly and very successfully because they are designed to assist human tasks. This enables companies such as restaurants to save time and money while also improving the quality and value of their operations. With the existence of this robot, the amount of time it takes for human labor to transport and collect each order from clients may be reduced indirectly by a little amount of time. Given the increase in orders, the majority of restaurants now use a robot workforce since it saves time and offers the institution an

edge over human labor, which takes more time to walk about when working in restaurants. As a result, this robot can cut total delivery times and may even allow the restaurant to grow. Collaboration between people and robots can save time and money on specialized professions, such as when a person acts as a chef in the kitchen and a robot act as a waiter who receives and delivers orders to clients.

### 5.2.3 RELATIONSHIP BETWEEN SECURITY TOWARDS CUSTOMER SATISFACTION

For this study, research question 3 has been identify the relationship between security towards customer satisfaction. This is required to answer third objective and hypothesis. Table 5.3 show the research objectives, questions, and hypothesis.

No	Research Objectives (RO)	Research Question (RQ)
3	To examine the relationship between security towards customer satisfaction.	Does security influence customer satisfaction?

Table 5.3: Research Objective 3 and Research Question 3

H3: There is relationship between security with customer satisfaction towards robotic service restaurant in Malaysia.

To answer RQ3, need to review and look at the result of hypothesis 3. H3 mentioned that there is relationship between monetary value with customer satisfaction towards robotic service restaurant in Malaysia. From the findings, it is positive with the correlation coefficient of 0.70 while p value is 0.00 which is less than the highly significance level 0.01. As a result, H3 is accepted. If the security is positive, the higher customers satisfaction toward robot service restaurant in Malaysia. Security is the state

of being or feeling secure, free of fear, anxiety, danger, and uncertainty. Something that provides or guarantees safety, tranquillity, or certainty, such as protection or safeguard. Security is an outsourced service in which an outside company handles and manages your security because robots can directly perceive and affect the physical world (Webster's New World College. Houghton Mifflin. 2014). Besides, security is especially important in robotics. As autonomous systems interact with humans and robotic systems grow more widespread, the necessity to safeguard these systems becomes crucial. Historically, industrial robots were mostly used in production areas that had walls and closed networks to keep them secure. In all matters, good security is required so that the robot is safe to use in the restaurant. Indirectly, able to increase customer satisfaction. This gives an advantage to know the feedback and improve in the future. It doesn't matter where is security, it is important for things and situations.

#### **5.2.4 RELATIONSHIP BETWEEN MONETARY VALUE TOWARDS CUSTOMER SATISFACTION**

For this study, research question 4 has been identify the relationship between monetary value towards customer satisfaction. This is required to answer forth objective and hypothesis. Table 5.4 show the research objectives, questions, and hypothesis.

No	Research Objectives (RO)	Research Question (RQ)
4	To examine the relationship between monetary value towards customer	Does monetary value influence customer satisfaction?

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satisfaction.

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Table 5.4: Research Objective 4 and Research Question 4

H4: There is relationship between monetary value with customer satisfaction towards robotic service restaurant in Malaysia.

To answer RQ4, need to review and look at the result of hypothesis 4. H4 mentioned that there is relationship between monetary value with customer satisfaction towards robotic service restaurant in Malaysia. From the findings, it is positive with the correlation coefficient of 0.68 while p value is 0.00 which is less than the highly significance level 0.01. As a result, H4 is accepted. If the monetary value is positive, the higher customers satisfaction toward robot service restaurant in Malaysia. Monetary value defines as According to Pizzol et al. (2015) stated that financial value is also an exchange of measurement of social impact and physical impact in measuring the economic value of certain goods and services. Financial value can also be linked to an agreement in the payment of goods and services according to economic value. (Lo & Spash, 2013). Investing in something affects the decision in the portfolio for monetary value. (Amendinger et al., 2003). The use of this robot focuses on the customer's reaction as a service value with the advanced technology available on the robot. Blanche et al. (2021). This robot becomes a communication between humans and robots in creating society and giving sociotechnical implications. (Cardenas & Kim, 2020). The service sector contributes to the economy in monetary value, especially in restaurants with good work results. Therefore, monetary value is a very important role in having these robot services for customers and offering a suitable price for the service charge of these robots. Accompanied by the quality offered able to attract customers to come to the restaurant.

### 5.3 LIMITATIONS

This study had restrictions that made it difficult for researchers to complete it. One of the study's weaknesses was the method of data gathering. A questionnaire was utilised to collect information. This questionnaire was available in two languages: Bahasa Melayu and English. One restriction of this is that many people are unable to read or understand these languages. Some responders do not fully comprehend the questionnaire, or the statements asked in it. As a result, there may be inaccuracies in the statistics since respondents are doubtful about their own replies. In addition, some respondents prefer face-to-face questioning or interviews to filling out a questionnaire.

The next limitation to this study was that it was very unlikely for respondents to seek help or to address us if they are unsure of the questionnaire. As the questionnaire is distributed online, the questionnaire distributor is not physically available to help answer questions immediately if respondents have doubt or unsure the statement.

Finally, because the questionnaire is circulated via social media, many people simply scroll past it and ignore it. Only if we privately or directly message them will they respond, but the likelihood of them answering the questionnaire is also unknown. One would think that publishing and disseminating the questionnaire online will increase the number of replies, but this is not the case because most people are not interested in responding it.

## **5.4 RECOMMENDATIONS**

The strategy is unquestionably the most effective way to collect accurate data for this inquiry. The quantitative method is suited for this study because the goal is to determine the elements that influence customer satisfaction with robotic service restaurants in Malaysia. The findings would be more applicable, reliable, and generalizable to Malaysia's massive population. The second piece of advice is to choose respondents who are familiar with the questionnaire. Researchers would be able to acquire more credible survey data as a result of this. This will facilitate data collection and increase the number of sample data. As a result, there would be minimal misconceptions among survey respondents who do not understand or know how to complete the questionnaire. The last recommendation would be to increase the languages used for the questionnaire. The 2 languages were used for the questionnaire which were Bahasa Melayu and English. It would be more advantageous and beneficial if the questionnaire included languages such as Chinese and Tamil for wider and better understanding. This could potentially increase understandable languages in the questionnaire.

## **5.5 SUMMARY**

Finally, the purpose of this study was to look at the elements that influence customer satisfaction with robotic service restaurants in Malaysia. Furthermore, other scholars undertaking study on robotic service restaurants in Malaysia may find this paper useful. The data obtained in Chapter 4 using the Statistical Package for the Social Sciences (SPSS) were investigated further, and conclusions were formed. As a result, it is reasonable to conclude that in Malaysian robotic service restaurants, there is a link

between service efficiency, time savings, security, monetary value, and customer enjoyment. As a result, it is believed that all of the information supplied throughout this research will assist parties involved in improving robotic service in restaurants comparable to industrialised countries.



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## **APPENDIX A: QUESTIONNAIRE**

### **FACTORS THAT INFLUENCE CUSTOMERS SATISFACTION TOWARDS ROBOTIC SERVICE RESTAURANT IN MALAYSIA**

Dear respondents,

We are undergraduate students of Bachelor Degree in Entrepreneurship (Hospitality) with Honor, from Faculty of Hospitality, Tourism and Wellness (FHPK), University Malaysia Kelantan, Pengkalan Chepa, Kota Bharu, Kelantan. We are currently doing our final year project and we will be conducting the study above title. The purpose of this study is to examine the factors that influence customers satisfaction towards robotic service restaurant in Malaysia. We are hopeful that the information that we gather are useful by completing the questionnaire. All response will be kept strictly confidential and will be used for academic purposes only. Thank you for your cooperation.

Responden yang dihormati,

Kami merupakan pelajar Ijazah Sarjana Muda Keusahawanan (Hospitality) dengan Kepujian, dari Fakulti Hospitaliti, Pelancongan dan Kesejahteraan (FHPK), Universiti Malaysia Kelantan, Pengkalan Chepa, Kota Bharu, Kelantan. Kami sedang membuat projek tahun akhir kami dan kami akan menjalankan kajian berdasarkan tajuk yang dinyatakan di atas. Tujuan kajian ini adalah untuk mengkaji faktor-faktor yang mempengaruhi kepuasan pelanggan terhadap restoran perkhidmatan robotik di Malaysia. Kami berharap maklumat yang kami kumpulkan berguna dengan melengkapkan borang soal selidik. Semua jawapan adalah sulit dan akan digunakan untuk tujuan akademik sahaja. Terima kasih atas kerjasama anda.

Sincerely/ Sekian,

MUHAMAD HAKIMI BIN ABDULLAH (H20A1243)

MUHAMAD IBAD BIN HASSAN (H20A1245)

MUHAMMAD AIMAN HAKIM BIN ZAIDI (H20A1251)

MUHAMMAD FAHMI BIN AMIN HUSNI (H20A1267)

## **SECTION A: DEMOGRAPHIC SECTION**

### **BAHAGIAN A: MAKLUMAT DEMOGRAFI**

#### **GENDER / JANTINA**

- Male/ Lelaki
- Female/ Perempuan

#### **AGE / UMUR**

- 18 – 25 years old / 18 – 25 tahun
- 25 – 30 years old / 25 – 30 tahun
- 30 – 45 years old / 30 – 45 tahun
- 45 years old and above / 45 tahun dan ke atas

#### **RACE / BANGSA**

- Malay / Melayu
- Chinese / Cina
- Indian / India
- Others / Lain-lain

#### **OCCUPATION / PEKERJAAN**

- Student/ Pelajar
- Self-Employee / Bekerja Sendiri
- Government Staff / Kakitangan Kerajaan
- Private Staff / Kakitangan Swasta
- Others / Lain-lain



## EDUCATION LEVEL / TAHAP PENDIDIKAN

- Primary School / Sekolah Rendah
- Secondary School / Sekolah Menengah
- Stpm / Diploma
- Bachelor of Degree
- Masters
- PHD
- Others / Lain-lain

## INCOME LEVEL / TAHAP PENDAPATAN

- No Income / Tiada Pendapatan
- Below RM 1000 / Bawah RM 1000
- RM 1000 – RM 3000
- RM 3000 – RM 5000
- RM 5000 and above / RM 5000 dan ke atas

## STATE / NEGERI

- Kelantan
- Terengganu
- Pahang
- Johor
- Melaka
- Kuala Lumpur
- Selangor
- Negeri Sembilan
- Perak
- Kedah
- Pulau Pinang

- Perlis
- Sabah
- Sarawak

**SECTION B:**

**BAHAGIAN B:**

**I. SERVICE EFFICIENCY /KECEKAPAN PERKHIDMATAN**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Did you satisfied with the speed and efficiency of the robot service you received?  Adakah anda berpuas hati dengan kelajuan dan kecekapan perkhidmatan robot yang ada terima?	1	2	3	4	5
Did the efficiency of the robotic service at the restaurant impact your overall satisfaction with the dining experience?  Adakah kecekapan perkhidmatan robotik di restoran memberi kesan kepada kepuasan keseluruhan anda dengan pengalaman menjamu selera?	1	2	3	4	5
The robot service was efficient in meeting my needs.  Perkhidmatan robot adalah cekap dalam memenuhi keperluan saya.	1	2	3	4	5
The robot service was easy to use and navigate.  Perkhidmatan robot mudah untuk digunakan dan dinavigasi	1	2	3	4	5
Did you satisfied with the accuracy of robotic service provided?	1	2	3	4	5

Adakah anda berpuas hati dengan ketepatan perkhidmatan robotic yang disediakan.

Did robotic service functionable to you nicely? 1 2 3 4 5

Adakah perkhidmatan robotic berfungsi dengan baik kepada anda?

The robotic service responded quickly to my queries. 1 2 3 4 5

Perkhidmatan robot bertindak balas dengan cepat kepada pertanyaan saya.

I would use the robotic service again in future. 1 2 3 4 5

Saya akan menggunakan perkhidmatan robotic sekali lagi pada masa hadapan.

The robotic service met my expectations. 1 2 3 4 5

Perkhidmatan robotik memenuhi jangkaan saya.

Overall, I am satisfied with the efficiency of the robot service. 1 2 3 4 5

Secara keseluruhannya, saya berpuas hati dengan kecekapan perkhidmatan robot.



**II. TIME SAVING / PENJIMATAN MASA**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The time saving benefits of robotic service in restaurant are more important to me than the novelty of using a robot.	1	2	3	4	5
Kebaikan perkhidmatan robotik yang menjimatkan masa di restoran adalah lebih penting bagi saya daripada kebaruan menggunakan robot.					
Did the robotic service save your time?	1	2	3	4	5
Adakah perkhidmatan robotik menjimatkan masa anda?					
Did the robotic service reduce your waiting time in the restaurant?	1	2	3	4	5
Adakah perkhidmatan robotik mengurangkan masa menunggu anda di restoran?					
Are you satisfied with the time it takes to receive your order when using robotic service in a restaurant?	1	2	3	4	5
Adakah anda berpuas hati dengan masa yang diambil untuk menerima pesanan anda apabila menggunakan perkhidmatan robotik di restoran?					
Did you satisfied with the time it took for your food to be prepared and served by the robotic system?	1	2	3	4	5
Adakah anda berpuas hati dengan masa yang diambil untuk makanan anda disediakan dan dihidangkan oleh sistem robotik?					

Did the robotic service save your time compared to traditional service methods? 1 2 3 4 5

Adakah perkhidmatan robotik menjimatkan masa anda berbanding kaedah perkhidmatan tradisional?

The time saving benefits of robotic service in a restaurant make me more satisfied with the value of the food and service. 1 2 3 4 5

Kebaikan perkhidmatan robotik di restoran yang menjimatkan masa membuatkan saya lebih berpuas hati dengan nilai makanan dan perkhidmatan.

The speed of robotic service in a restaurant is more important to me than personalized service from a human server. 1 2 3 4 5

Kepantasan perkhidmatan robotik di restoran adalah lebih penting bagi saya berbanding perkhidmatan peribadi daripada pelayan manusia.

I am willing to use a robot server for faster service than a human server in restaurant. 1 2 3 4 5

Saya sanggup menggunakan pelayan robot untuk perkhidmatan yang lebih pantas daripada pelayan manusia di restoran.

I believed that the speed and efficiency of robotic service in a restaurant enhances my overall dining experience. 1 2 3 4 5

Saya percaya bahawa kelajuan dan kecekapan perkhidmatan robotik di restoran meningkatkan keseluruhan pengalaman makan saya.

### III. SECURITY / KESELAMATAN

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I believe the robotic service is reliable and trustworthy.	1	2	3	4	5
Saya percaya perkhidmatan robotik boleh dipercayai.					
I feel comfortable interacting with the robotic service.	1	2	3	4	5
Saya berasa selesa berinteraksi dengan perkhidmatan robotik.					
The robotic service provides clear instructions on how to use it safely.	1	2	3	4	5
Perkhidmatan robotik menyediakan arahan yang jelas tentang cara menggunakannya dengan selamat.					
Did you satisfied with the security measures of the robotic service you have used?	1	2	3	4	5
Adakah anda berpuas hati dengan langkah keselamatan perkhidmatan robotik yang telah digunakan?					
I am confident that the security measures in place for robotic services are effective.	1	2	3	4	5
Saya yakin bahawa langkah keselamatan yang disediakan untuk perkhidmatan robotik adalah berkesan.					
Did you satisfied with the security measures in place for the robotic service in restaurant?	1	2	3	4	5
Adakah anda berpuas hati dengan langkah keselamatan yang disediakan untuk					

perkhidmatan robotik di restoran?

Are you satisfied with the level of training and knowledge displayed by the restaurant staff in regards to the robotic service?

1                      2                      3                      4                      5

Adakah anda berpuas hati dengan tahap latihan dan pengetahuan yang dipaparkan oleh kakitangan restoran berkenaan dengan perkhidmatan robotik?

I trust the security measures implemented by the restaurant for the use of robotic service.

1                      2                      3                      4                      5

Saya percaya langkah keselamatan yang dilaksanakan oleh restoran untuk penggunaan perkhidmatan robotik.

I would recommend the restaurant's robotic service to others based on its security measures.

1                      2                      3                      4                      5

Saya akan mengesyorkan perkhidmatan robotik restoran kepada orang lain berdasarkan langkah keselamatannya.

The presence of security measures for robotic service in restaurant enhances my overall dining experience.

1                      2                      3                      4                      5

Kehadiran langkah keselamatan untuk perkhidmatan robotik di restoran meningkatkan keseluruhan pengalaman makan saya.



**IV. MONETARY VALUE / NILAI MONETARI**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The cost of robotic service in the restaurant was reasonable. Kos perkhidmatan robotik di restoran adalah berpatutan.	1	2	3	4	5
I received good value for the price I paid for the robotic service. Saya menerima nilai yang baik untuk harga yang saya bayar untuk perkhidmatan robotik.	1	2	3	4	5
Have you ever felt that the cost of the robotic service in the restaurant was too high for the benefits it provides? Pernahkan anda merasakan bahawa kos perkhidmatan robotik di restoran terlalu tinggi untuk faedah yang diberikannya?	1	2	3	4	5
Did you will recommend the restaurant to others based on cost or money value for the robotic service? Adakah anda akan mengesyorkan restoran itu kepada orang lain berdasarkan kos atau nilai wangnya untuk perkhidmatan robotik?	1	2	3	4	5
Would you be willing to pay more for a restaurant that offers a wider range of robotic service options such as automated ordering, robotic food delivery and automated payment? Adakah anda sanggup membayar lebih untuk restoran yang menawarkan pilihan perkhidmatan robotik	1	2	3	4	5



yang lebih luas seperti pesanan automatik, penghantaran makanan robotik dan pembayaran automatik?

Would you be more likely to visit a restaurant that offered a discount or promotion for the use of robotic service?

1                      2                      3                      4                      5

Adakah anda lebih cenderung untuk mengunjungi restoran yang menawarkan diskaun atau promosi untuk penggunaan perkhidmatan robotik?

Do you agree that the cost of the robotic service in restaurant is fair compared to the cost of traditional human service?

1                      2                      3                      4                      5

Adakah anda bersetuju bahawa kos perkhidmatan robotik di restoran adalah adil berbanding kos perkhidmatan manusia tradisional?

Did the cost of the robotic service affect your decision to dine in at the restaurant?

1                      2                      3                      4                      5

Adakah kos perkhidmatan robotik mempengaruhi keputusan anda untuk menjamu selera di restoran ?

Did the price of the robotic service influence your decision to order more or less food or drinks than you would have otherwise?

1                      2                      3                      4                      5

Adakah harga perkhidmatan robotik mempengaruhi keputusan anda untuk memesan lebih banyak atau kurang makanan atau minuman daripada yang anda lakukan sebaliknya?

The cost of the robotic service did not negatively impact on my overall satisfaction.

1                      2                      3                      4                      5

Kos perkhidmatan robotik tidak memberi kesan negative terhadap kepuasan keseluruhan saya.

**SECTION C:**

**BAHAGIAN C:**

**I. CUSTOMER SATISFACTION / KEPUASAN PELANGGAN**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Robotic service in a restaurant improves the efficiency of my dining experience.	1	2	3	4	5
Perkhidmatan robot di restoran meningkatkan kecekapan pengalaman makan saya.					
Robotic service in a restaurant increases my overall satisfaction with my dining experience.	1	2	3	4	5
Perkhidmatan robotik di restoran meningkatkan kepuasan keseluruhan saya dengan pengalaman makan saya.					
I find robotic service in a restaurant to be impersonal.	1	2	3	4	5
Saya mendapati perkhidmatan robotik di restoran tidak bersifat peribadi.					
Overall, robotic service in a restaurant is more accurate than human service.	1	2	3	4	5
Secara keseluruhan, perkhidmatan robotik di restoran adalah lebih tepat daripada perkhidmatan manusia.					

I believe that a restaurant using robotic service cares less about its customers. 1 2 3 4 5

Saya percaya bahawa restoran yang menggunakan perkhidmatan robotik kurang mengambil berat tentang pelanggannya.

Overall, robotic service in a restaurant reduces the amount of time I need to wait for my food. 1 2 3 4 5

Secara keseluruhan, perkhidmatan robotik di restoran mengurangkan jumlah masa yang saya perlukan untuk menunggu makanan saya.

I feel comfortable interacting with a robot in a restaurant setting. 1 2 3 4 5

Saya berasa selesa berinteraksi dengan robot dalam suasana restoran.

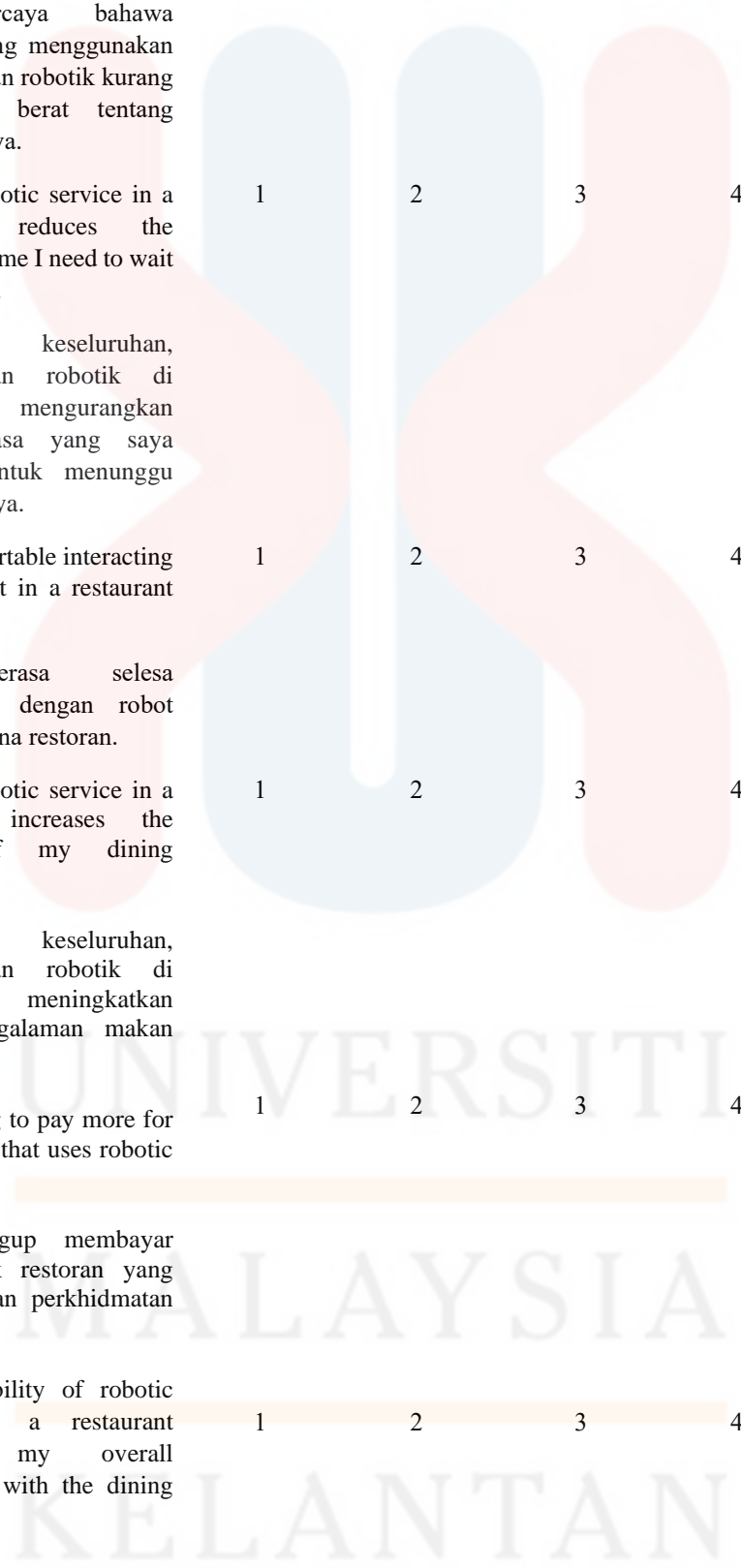
Overall, robotic service in a restaurant increases the quality of my dining experience. 1 2 3 4 5

Secara keseluruhan, perkhidmatan robotik di restoran meningkatkan kualiti pengalaman makan saya.

I am willing to pay more for a restaurant that uses robotic service. 1 2 3 4 5

Saya sanggup membayar lebih untuk restoran yang menggunakan perkhidmatan robotik.

The availability of robotic service in a restaurant increases my overall satisfaction with the dining experience. 1 2 3 4 5

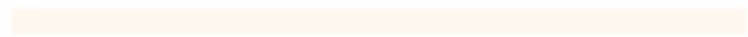


Ketersediaan perkhidmatan robotik di restoran meningkatkan kepuasan keseluruhan saya dengan pengalaman menjamu selera.

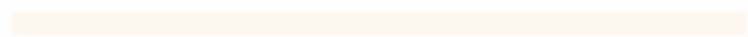
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