

**THE STUDY ON FACTORS THAT INFLUENCE
CONSUMERS' ACCEPTANCE TOWARDS SELF -
CHECKOUT SYSTEM (SCS) AT IKEA BATU KAWAN**

EKFP

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The Study On Factors That Influence Consumers' Acceptance Towards Self - Checkout System (SCS) At IKEA Batu Kawan

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ABSTRAK

Sejak kebelakangan ini, isu ramai tidak mengetahui berkenaan sistem pembayaran sendiri di IKEA Batu Kawan. Oleh itu, kajian ini bertujuan untuk mengkaji faktor - faktor yang mempengaruhi penerimaan pengguna terhadap sistem pembayaran sendiri di IKEA Batu Kawan. Kaedah kuantitatif digunakan dalam menyempurnakan penyelidikan ini. Persampelan rawak mudah digunakan untuk mengumpul data, dan soal selidik berstruktur direka bentuk untuk mengumpul data daripada 382 responden. Pakej Statistik untuk Sains Sosial (SPSS) versi 25 dan PLS 4.0 digunakan untuk analisis data. Hasil kajian merumuskan bahawa pembolehubah bebas kebergunaan yang dirasakan, kepantasan, kemudahan penggunaan yang dirasakan, sikap terhadap teknologi, dan celik pelanggan mempunyai hubungan yang signifikan dengan penerimaan pengguna terhadap sistem pembayaran sendiri di IKEA Batu Kawan. Batasan kajian dan cadangan ini disertakan dalam kajian ini bagi memberi gambaran yang lebih baik kepada pengkaji akan datang berkaitan kajian yang melibatkan sistem pembayaran sendiri di IKEA Batu Kawan.

ABSTRACT

Recently, the issue of most of people do not know about self - checkout system at IKEA Batu Kawan. Therefore, this study aims to study the factors that influence consumers' acceptance towards self - checkout system (SCS) at IKEA Batu Kawan. A quantitative method is used in completing this research. A simple random sampling is used to collect data and the structured questionnaire was designed to collect data from 382 respondents. The Statistical Package for Sciences (SPSS) version 25 and PLS 4.0 was used for data analysis. The results concluded that the independent variables of the perceived usefulness, speed, perceived ease of use, attitude towards technology and customer literacy have a significant relationship with the consumers' acceptance self - checkout system (SCS) at IKEA Batu Kawan. Limitations of this study and recommendations are included in this study to give a better idea for future researchers related to studies involving the self - checkout system (SCS) at IKEA Batu Kawan.

Keywords: *Perceived usefulness, Speed, Perceived ease of use, Attitude towards technology, Customer literacy and Consumers' acceptance*

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

During the last ten years, the retail business has seen a significant level. The transformation in the retail sector is creating a new space for interaction between people and technology. A self-checkout system is one of the effective technology innovations that supports regular company operations. The goal of this technology is to cut down on traffic and driving time (Corgi, 2020).

Over 151,000 employees, 345 locations in 42 countries, and annual global revenues of EUR 29.2 billion, IKEA has established itself as the biggest mechanized retail chain in the world. IKEA believes that the most major things in the society is the home and it proven that children are also one of the most important for parent to give the comfortable places for them to stay. Creating an IKEA store is more like creating a warehouse (MCFARLANE, 2022). Due to the "knockdown" nature of the kits sold at IKEA, they may be put on stores almost immediately after being purchased. Additionally, the store's stock is consistently large and customers don't have to wait for delivery to their homes (Shrum, 2019). There are several IKEA locations in Malaysia's major cities such as IKEA Batu Kawan. A distinctive feature of this contemporary purchasing model is that the consumer must carry out all sales operations alone by taking the trolley or basket, selecting the product from the racks, and bringing it to the counter for payment (Parkley, 2022). As a result, the checkout counter is the only location where there is any contact between the customer and the service provider. The present self-checkout system retailing idea must be converted to a completely self-service concept by swapping the conventional cashiering operation with an automated self-checkout system due to contemporary lifestyles that place a strong emphasis on technology (Damen, 2021).

The quick development of cashless transactions, which were initially card-based and are now accessed by smart phones, is correlated with the success of the self-checkout system at the IKEA Batu Kawan. The self-checkout system has demonstrated that it may present a chance for universal utilization of technology. IKEA's food court, which had kept fighting then to find a solution to checkout counter lineups, took the lead in this early phase. Mostly, cashiers will help customers check out and they will get full service throughout. The main purpose of cashiers at the checkout counter serve as the service provider at the point of sale who processes consumer transactions in a retail shop (Anderson, 2012). In general, cashiers must use minimal force while serving customers at the checkout counter. By reading product bar codes, bagging goods for customers and taking money from customers, they carry out the same employment duties. Due to pressure from consumers in line, cashiers at any retail stores are forced to speed up the checkout procedure in order to boost productivity and efficacy of customer service (Meyersohn, 2022). Customers wait in line at the checkout counter for a while. Thus, while they are purchasing at the checkout counter, they expect for quick and effective customer service. When the service at the checkout desk is unpleasant and unsatisfactory, particularly when there is a slower reaction line, customers will leave their shopping basket or cart.

In conclusion, they expect effective and quick checkout counter service. Consumers will abandon their purchasing basket or cart if the service provided at the checkout counter is overwhelming and unsatisfying, especially if the lineup is pack. The purpose of this research is to have understanding of how customers of IKEA Batu Kawan acceptance towards the self-checkout system.

1.2 Problem Statement

There has been some research on how self-checkout system affects consumers and retailing sector. The global market for self-service technology is anticipated to increase at a compound annual growth rate (CAGR) of 9.9% from \$32.35 billion in 2021 to \$35.55 billion in 2022, according to Retail Banking Research (Company, 2022). At a CAGR of 10.0%, the market for self-service technology is anticipated to reach \$52.13 billion in 2026 (Company, 2022). It demonstrates how frequently small shops employ self-checkout systems. Approximately, 90% of respondents regardless of the quantity of things purchased, according to a 2014 survey by NPD Group that polled 2,803 customers from Australia, France, Germany, Italy, Japan, Russia, Spain, UK and US (Company, 2022).

IKEA retail location entice visitors with contemporary home goods at competitive prices, but its enormous store areas and winding floors designs can keep customers inside for an hour or more. The choice of a book case taking so much time is one thing. Another is to wait another 20 minutes to pay for it. Because of self-checkout system in IKEA, customers can save time during the checkout process, which improves their shopping experience, as a result of wave of complaints from customers who reported precisely that kind of recurring delay. According to a recent survey, a self-checkout system in supermarket can cut down on the lengthy wait time for the checkout procedure by 40%, and almost two third of customer believe that self-checkout system offers superior customer service (Lee, 2018).

IKEA stores frequently experience long lines during checkout. Customers often decide against making a purchase because of the lengthy line (Hassan, 2014). When customers are paying at an IKEA checkout counter, they have a different perception of time, which makes them more bothered by the wait in line and the speed of the service delivery. Better customers service and more adaptable checkout option are what customers would want. Customers' satisfaction levels will be high if they just have to wait between one and three minutes at the checkout counter as opposed to more than five minutes (Kwak, 2017).

Service delivery time at the checkout counter is another concern for hypermarket operations, in addition to waiting in line. Three crucial components of the purchasing process, from the viewpoint of the buyer, are section time, queue time, and transaction period (Hassan, 2014). Operation for scanning, packing, and payment are activities that take time at the checkout-counter. As a result, it slows down how quickly the service provider delivers services at the checkout counter. Customers' contentment will diminish the more patiently they are kept waiting during the checkout procedure (Fernandes & Pedroso, 2017). On the other side, prompt checkout assistance leads to a comparatively high degree of customer satisfaction. Adopting self - checkout system can help hypermarkets improve the speed of service at the checkout counter.

The topic of self - checkout system in IKEA Batu Kawan is a very interesting and pertinent one for research because it is a phenomenon for implementing self - checkout system in retail businesses. Additionally, Malaysian retailers can deliver excellent self - checkout system that consumers want by researching the elements that influence consumers acceptance towards self - checkout system. Due to this, the subject of self - checkout system is being studied in Malaysia with the emphasis of the study being on the factors that affect consumers' acceptance towards self - checkout system in IKEA Batu Kawan.

1.3 Research Question

1. What is the relationship between perceived usefulness and consumers acceptance towards self - checkout system at IKEA Batu Kawan?
2. What is the relationship between speed and consumers acceptance towards self - checkout system at IKEA Batu Kawan?
3. What is the impact of perceived ease of use on consumers acceptance towards self - checkout system at IKEA Batu Kawan.
4. What is the relationship between attitude towards technology and consumers acceptance towards self - checkout system at IKEA Batu Kawan?
5. What is the relationship between customer literacy and consumers acceptance towards self - checkout system at IKEA Batu Kawan?

1.4 Research Objectives

1. To identify the relationship between perceived usefulness and consumers acceptance towards self - checkout system at IKEA Batu Kawan.
2. To examine the relationship between speed and consumers acceptance towards self - checkout system at IKEA Batu Kawan.
3. To determine the impact of perceived ease of use on consumers acceptance towards self - checkout system at IKEA Batu Kawan.
4. To investigate the relationship between attitude towards technology and consumers acceptance towards self - checkout system at IKEA Batu Kawan.
5. To assess the relationship between customer literacy and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

1.5 Scope of the Study

This research focus on the factors that influence consumers acceptance towards self-checkout system at IKEA. This scope of this study is limited in area IKEA Batu Kawan, one of the branch IKEA in Malaysia. The research primarily focuses on the more than 300 questionnaires from the respondent. This could be crucial information when understanding the study findings, the influence towards consumers acceptance towards self-checkout system at IKEA Batu Kawan. Any additional approaches are outside the purview of the study their exclusion could constitute a flaw in the design of the investigation. This is clear statement of how the outcome measure will be research. The study's scope should be clearly defined since it helps the research focus their work within realistic boundaries.

1.6 Significance of the Study

This research can provide an overview to consumers experience to use self-checkout system. Since self-checkout system have been available for some time, the majority of consumers are accustomed to it. Although self-checkout system maximize the space utilization, effectiveness and customer pleasure, their usability should be enhanced.

This study also contributed for the country for the efficient of self-checkout system. This self checkout reduces the labor costs. Due to the fact that clients can use their own gadgets and that very little hardware is needed, equipment expenses are also decreased. Compared to other system, this self-checkout system is most effective system which makes up to reduce the labor cost with more efficiently.

The advantage of this research, while it has theoretical applications is that will help us learn more about consumers acceptance towards self-checkout system at IKEA Batu Kawan. In addition, it's crucial for customers to use the self-checkout system and choose to do so in order to receive the greatest option going forward.

1.7 Definition of Term

Consumers' acceptance

Customer acceptance defined as the process of determining whether it makes sense to conduct business with a specific client or not (KENTON, 2021). In this study, the researcher would like to examine how the consumers are adopt to the new technology which self - checkout system.

Perceived usefulness

An individual's view of how technologies, or a specific technology, are designed to enhance their duties or roles in terms of efficiency and effectiveness is known as perceived usefulness (Precious Bolanle Bolodeoku, 2022). In this study, the researcher would like investigate how the technology is benefit to the consumers.

Speed

The amount of time which takes to accomplish a customer service action is known as speed of service (Fontanella, 2021). In this study, the researcher aims to know the quality of self - checkout service instead of basic checkout system.

Perceived ease of use

According to Davis (1989), perceived ease of use defines as the level to which a person thinks utilizing a specific system would be effortless. In this study, the researcher is examine how the self - checkout system is make the consumers' task easier.

Attitude towards technology

The term "attitude toward technology" relates to one's opinion regarding the introduction of new technological developments in any setting, whether favourable or unfavourable (Sandra Huedo-Martínez, 2018). In this study, the researcher investigate that the consumers' are able to adopt with the new system or not.

Customer literacy

According to the past studies, consumer literacy is the capacity to select and use communications products correctly (Bowe, 2011). In this study, the researcher investigate on how the customers are use the self - checkout system efficiently.

1.8 Organization of the Proposal

An outline of this study was presented in this chapter. It provided about the background of the study, problem statement, research questions, research objectives, scope of the study, significance of the study, definition of terms and organization of the proposal. It was highlighting factors that influence consumers' acceptance towards self - checkout system at IKEA Batu Kawan. The proposed conceptual framework will also be covered in detail from top to bottom in the following chapter.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In this chapter, the researcher will be study clearly of the factors that influence consumers acceptance toward self-checkout system at IKEA Batu Kawan in order to meet the objectives of the research. This chapter include a literature review, an underpinning review, a conceptual framework, the formulation of hypotheses and the chapter's general conclusion.

2.2 Consumer's acceptance towards self – checkout system at IKEA Batu Kawan

A self-service checkout system is one in which buyers scan, pack, and pay for their products without guidance from a staff (Collins, 2019). Customer acceptance is defined as process of determining whether it is reasonable or not to do business with a specific customer or prospect (Evans, 2016). Prior studies asserted that behavioral intention and loyalty are related both directly and indirectly through satisfaction with the service quality of self-checkout systems (Masood Ul Hassan & Habibah, 2020). Previous studies have demonstrated a clear correlation between customer satisfaction and service excellence. Customers will feel happy if they experience exceptional service quality. This study aimed to improve the service quality of self-service technology, making it a stronger force that encourages shoppers to make more purchases in physical businesses (Dea Clarissa Safitria, 2021). Basically, in Malaysia 77.9% of customers have access to self-checkout information compared to 22.1% who do not access self - checkout system (Siah, 2019). IKEA Batu Kawan is the fourth IKEA that located in Malaysia. It is owned by Aspen-Ikano which is situated near to the Bandar Cassia Interchange. The store's official opening date is 14 March 2019. It is located on a 245-acre tract at Batu Kawan, next to the Second Penang Bridge's toll booth and takes up 30 of those acres. For RM484 million, Aspen-Ikano acquired the land from Penang Development Corporation (Tye, 2019).

2.3 Underpinning Theory

The most prominent and widely used theory for characterizing a person's adoption of diverse information systems is known as the technology acceptance model, or TAM. Davis is the one who first proposed TAM (1986). Davis makes the assumption that two key factors—perceived usefulness and perceived ease of use—are what ultimately determine a person's acceptance of an information system. Because of this, this study makes the assumption that it can be used to evaluate self-checkout system in full or in part. Based on Siah and Fam (2018) study perceived usefulness is a measure of how customers believe they can use technology to enhance and improve their performance (Pantano & Di Pietro, 2012). Furthermore, perceived ease of use measure how much customer think utilizing the newest and most advanced technologies would be simple and effortless (Hartmann, 2013). Both of these factors affect how customers perceive technology, which in turn influences their intent to use it and, finally, how much they use it. As an example, when customers are enthusiastic about technology, their decision to use it will be based on whether the particular technology is accessible. Additionally, the desire to adopt new technology is only related to customer's desire to adopt is created (Lai, 2017). Based on Technology Acceptance Modal (TAM), this study examine the relationship between perceived usefulness, speed, perceived ease of use, attitude towards technology, customer literacy and customer acceptance towards self - checkout system at IKEA Batu Kawan. Based on Technology Acceptance Modal, in this study we examined the relationship between perceived usefulness, perceived ease of use, speed, attitude to use and customer literacy and consumer acceptance toward self-checkout system in IKEA Batu Kawan.

Self-service technologies (SSTs), technology interface that enable client to generate a service without direct service personnel engagement, have quickly permeated the retail sector (Curran, 2003). The majority of retailers have deployed self-service technologies (SSTs) to boost productivity (Walker, 2002). Retailers are more frequently utilizing self-service technology (SSTs) designed to thereby reducing costs, increasing productivity and service quality (Weijters, 2007). SSTs are defined as technological interfaces that allow client to create a service without direct employee engagement (Meuter, 2000). Retailers have extended their range of SSTs to include self-scanning or self-checkout system whereby customers scan their purchases themselves before making payment.

Customers use SSTs to carry out all of the operations that are typically offered by the network operator. Self-service technology (SST) like self-scanning and self-checkouts let customers perform tasks that before needed to be done by supermarket workers (Anitsal & Paige, 2006; Meuter, 2003; Meuter, 2000). In order to stay up with the continuously changing needs of the consumer, Malaysian retailers must continually invest in better technologies. The goal of technological advancement in the retail industry is today's to make consumer' shopping experiences more profitable (Siah & Fam, 2018).

2.4 Perceived Usefulness and Acceptance towards Self - Checkout System

Perceived usefulness can be defined by prospective consumer's likelihood, where it offers a probability that the technology employed could increase the performance of the person or team from an organizational viewpoint (Malik and Annuar, 2021). The researcher has analyzed of the perceived usefulness from Davis research, which he mentioned that "perceived usefulness" is the way in which how does the individual thinks that using technology would enhance the quality of the professional task. Various researchers have used different definitions of perceived usefulness in previous studies. Some of past studies conducted by researchers from perceived usefulness is the individual's subjective perceptions of how using a certain system or technology would improve his work performance (Fathema, Shannon, & Ross, 2015). The perceived utility of technology refers to the level an individual believes that the technology being used will ultimately be the essential factor in achieving their learning goals. A term known as "perceived usefulness" demonstrates how changing people's behaviour might be a particular aspect of continuous utilization on several occasions. (Xia, 2019). Perceived usefulness is being analyzed to determine the acceptance of users and their intention to use the self-checkout system at IKEA Batu Kawan. This characteristic will change the views of individuals regarding how to use a specific software system might enhance his work productivity. Therefore, perceived usefulness is implemented in research of Olivia and Marchyta (2022) to study the influence of Indonesian customer satisfaction on e-wallet intention . By investigating and implementing all of the previous research, it has proved that perceived usefulness is positively indicate influence consumers' acceptance towards self - checkout system at IKEA Batu Kawan.

H1: There is a significant relationship between perceived usefulness and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

2.5 Speed and Acceptance towards Self - Checkout System

Speed of service is a statistic that assesses how quickly a customer service operation is completed. Depending on the organization, product and sector, it may be implemented at various stages of the customer journey. Speed of service also play an important things towards evaluation of customer experience (Client Fontanella,2021). Some customers who are ready to check out are unable to wait for a delayed cashier. In a QSR environment, it may be desirable for the operator to have customers leave as fast as possible during lunch hours, given that these customers have time restrictions and appreciate the ease of rapid service (Dtiq,2021).Waiting time may have contributed to the inadequate number of cashiers or the heavy volume of traffic in rush hour (Hassan, Sade, Rahman, 2013). Apart from that, the researcher approved to select speed as the variable on how does the consumer's acceptance of users and their intention to use the self-service counter in IKEA Batu Kawan. If the checkout process was efficient, this factor will have a positive effect on the consumer's evaluation of the service's quality. Past studies by Ng Xin Jie and Kamsin (2021), speed can be applied for identification (RFID) technology to self-checkout systems to tackle the issue of rising thefts brought on by the introduction of self-checkout system in supermarkets. Next, according to Alinda and David (2013), self-service technology has the capability to improve service speed. Self-service technology might minimize real wait times and increase service quality in a service delivery process. After reviewing all of the previous studies, it shown that speed is positively point out the influence consumers acceptance towards self-checkout system at IKEA Batu Kawan.

H2: There is a significant relationship between speed and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

2.6 Perceived Ease of Use and Acceptance towards Self - Checkout System

According to Davis (1989), perceived ease of use can be defined as the degree to which a person thinks utilizing a certain technology would be effortless. If the technology is simple to use, then the obstacles have been removed. Perceived ease of use was identified as one of the characteristics that influence users' attitudes (Osman, Alwi & Khan, 2016). The character of perceived ease of use factor looks at one of the attitudes towards using technology. Okafor (2016), discovered that although perceived ease of use does not influence the adoption of new online multimedia technologies, other factors such as age, gender, local population literacy level, and traditional beliefs do. These authors specifically aimed to assess the psychometric characteristics of usability and utility indices and empirically based determine how the structure related to one another. In the study, the term "degree to which a person believes that utilizing a certain system would be devoid of effort" is used to describe the perceived ease of use. This is inferred from the meaning of the word "ease," which is freedom from hardship or excessive effort. Also, they discovered the substantial connection between perceived ease of use and perceived usefulness when using mobile learning Tan (2012). We assume that, other things being equal, an application that consumers perceived as being simpler to use than another is more likely to be adopted by users. The investigation in this study focuses on two theoretical constructs that are thought to be fundamental predictors of system use, perceived utility and perceived ease of use. In the past study, all have shown that perceived ease of use is a positive indicator of consumers' acceptance towards self-checkout system at IKEA Batu Kawan.

H3: There is a significant relationship between perceived ease of use and consumers' acceptance towards self-checkout system at IKEA Batu Kawan.

2.7 Attitude towards Technology and Acceptance towards Self - Checkout System

Attitude towards technology (ATT) is a wide concept. According to Davis, one of the concept are an individual's attitude towards technology can be either positive or negative depending on their intention to engage in the desired behaviour (Sriwidharmanely & Vina, 2012). As it's complex, the concept of attitude toward technology cannot be conceived as a single, unitary construct (Van Aalderen-Smeets, 2012). They are check out counters where customers scan the bar codes on their products, pay for them and place them in bags without assistance from store staff (Schliewe and Pezoldt, 2010). Based on the past research, they found that SSTs influenced by how people rate the quality of the self-checkout experience, the criteria they employ and whether or not customer characteristics have an impact on this rating. (Lin and Hsieh, 2011). Another that, the distinction between attitudes towards technology, that are exclusive to various technologies and generic technological attitudes is particularly problematic which can be used across different technologies (Besley, 2013). As a scholars propensity to pursue generalist propositions, a study of general attitudes its crucial to consider how academics feel about technology. Self-checkout system is a cutting-edge SSTs that offers consumers privacy and time savings as an alternative to checkout (Lee, & Yang, 2013). All the past studies, all have shown attitudes towards technology is positive indicate influence consumers acceptance towards self - checkout system at IKEA Batu Kawan.

H4: There is a significant relationship between attitude towards technology and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

2.8 Customer Literacy and Acceptance towards Self - Checkout System

According to Consumer Panel, customer literacy defined as the capacity to select and use communications products effectively (Bowe, 2011). This enables individuals to make the best possible decisions and purchase appropriate goods. Today, literacy skill levels also take into account a person's capacity for understanding and analyzing data, a critical task in a society where better communication and information processing abilities are necessary every day (Consumer Literacy and Education, 2019). Additionally, it has been discovered that financial literacy varies depending on a person's economic situation, status and income. Financial literacy discourages people from making bad financial decisions like borrowing money to fund their activities or utilizing expensive credit cards or retirement plan assets as collateral (Roberto Graña-Alvarez, 2020). Previous research suggests that customer adoption of automated service technologies should be influenced by both their functional performance and their capacity to meet social-emotional and relationship needs. In the case of the Service Robot Acceptance Model (sRAM), consumer acceptance will depend on how effectively robots can meet both functional, social-emotional and relational needs (Fernandes, 2021). Another previous study shows that, an individual is more likely to have a favourable opinion of autonomous delivery robots if they become the social norm. This is because of positive word-of-mouth and social impact. They will be more inclined to use autonomous delivery robots in last-mile deliveries when they become available as a result (Yuen, 2022). More consumers have knowledge about self - checkout system which increase the usage of self - checkout system at IKEA Batu Kawan. It was proven in the previous articles which is 70% of consumers who are use the self - checkout system at IKEA Batu Kawan are feel satisfied to use it (Gagliardi, 2012). All the past studies, all have shown customer literacy is positive indicate influence consumers acceptance towards self - checkout system at IKEA Batu Kawan.

H5: There is a significant relationship between customer literacy and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

2.9 Conceptual Framework

Technology Acceptance Model (TAM) is defined as attitude toward particular behavior and subjective norm have an effect on behavioral intention, which in turn influences the behavior performed. TAM supporters believe in its robustness because it has been applied to a variety of technologies such as word processors, e-mail, WWW, GSS, Hospital Information Systems in a variety of contexts which are time and culture with a variety of control factors such as gender, organizational type and size and with variety of subject matter such as undergraduate students, postgraduate students and knowledge workers (Lee, 2003). There are studies that highlight the benefits of self-checkout systems and their impact on consumer impression of retail store and store loyalty (Marzocchi & Zammit, 2006). In addition, literature review shows that perceived usefulness, perceived ease of use, speed, attitude towards technology, and customer literacy have positive relationships with consumer acceptance towards self-checkout system at IKEA Batu Kawan. Hence, based on the TAM model and literature review, we constructed the conceptual framework that shows the relationship between the independent variables and dependent variable as shown in the figure 2.1.

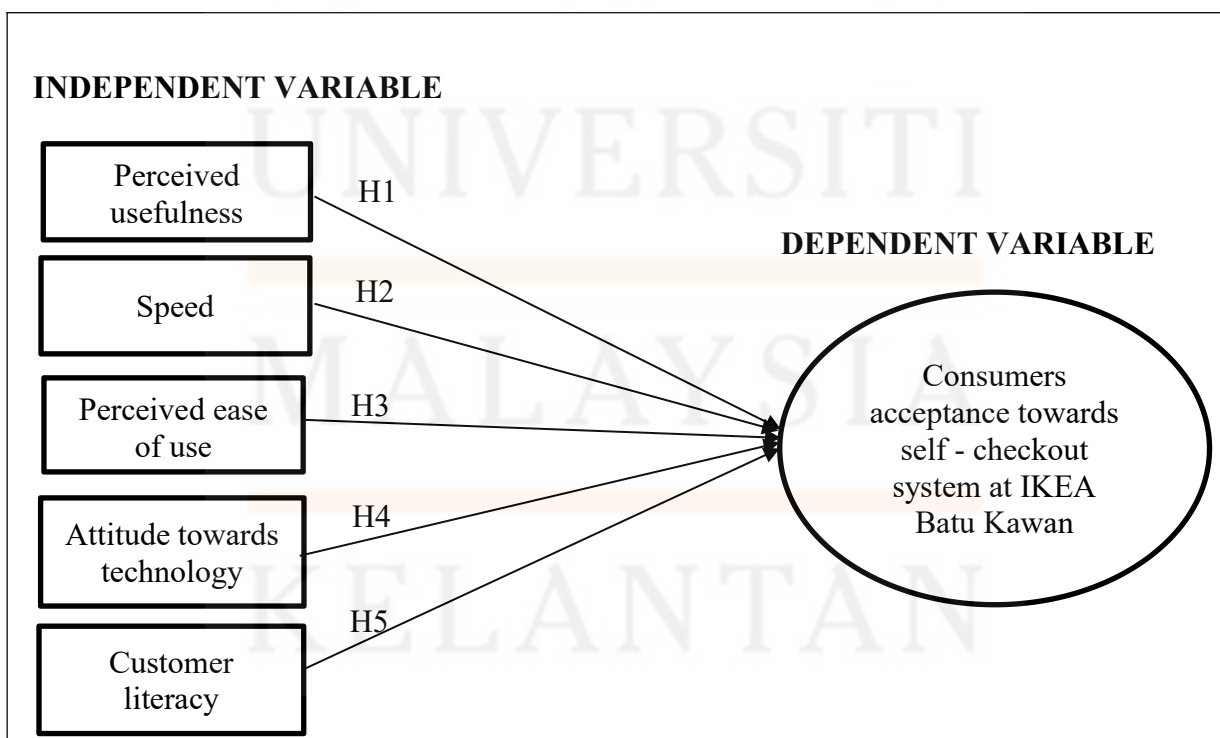


Figure 2.1: Conceptual framework

2.10 Summary / Conclusion

This chapter we can see that there is a big connection between the elements and consumer acceptance towards the modern technology. Technology Acceptance Modal is used in this study to determine the relationship between perceived usefulness, speed, perceived ease of use, attitude towards technology, customer literacy and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. We already explained relationship between the factors and consumer's acceptance towards self-checkout system at IKEA Batu Kawan in this chapter. According to the TAM the conceptual framework was designed as in figure 2.1. The conceptual framework was designed by the researcher to figure out the relationship between independent variables and dependent variable.

CHAPTER 3: RESEARCH METHODS

3.1 Introduction

In the section, data collection method and analysis data are outlined in this research. This include of research design, data collection methods, study population, sample size, sampling technique, research instruments development, measurements of the variables and data analysis procedure.

3.2 Research Design

A research design, sometimes referred to as a survey method, is an approach for answering a set of questions (McCombes, 2019). The other essential elements of a study, such as factors, assumptions, procedures, methods, and data analysis are all determined by the research design (Creswell, 2018).

In the review, the quantitative research methodology was used. Quantitative approaches emphasize evaluations that are factually mathematical or numerically accurate and objective. Quantitative emphasizes precision estimates, factual or mathematical research on the data obtained from questionnaires and research, or computational methods to manage earlier quantifiable information.

In this study, this focuses on the consumers acceptance towards self-checkout system at IKEA Batu Kawan. Besides that, there have four essential methods for getting bits of knowledge and acquiring a clearer image of an issue which are secondary data analysis, pilot studies, case studies and questionnaires. A survey questionnaire is also chosen to examine the factors of consumers acceptance towards self-checkout system at IKEA Batu Kawan.

3.3 Data Collection Methods

Data collection methods are important because they affect the methodology and analytical strategy utilized by the research, which then influences how the data is used and what conclusions it might draw (Teherani, 2015). Data and information can be obtained via primary and secondary data. An online survey questionnaire is the main tool used to collect data for this investigation. An online survey questionnaire is distributed for consumers at IKEA Batu Kawan. The data that someone else has gathered for an explanation is known as secondary data. Therefore, secondary data is utilized in the research to improve knowledge.

3.4 Study Population

A population is any grouping of a particular group of people or non-human elements such as things, institutions of higher learning, periods of time, places, wheat prices or individual wages. Some statisticians refer to it as the universe (Population and Sample, 2017). This study focuses on IKEA Batu Kawan customers who utilize the self-checkout system to see what are the factors that affect customers' acceptance toward self-checkout system. This will include only customers who usually shop at IKEA Batu Kawan which is located at Penang. IKEA Batu Kawan expects a weekly traffic from 50,000 to 60,000 people from its entire population (Tan, 2019). Therefore, we target to distribute about 300 to 400 questionnaires to the respondents.

Customers of IKEA Batu Kawan were the population chosen for this study without taking gender or age into consideration. Since IKEA Batu Kawan is where the majority of people buy their furniture, we concentrate on our target market. We selected this location because it will be easier to ask respondents to complete surveys using a Google form in this particular area. IKEA Batu Kawan consumers will also be included in the sample size.

3.5 Sample size

In research, the sample size is the amount of participants in the study. The sample size is a group of persons picked from the overall population who are believed to constitute a random subset for that specific study. (Sample size definition, 2019). The letter n frequently serves as a symbol for sample size. According to earlier studies, sample sizes must be over 30 and under 500 (Ganti, 2022). Based on Krejcie & Morgan (1970) table, the sample size for this research is 382 people. Therefore, we distribute the questionnaire to minimum 382 customers of IKEA Batu Kawan to collect the data for further process.

3.6 Sampling Techniques

A sampling technique is the name for the specific method used to choose the sample's participants. The study used a non-probability sampling technique. To save time and money, the researcher employs a non-probability sampling method. To acquire data, random sampling is being used. It is employed when the study's target participants are simple or handle to approach, have free time, or are willing to engage (Alvi, 2016). By non - probability sampling, we distribute the questionnaires to minimum 382 respondents.

3.7 Research Instrument Development

A survey method is one that gathers, quantifies, and interprets data from sources relevant to the survey's objective ("What is a research instrument?," 2020). A standard measuring instrument is an online survey questionnaire, which is the research instrument used in this review to gather information. This study was a quantitative approach that involved a survey as the essential instrument for gathering respondents' information. A questionnaire is a form of survey instrument that asks respondents a variety of questions or provides additional recommendations in order to collect data from them.

The questionnaire in this study is divided into three sections, namely Section A, Section B and Section C. Section A is related to the information and demographic data of the respondents. Next, Section B is related to the perceived usefulness, speed, perceived ease of use, attitude towards technology and customer literacy. The last section, Section C is related to the consumers' acceptance towards self - checkout system at IKEA Batu Kawan. These sections use the five Likert scales in the questionnaire structure. Thus, a distributed questionnaire will be helpful in the analysis of this study.

3.8 Measurement of the Variables

A measurement variable is a variable that is unidentified, analyzes a certain object, and can take on any number of values (Blog, 2022). The researcher has two types of variables in this research which are nominal data and ordinal data. This method was chosen to assist in finding more accurate information to complete the research. We modify 5 items under every variables which are perceived usefulness, speed, perceived ease of use, attitude towards technology, customer literacy and consumer's acceptance towards self - checkout system in the questionnaire.

Nominal Data

A nominal variable assigns a term, a label, or a categorization to a characteristic which is being analyzed. The quantitative values it employs to describe the several categories are not naturally arranged (Blog, 2022). Researchers use the nominal scale to assign participants to specific groups or categories. It is simple for respondents to pick between mutually exclusive groups or classes as an answer. In this research, nominal data is used to analyze the demographic profile of respondents. For example, gender, age, race, education, occupation and level of income.

Ordinal Data

An ordinal variable is a measured variable that allows data that have a ranking . It includes the nominal variable and is quantified at the second level. They use nominal scales to build things by assigning numerical values to signify a ranking on a characteristic (Blog, 2022). In this research, respondents are answer the question that created for independent variable and dependent variable based on the Likert scale. In this study, the researcher use Likert scale because researchers do not anticipate a straightforward affirmative or negative response from the respondents but rather they accept a range of opinions, including none at all (McLeod, 2019).

The Likert scale as below:

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

3.9 Data Analysis Method

In this research SPSS and SmartPLS 4.0 are being used and the data are also being reviewed.

3.9.1 Statistical Package for the Social Sciences (SPSS)

SPSS is new software mostly used by investigators to handle vital data in a straightforward manner. Dealing with data is a difficult and time-consuming procedure but this application can simply manage and operate data with the use of certain strategies (Jordan, 2021). SPSS provides the ability to go further into an analyst data, providing a significantly useful method than other accessible spreadsheets, databases, or typical multidimensional tools. SPSS Statistics excels in drawing inferences and forecasts from user data. In comparison to many non-statistical applications, it is definitely one of the quickest at handling activities such as data processing and statistical operations (Pedamkar, 2022). In addition to statistical analysis, its capabilities include data administration and documentation. Enabling researchers to conduct complicated studies and display the results on a variety of charts and graphs provided inside the application (Bernardita, 2022). In this research the researches will deep recognized by looking descriptive statistics such as mean, demographic profile, and standard deviation which each of the questions was answered individually and generate using SPSS 4.0. Results of the analysis will be displayed using statistical summary tables, charts, and graphs (Ibrahim, 2015). SPSS software was used to perform regression analysis and frequency tests on the acceptance towards the self-checkout system at IKEA Batu Kawan acquired data to answer the research question.

3.9.2 Partial Least Square (PLS)

Partial Least Squares (PLS) is inferring analysis about a wider population based on the analysis of samples. Partial Least Squares (PLS) is a method for Structural Equation Models (SEM) that enables researchers to concurrently analyse the connections between variables. (Sarstedt, Ringle, & Hair,2017). The scalability of the sample size and data assumption made (PLS-SEM) useful. Smart-PLS 4.0 was used as the scientific tool for the model's analysis. In this research, partial least-square structural equation modelling (PLS-SEM) is often used. The fact that the data do not have to match to certain normality test constraints is the proof usefulness of PLS-SEM (Lu, Lai, & Liu, 2019). Investigators are evaluating consumer perceptions towards self-checkout system at IKEA Batu Kawan using the fourth edition of SmartPLS. This technique would provide the researcher gain more information. Initially, the independent variables and dependent variable of the instrument model were assessed using SmartPLS 4.0. Consequently, PLS-SEM findings are useful for generating out-of-sample predictions, referring to the link between explanation and prediction theory (Alam, Masroor, Rokon, & Rakib, 2020). PLS-SEM characteristics has meet the recent research objectives to investigate the acceptance towards the self-checkout system at IKEA Batu Kawan greater representative as well as the correlation coefficients of the evolved research framework from a gender perspective.

The structural model and measurement model are the two steps in structural equation modelling (SEM), according to research utilizing SmartPLS. A model's evaluation provides two types of empirical measurements which are:-

1. The correlation between the constructs and the indicators (measurement model)
2. The links between the constructs (structural model)

The study can offer a sequence of elements or inquiries to look at each component, feature, or structure in the measurement model. The model were being used in order to represent the ideas of the generated structures (Joseph, Tomas, Christian, Marko, Nicholas, Soumya, 2021). The goal source for acquiring them is so-called dimension adaptation, in which the researcher should identify the items or questions that are likely to be picked by conducting an exhaustive study of recently published literature that fits the research environment. The adaptation means that certain modifications will be made to the original scale (Xu, Zhang, Min, Wang, Zhoa, Liu, 2018).

Meanwhile for the structural model, the researcher provide an overview like picture of how the chosen elements, dimensions, or structures interact with one another (Joseph, Tomas, Christian, Marko, Nicholas, Soumya, 2021). These relationships are often based on the collected research, previous history, or the anticipated consequence of an individual's disposition (Collier, 2020).

The researcher may contrast theoretically developed measurement and structural models with reality using sample data and empirical measurements. In other terms, the researcher may assess the degree to which the theory accounts for the data using the empirical metrics. As a result of employing PLS-SEM, the researcher was able to assess the model's predictive potential and competencies (Joseph, Tomas, Christian, Marko, Nicholas, Soumya, 2021). The structural model and measurement model are the two components that make up the structural equation model (SEM). The measuring model evaluated how apparent signs and predictor variable were related to one another (Sanaz, 2016). The causal connections between the independent and dependent variables were determined using the structural model. Beside that, it defined how the independent and dependent variables impact other latent variables in the model directly or indirectly (Locky, Natalie, 2020).

Table 3.1 Systematic evaluation of PLS-SEM results

Systematic Evaluation of PLS-SEM Results	
Step 1: Evaluation of the Measurement Model	
Stapes 1a: Reflective Measurement Model	Stapes 1b: Formative Measurement Model
Internal Consistency	Collinearity among Indicators
Construct Validity	Significance and Relevance of Outer weights
Discriminant Validity	
Step 2: Evaluation of Structural Model	
Collinearity Assessment	
Structural Model Path Coefficients and Hypothesis Testing	
Coefficient of Determination (R2 Value)	
Effect size F2	
Predictive Relevance Q2	

Source: Sanaz (2016)

3.10 Summary

This chapter described how the study would be carried out and how the provided questionnaire would be used to gather data from the respondents questioned. The research team will start by determining the objectives of the study, the sample size and the tools to be employed. Subject to the fulfillment of the Pre-test responsibility, every factor was examined to test the hypothesis with an estimation of buildings based on prior research. In order to collect, analyse and decode the data, research were used. SPSS version 25 and PLS 4.0 were used to help with the analysis and translation.

CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.1 Introduction

In this chapter, results of the questionnaires surveyed respondents' data were analyzed. The pilot test, demographic profile of the respondent, descriptive analysis, reliability and validity test, discriminant validity test, collinearity statistics and regression test are analyzed in this study. The total number of respondents required for this study is 382. The researcher analyses the data using IBM/SPSS statistics version 28.0 (Statistical Package for Social Science) and Partial Least Squares 4.0, and the findings of the statistical analysis will be discussed in this chapter.

4.2 Preliminary Analysis

A pilot test was organized to evaluate the survey's reliability and validity in order to confirm that it may be used for the research. The research used Google Form to appropriate surveys for the pilot test (30 respondents) and collected 401 respondents as information.

As indicated by Table 4.1 show that the worth of each part of poll is adequate on the grounds that it is more than 0.700 of Cronbach Alpha. The cronbach alpha value of consumer's acceptance towards self-checkout system at IKEA Batu Kawan is 0.904. The cronbach alpha value of perceived usefulness and speed is 0.870 which is least cronbach value of this study. The cronbach alpha value of perceived ease of use is 0.885. The cronbach alpha value of attitude towards technology is 0.903. The cronbach alpha value of customer literacy is 0.933 which is highest value of this study.

Table 4.1: Result of pilot test

Variables	Cronbach Alpha	Number of Item
Consumer's acceptance towards self-checkout system at IKEA Batu Kawan	0.904	5
Perceived Usefulness	0.870	5
Speed	0.870	5
Perceived Ease Of Use	0.885	5
Attitude Towards Technology	0.903	5
Customer Literacy	0.933	5

4.3 Demographic Profile of Respondents

In this study, there are 8 questions were asked under respondent demographic section such as gender, age, race, occupation, education level, monthly income, how many times will you use self-checkout system in a year and what type of cashless payment method that you prefer when make payment in self-checkout system. This part include the fundamental examination of the demographic profiles of the 401 respondents who provided their responses via the distributed Google Form. Then, tables and enhanced diagrams were used to display the frequency and rate for each section of res the recurrence and rate for each segment profile of respondents were shown through tables and improved on diagrams.

4.3.1 Gender

According to the result shows in the table 4.2 and figure 4.1, the female respondent is 55% and the male respondent are 45%. The analysis of respondent gender female is 220 while male is 181 of the total sample size.

Table 4.2: Gender of respondents

	Category	Frequency(N)	Percentage (%)	Valid Percent	Cumulative Percent
Valid	Male	181	45.1	45.1	45.1
	Female	220	54.9	54.9	100.0
	Total	401	100	100	

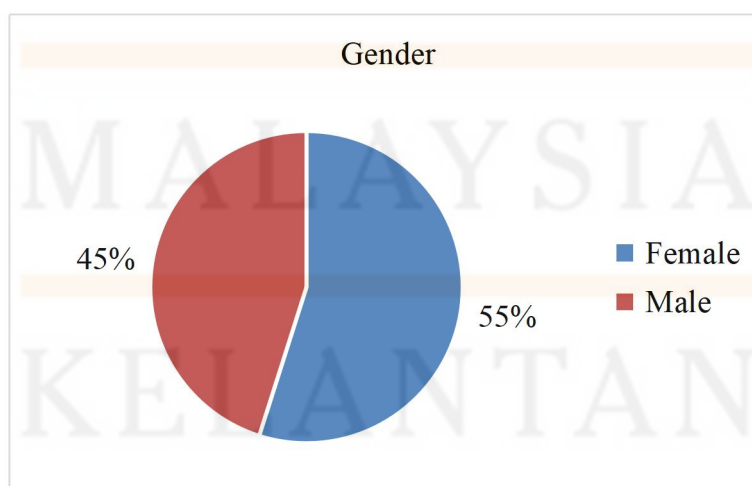


Figure 4.1 Gender of respondents

4.3.2 Age

Based on table 4.3 and figure 4.2 there were 16.7% of 67 respondents are 19 to 21 years old, 29.2% of 117 respondents are 22 to 25 years old, 20.0% of 80 respondents are 26 to 29 years old, 19.5% of 78 respondents are 30 to 33 years old and 14.7% of 59 respondents are 34 years old and above.

Table 4.3: Age of respondents

	Category	Frequency (N)	Percentage (%)	Valid Percent	Cumulative Percent
Valid	19 – 21 years old	67	16.7	16.7	16.7
	22 – 25 years old	117	29.2	29.2	45.9
	26 – 29 years old	80	20.0	20.0	65.8
	30 – 33 years old	78	19.5	19.5	85.3
	34 years old and above	59	14.7	14.7	100.0
	Total	401	100	100	

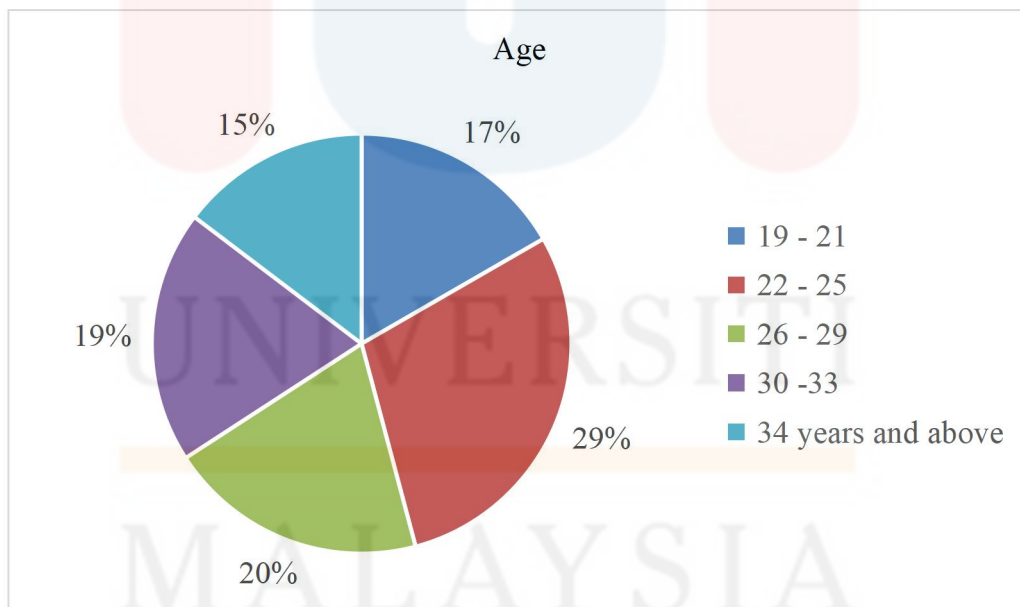


Figure 4.2 Age of respondents

4.3.3 Race

The table 4.4 and pie chart 4.3 shows race were examined in this study. The majority of the respondents were Malay of 160 respondents and it presented 39.9% of total respondents. Meanwhile, 125 respondents were Chinese and it presented 31.2% and Indian respondents represented 98 with 24.4%. Lastly, the other races represented 18 respondent with 4.5% only.

Table 4.4: Race of respondents

	Category	Frequency (N)	Percentage (%)	Valid Percent	Cumulative Percent
Valid	Malay	160	39.9	39.9	39.9
	Chinese	125	31.2	31.2	71.1
	Indian	98	24.4	24.4	95.5
	Others	18	4.5	4.5	100.0
	Total	401	100	100	

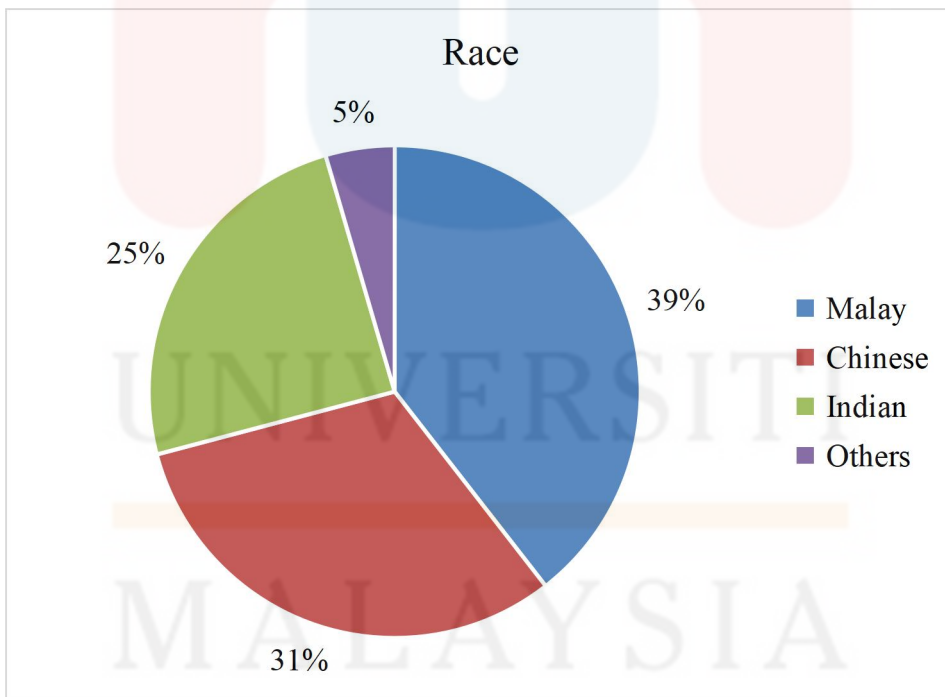


Figure 4.3: Race of respondents

4.3.4 Occupation

The table 4.5 and pie chart 4.4 shows occupation were examined in this study. The majority of the respondents were private sector employees of 161 respondent and it presented 39.9% of total respondents. Meanwhile, 92 respondents were government sector employees and it presented 22.9% and unemployed represented 83 with 20.7%. Lastly, the other occupation represented 65 respondent with 16.2% only.

Table 4.5: Occupation of respondents

	Category	Frequency (N)	Percentage (%)	Valid Percent	Cumulative Percent
Valid	Government Sector	92	22.9	22.9	22.9
	Private Sector	161	40.1	40.1	63.1
	Unemployed	83	20.7	20.7	83.8
	Others	65	16.2	16.2	100.0
	Total	401	100	100	

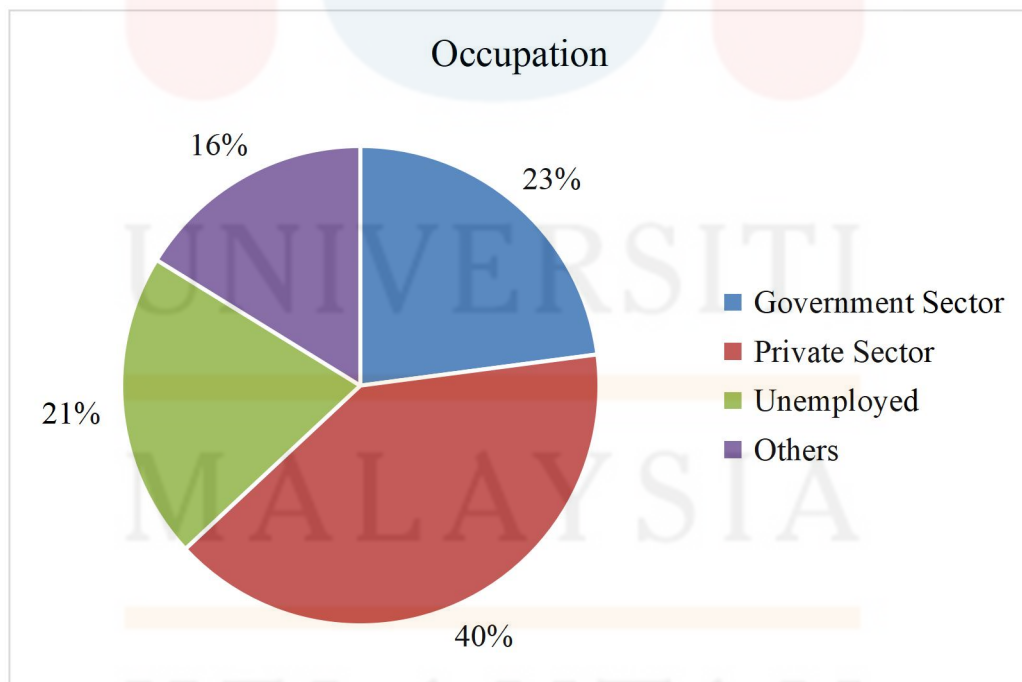


Figure 4.4: Occupation of respondents

4.3.5 Education Level

The table 4.6 and figure 4.5 shows education level of respondents was examined in this study. The results have shown that 143 respondents with 35.7% of education levels represented Bachelor Degree, followed by 105 respondents with 26.2% were Diploma while STPM are 50 respondents with 12.5%, 7 respondents of 10% were certificate SPM, 54 respondents with 13.5% were Master. Lastly only 12 respondent of 3.0% represented PHD categories.

Table 4.6: Education level of respondent

	Category	Frequency (N)	Percentage (%)	Valid Percent	Cumulative Percent
Valid	Malaysian Certificate of Education	37	9.2	9.2	9.2
	Malaysian Higher School Certificate	50	12.5	12.5	21.7
	Diploma	105	26.2	26.2	47.9
	Degree	143	35.7	35.7	83.5
	Master	54	13.5	13.5	97.0
	PHD	12	3.0	3.0	100.0
	Total	401	100.0	100.0	

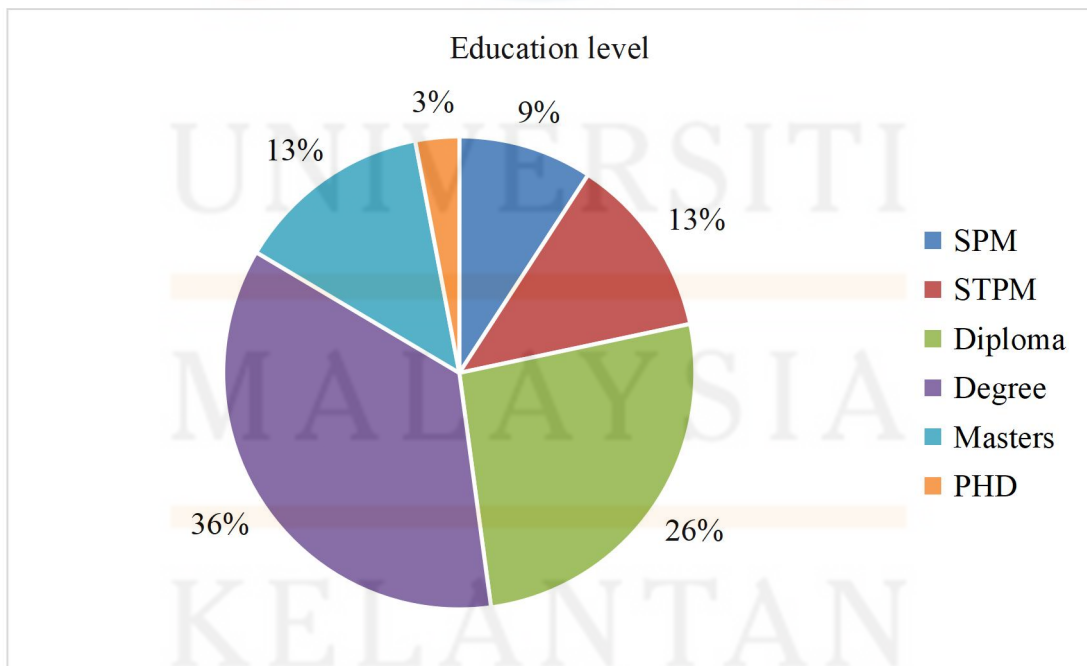


Figure 4.5: Education level of respondents

4.3.6 Monthly income

The table 4.7 and figure 4.6 monthly income of respondents was examined in this study. The results have shown that 121 respondents with 30.2% monthly income are RM0 - RM999, followed by 87 respondents with 21.7% were RM2,000 to RM2,499 while RM3,000 and above are 80 respondents with 20%, 52 respondents of 15.2% were RM1,000 to RM1,999. Lastly only 52 monthly income respondent of 13% were RM2,500 to RM2,999.

Table 4.7: Monthly income of respondents

	Category	Frequency (N)	Percentage (%)	Valid Percent	Cumulative Percent
Valid	RM0 - RM999	121	30.2	30.2	30.2
	RM1,000 - RM1,999	61	15.2	15.2	45.4
	RM2,000 - RM2,499	87	21.7	21.7	67.1
	RM2,500 - RM2,999	52	13.0	13.0	80.0
	RM3,000 and above	80	20.0	20.0	100.0
	Total	401	100.0	100.0	

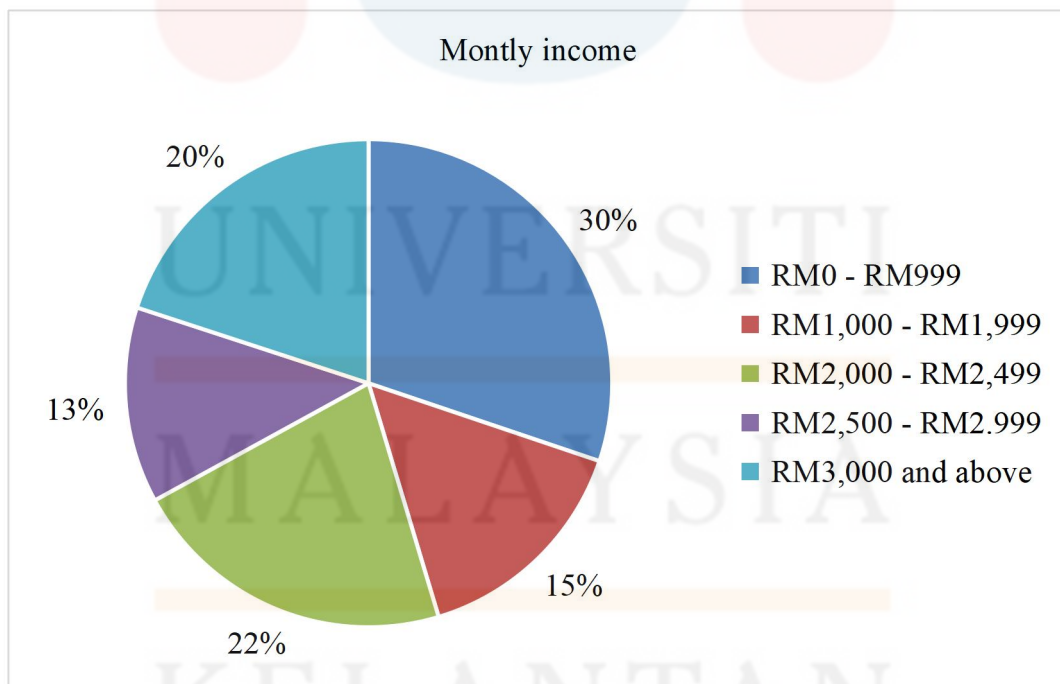


Figure 4.6: Monthly income of respondents

4.3.7 How many times will you use self-checkout system in a year

The table 4.8 and figure 4.7 shows how many times will you use self-checkout system in a year was examined in this study. The results have shown that 146 respondents with 36.4% are used self-checkout system 0 - 3 times , followed by 120 respondents with 29.9% were used self-checkout system above 8 times and total 108 respondents with 26.9% using self-checkout systems with 4 - 7 times in year. Lastly only 27 respondents with 6.7% never use self-checkout system at IKEA Batu Kawan.

Table 4.8: How many times will you use self-checkout system in a year?

	Category	Frequency (N)	Percentage(%)	Valid Percent	Cumulative Percent
Valid	0 - 3 times	146	36.4	36.4	36.4
	4 - 7 times	108	26.9	26.9	63.3
	Above 8 times	120	29.9	29.9	93.3
	Never	27	6.7	6.7	100.0
	Total	401	100.0	100.0	

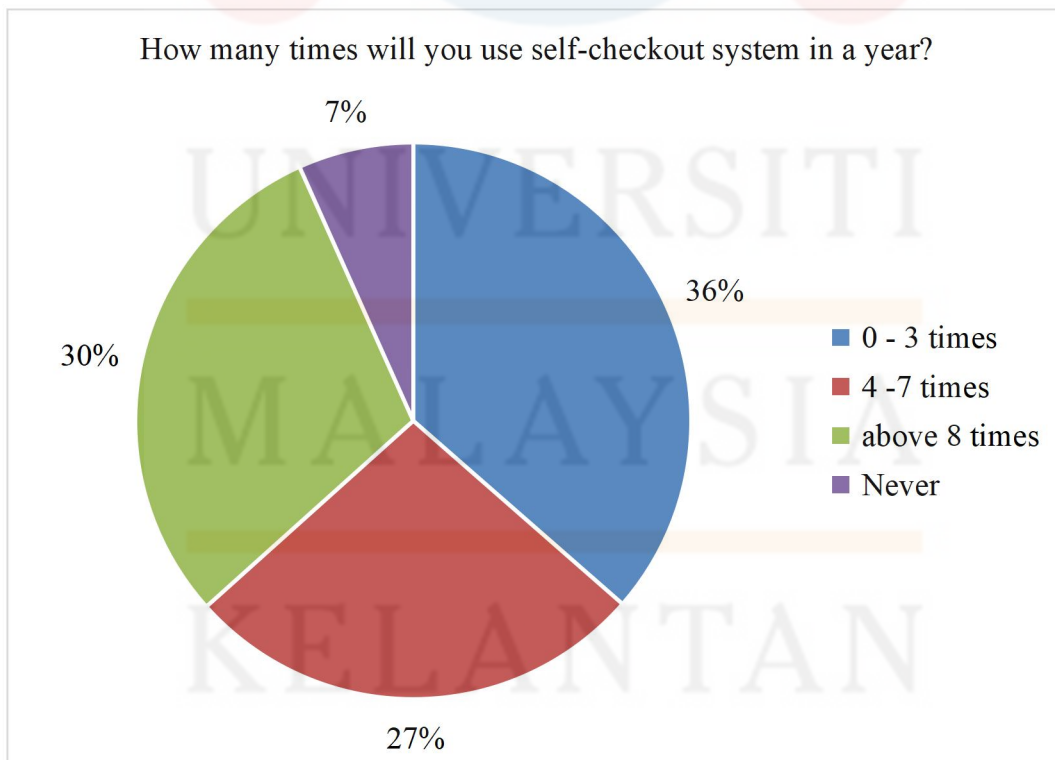


Figure 4.7: How many times will you use self-checkout system in a year?

4.3.8 What type of cashless payment method that you prefer when make payment in self-checkout system?

The table 4.9 and figure 4.8 shows what type of cashless payment method that you prefer when make payment in self-checkout system. The results have shown that 174 respondents with 43.4 % choose QR payment in self-checkout system. Meanwhile, 227 respondents with 56.6% choose the debit card or credit card as payment method.

Table 4.9 : What type of cashless payment method that you prefer when make payment in self-checkout system?

	Category	Frequency(N)	Percentage(%)	Valid Percent	Cumulative Percent
Valid	QR payment	174	43.4	43.4	43.4
	Debit card or credit card	227	56.6	56.6	56.6
	Total	401	100	100	

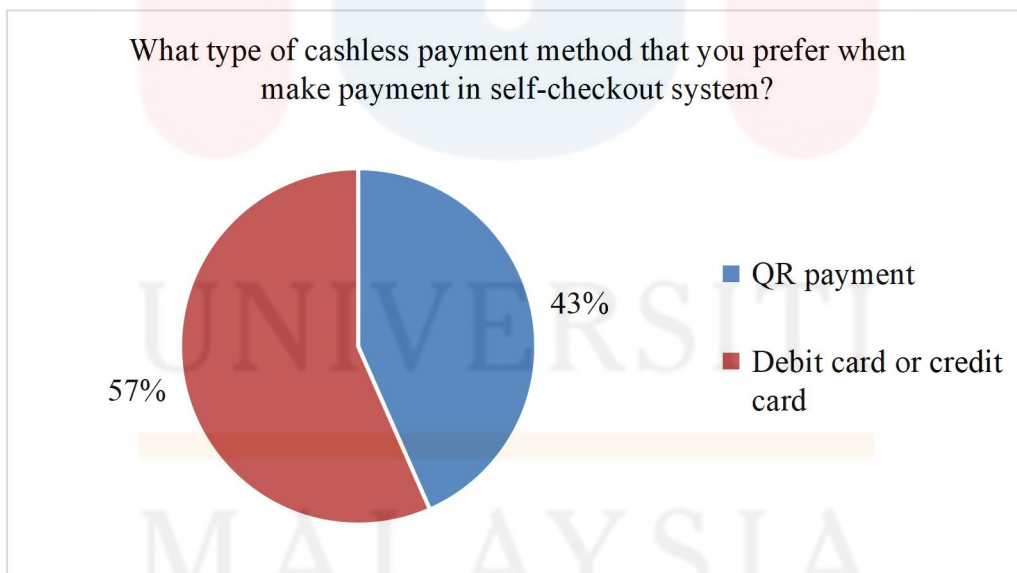


Figure 4.8 : What type of cashless payment method that you prefer when make payment in self-checkout system?

4.4 Descriptive Analysis

Descriptive analysis is a sort of data analysis that aids in accurately describing, displaying or summarizing data points so that pattern may appear that satisfy all of the data requirements. This section discussed the descriptive statistics of this research's dependent variable which is consumers acceptance towards self-checkout system at IKEA Batu Kawan and independent variables which are perceived usefulness, speed, perceived ease of use, attitude towards technology and customer literacy.

From the results in table 4.10, showing the highest mean score of perceived usefulness is 4.37 which save the time influenced the customers when purchasing in IKEA. Meanwhile, the lowest mean score is 4.18 which is IKEA give reasonable advantages to customers in society.

Table 4.10: Descriptive analysis of perceived usefulness

	N	Minimum	Maximum	Mean	Std. Deviation
The self-checkout system at IKEA would be advantages to me in today society	401	1	5	4.18	.837
In IKEA, using the self-checkout system would help optimize the time	401	1	5	4.37	.702
My efficiency of buying things would rise if I used the self-checkout system at the IKEA	401	1	5	4.35	.764
The self-service checkout at IKEA would greatly improve my shopping experience.	401	1	5	4.24	.784
When I use self-checkout system at IKEA, it allow me to complete my shopping experience.	401	1	5	4.30	.754
Valid N (listwise)	401				

From the results in table 4.11, showing the highest mean score is 4.37 which self-check system make customer no need to stand in long queue when buying at IKEA Batu Kawan. Meanwhile, the lowest mean score is 4.17 which is self-checkout system is saving time in IKEA Batu Kawan.

Table 4.11: Descriptive analysis of speed

	N	Minimum	Maximum	Mean	Std. Deviation
Self-checkout system is saving time	401	1	5	4.17	.839
Customer no need stands in a long queue to make payment when using self-checkout system	401	1	5	4.37	.702
Self-check system can reduce the Covid-19 cases	401	1	5	4.36	.746
Self-checkout system increase customer satisfaction.	401	1	5	4.25	.785
Customers will purchase the goods repeatedly at IKEA Batu Kawan	401	1	5	4.30	.745
Valid N (listwise)	401				

From the results in table 4.12, showing the highest mean score is 4.34 which customers think self-checkout system are easy to use. Meanwhile, the lowest mean score is 4.06 which is influence the customer using self-checkout system with easy to access in IKEA Batu Kawan.

Table 4.12 : Descriptive analysis of perceived ease of use

	N	Minimum	Maximum	Mean	Std. Deviation
I feel that using self-checkout system in IKEA Batu Kawan would be easy for me.	401	1	5	4.34	.785
I feel that my interaction with self-checkout system would be clear and understandable.	401	1	5	4.11	.879
I feel that it would be easy to become skillful at using self-checkout system in IKEA Batu Kawan	401	1	5	4.06	.975
Learning to use a self-checkout system would be easy for me.	401	1	5	4.13	.944
Using self-checkout system in hypermarket might be effortless.	401	1	5	4.12	.922
Valid N (listwise)	401				

From the results in table 4.13, showing the highest mean score at 4.28 which is IKEA Batu Kawan used technology at right time. Meanwhile, the lowest mean score is 4.05 which is technology self-checkout system influenced the customers when purchasing.

Table 4.13 : Descriptive analysis of attitude towards technology

	N	Minimum	Maximum	Mean	Std. Deviation
I will use the “self checkout system” in IKEA Batu Kawan when make purchase.	401	1	5	4.05	.929
I will use the “self checkout system” in IKEA Batu Kawan as it is responsive and reliable.	401	1	5	4.27	.838
I like the idea of using self-checkout system in IKEA Batu Kawan.	401	1	5	4.11	8.65
I believe it is a good idea to use self-checkout system in IKEA Batu Kawan.	401	1	5	4.25	.832
Using a self-checkout system in a IKEA Batu Kawan the right move in the present.	401	1	5	4.28	.785
Valid N (listwise)	401				

From the results in table 4.14, showing the highest mean score is 4.17 which is self-checkout system is excellent concept at IKEA Batu Kawan. Meanwhile, the lowest mean score is 4.09 which is customers know the steps of make cashless payment by using self - checkout system.

Table 4.14 : Descriptive analysis of customer literacy

	N	Minimum	Maximum	Mean	Std. Deviation
I know how to make cashless payment when using self-checkout system.	401	1	5	4.09	.906
I feel that self-checkout system at IKEA is faster than the cashier assisted line.	401	1	5	4.16	.849
I believe that self-checkout systems at IKEA are an excellent concept.	401	1	5	4.17	.900
I like the self-checkout system because I can have my privacy around the purchase.	401	1	5	4.14	.818
It's good idea for IKEA to have a self-checkout system.	401	1	5	4.13	.911
Valid N (listwise)	401				

The results in table 4.15 show the highest mean score of dependent variable is 4.24 which customers feel comfortable when using self-checkout system in IKEA Batu Kawan. Meanwhile, the lowest mean score of dependent variable is 4.04 which customer's intend to use self - checkout system many times in a year.

Table 4.15 : Descriptive analysis of consumers acceptance towards self-checkout system at IKEA Batu Kawan

	N	Minimum	Maximum	Mean	Std. Deviation
I intend used self-checkout system multiple times during this year.	401	1	5	4.04	.888
I using self-checkout system because it is easy to use.	401	1	5	4.15	.825
I use self-checkout system frequently when buying things at IKEA Batu Kawan.	401	1	5	4.19	.773
I am very comfortable using self-checkout system when buying at IKEA Batu Kawan.	401	1	5	4.24	.775
I encourage my famiLy or friend to use self-checkout system when buying at IKEA Batu Kawan.	401	1	5	4.18	.800
Valid N (listwise)	401				

4.5 Measurement Model Analysis

The model's ability to explain the target constructs of interest is assessed using PLS-SEM, which calculates the associations between the latent variables. The key drivers of PLS-rising SEM's popularity are its ability to estimate extremely complex models and its loose data requirements. Figure 4.9 shows the Cronbach value, standardized beta and outer loading's. The outer loading's value between perceived usefulness and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is -0.060, speed and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 0.133, perceived ease of use and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 0.110, attitude towards technology and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 0.268 and customer literacy and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 0.342.

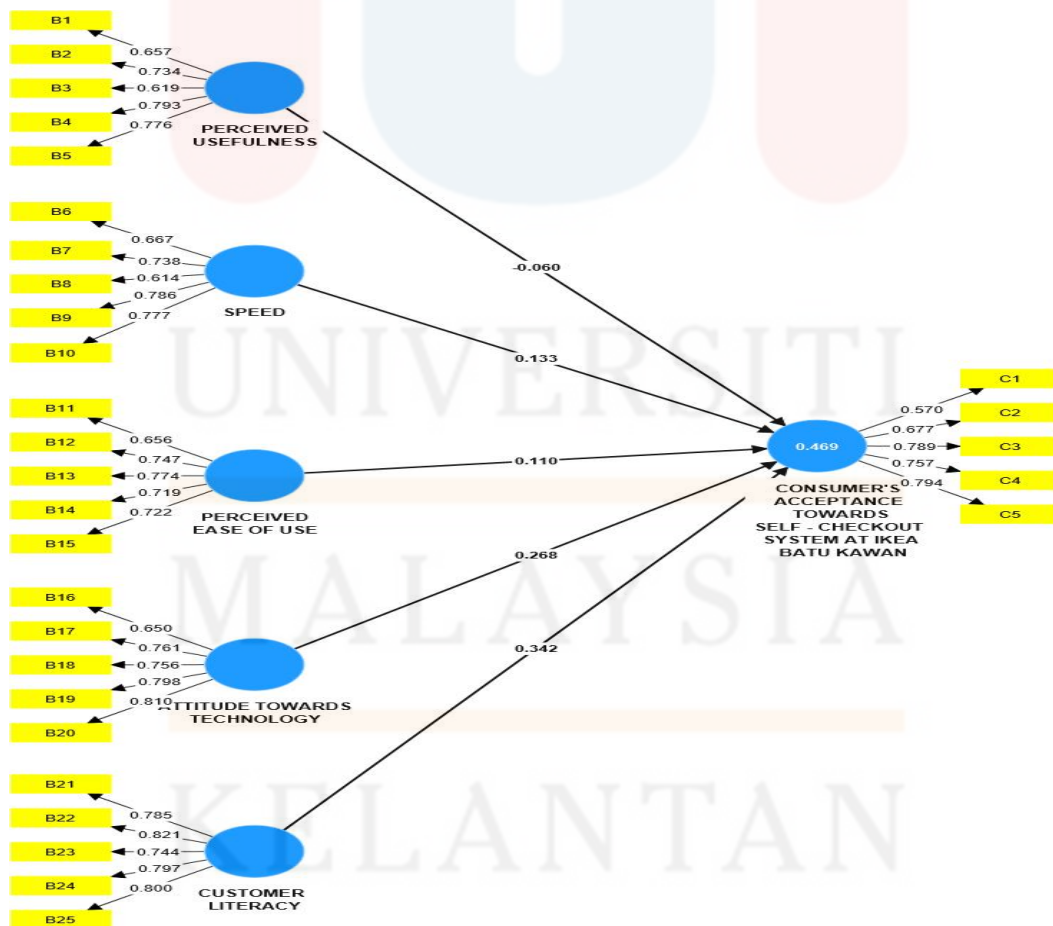


Figure 4.9: Modal of PLS - SEM

4.5.1 Reliability Test

This section discussed the reliability of this research's questionnaires that represents the dependent variable, the acceptance towards self-checkout service in IKEA Batu Kawan and independent variables, which are perceived usefulness, speed, perceived ease of use, attitude towards technology, customer literacy. In this section, Cronbach's Alpha of every question for each variable and section was analyzed and presented.

Perceived Usefulness

In this research, there are five questions that act as item in this test were used to measure the perceived usefulness as the independent variable. Table 4.16 indicates that Cronbach's Alpha coefficient of perceived usefulness is 0.764 which resulted as an acceptable strength of internal consistency. Due to the coefficient obtained for the questions of acceptance towards perceived usefulness have an acceptable consistency and strength, consequently all questions utilized for this variable is valid and reliable.

Table 4.16: Reliability test of perceived usefulness

Reliability Statistics	
Cronbach's Alpha	N of items
0.764	5

Speed

Next, reliability of speed, there are five questions that act as item in this test were used to test this independent variable. Table 4.17 indicates that Cronbach's Alpha coefficient of speed is 0.765 which resulted as an acceptable strength of internal consistency. Due to the coefficient obtained for the questions of speed an acceptable consistency and strength, consequently all questions utilized for this variable is valid and reliable.

Table 4.17: Reliability test of speed

Reliability Statistics	
Cronbach's Alpha	N of items
0.765	5

Perceived Ease of Use

The third reliability test is perceived ease of use. Five questions are stated that act as item in this test were used to identify this independent variable. Table 4.18 indicates that Cronbach's Alpha coefficient of perceived ease of use is 0.774 which resulted as an acceptable strength of internal consistency. Due to the coefficient obtained for the questions of perceived ease of use an acceptable consistency and strength, consequently all questions utilized for this variable is valid and reliable.

Table 4.18: Reliability test of perceived ease of use

Reliability Statistics	
Cronbach's Alpha	N of items
0.774	5

Attitude towards Technology

The fourth reliability test is attitude towards technology. Five questions are stated that act as item in this test were used to identify this independent variable. Table 4.19 indicates that Cronbach's Alpha coefficient of attitude towards technology is 0.812 which resulted as a very good level of internal consistency. Due to the coefficient obtained for the questions of attitude towards technology was good consistency and strength, consequently all questions utilized for this variable is valid and reliable.

Table 4.19: Reliability test of attitude towards technology

Reliability Statistics	
Cronbach's Alpha	N of items
0.812	5

Customer Literacy

The fifth reliability test is customer literacy. Five questions are stated that act as item in this test were used to identify this independent variable. Table 4.20 indicates that Cronbach's Alpha coefficient of customer literacy is 0.849 which resulted as a very good level of internal consistency. Due to the coefficient obtained for the questions of customer literacy has shown the result good consistency and strength, consequently all questions utilized for this variable is valid and reliable.

Table 4.20: Reliability test of customer literacy

Reliability Statistics	
Cronbach's Alpha	N of items
0.849	5

Consumer's Acceptance towards Self-Checkout System at IKEA Batu Kawan

Last reliability test is consumer's acceptance towards self-checkout system at IKEA Batu Kawan. Five questions are stated that act as item in this test were used to identify this dependent variable. Table 4.21 indicates that Cronbach's Alpha coefficient of consumer's acceptance towards self-checkout system at IKEA Batu Kawan is 0.767 which resulted as an acceptable strength of internal consistency. Due to the coefficient obtained for the questions of consumer's acceptance towards self-checkout system at Ikea Batu Kawan an acceptable consistency and strength, consequently all questions utilized for this variable is valid and reliable.

Table 4.21: Reliability test of consumer's acceptance towards self-checkout system at IKEA Batu Kawan

Reliability Statistics	
Cronbach's Alpha	N of items
0.767	5

In data validation, the researcher gains data from respondents which for identify the reliability. Cronbach's alpha and average variance extracted was used for checking the reliability of the data. In this research there are 401 respondents and being divided by 5 latent of independent variable which are perceived usefulness, speed, perceived ease of use, attitude towards technology, customer literacy. The dependent variable is consumer's acceptance towards self-checkout system at IKEA Batu Kawan. A reliability test of individual factors was also conducted, which ranged from 0.764 to 0.849 (Table 4.22). Since the coefficient of all the factors is above 0.7, the data was considered reliable for further analysis.

The Average Variance Extracted (AVE) is a measure of the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error. In the table above, each of latent variable and observed the values was between 0.518 until 0.624. A value of at least 0.50 for the average extracted variance (AVE) is highly accepted. According to some studies, an AVE of less than 0.50 indicates that there are some inaccuracies in the constructs' variance. The Average Variance Extracted (AVE) must be determined for each construct in any measurement model and it should be at least 0.50 (Lathiya,2022). By these average variances extracted (AVE) test shown that the measurement items which is fairly good.

Table 4.22 : Summary of reliability and validity test

Reliability and Validity Table				
	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Attitude Towards Technology	0.812	0.818	0.87	0.573
Consumer's Acceptance Towards Self - Checkout System At IKEA Batu Kawan	0.767	0.783	0.843	0.522
Customer Literacy	0.849	0.851	0.892	0.624
Perceived Ease of Use	0.774	0.779	0.847	0.525
Perceived Usefulness	0.764	0.779	0.841	0.517
Speed	0.765	0.78	0.842	0.518

4.5.2 Collinearity Statistics

In the table below, we can see that the VIF values for perceived usefulness and speed both greater than 5. It proven that this VIF was multicollinearity. Multicollinearity can be linked if independent variable is greater in the regression model which are correlated. Multicollinearity also may be a problem, but when it is moderate or high, it is a problem that needs to be solved (Daoud,2017). From the data above, it leads both of them probably have problems with multicollinearity and are probably not reliable. High VIFs only happen in control variables, not in variables of interest. Within that specific instance, neither the variables of interest nor the control variables are correlated. The regression coefficients are unaffected.

Table 4.23 : Collinearity statistics

Collinerity Statistics (VIF)	
	VIF
Perceived Usefulness	24.011
Customer Literacy	2.384
Speed	24.05
Attitude Towards Technology	2.276
Perceived Ease of Use	2.188

4.5.3 Discriminant Validity

The Fornell and Larcker criterion, the cross-loading of indicators and the hetero trait mono trait (HTMT) ratio of correlations are used to assess discriminant validity.

According to the Fornell and Larcker Criterion, the AVE of a construct must be greater than the squared correlations of that construct with all others constructs in the model (Henseler et al., 2015). Table 4.24 showed the square root of AVE as bold figures. When compared to other structures, the bold figures that are decided by diagonal line show a higher number. Since the AVE of a construct is higher than the squared correlations with all other construct in the model, this study demonstrates that discriminant analysis is supported.

Table 4.24 : Fornell lacker criterion

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Attitude Towards Technology (1)	0.757					
Consumer Acceptance Toward Self-Checkout (2)	0.61	0.722				
Customer Literacy (3)	0.693	0.635	0.79			
Perceived Ease of Use (4)	0.666	0.552	0.684	0.725		
Percieved Usefulness (5)	0.434	0.383	0.443	0.408	0.719	
Speed (6)	0.438	0.388	0.442	0.409	0.979	0.72

The result of cross-loading's indicated the range between 0.57 and 0.81 (Table 4.25). Henseler, Hubona & Ray (2015) mentioned that when a latent variable's load is greater than that of another latent variable, discriminant validity is verified. The values with the highest cross loading in comparison to other loading values are shown in bold. Thus, these items are valuable to measure consumer acceptance toward self-checkout in IKEA Batu Kawan.

Table 4.25 : Cross loading's

Variables	Attitude Towards Technology	Consumer Acceptance Toward Self-Checkout	Customer Literacy	Perceived Ease of Use	Perceived Usefulness	Speed
B1	0.246	0.255	0.288	0.221	0.657	0.655
B2	0.268	0.279	0.291	0.286	0.734	0.712
B3	0.283	0.205	0.257	0.267	0.619	0.602
B4	0.333	0.298	0.358	0.325	0.793	0.776
B5	0.415	0.321	0.381	0.357	0.776	0.759
B6	0.25	0.258	0.293	0.227	0.666	0.667
B7	0.259	0.283	0.282	0.28	0.704	0.738
B8	0.297	0.209	0.256	0.263	0.584	0.614
B9	0.329	0.3	0.363	0.329	0.783	0.786
B10	0.426	0.328	0.38	0.358	0.765	0.777
B11	0.456	0.328	0.403	0.656	0.287	0.294
B12	0.44	0.387	0.459	0.747	0.405	0.416
B13	0.508	0.423	0.534	0.774	0.284	0.288
B14	0.506	0.399	0.524	0.719	0.162	0.159
B15	0.5	0.447	0.539	0.722	0.343	0.328
B16	0.65	0.406	0.425	0.494	0.278	0.281
B17	0.761	0.469	0.503	0.534	0.251	0.262
B18	0.756	0.429	0.543	0.485	0.42	0.422
B19	0.798	0.497	0.574	0.495	0.36	0.358
B20	0.81	0.499	0.568	0.515	0.338	0.338
B21	0.547	0.531	0.785	0.551	0.431	0.434
B22	0.536	0.504	0.821	0.528	0.317	0.311
B23	0.522	0.443	0.744	0.534	0.23	0.229
B24	0.535	0.499	0.797	0.544	0.409	0.405
B25	0.593	0.522	0.8	0.545	0.346	0.351
C1	0.379	0.57	0.344	0.376	0.275	0.273
C2	0.32	0.677	0.408	0.384	0.372	0.357
C3	0.515	0.789	0.548	0.423	0.262	0.28
C4	0.482	0.757	0.44	0.362	0.21	0.215
C5	0.48	0.794	0.521	0.446	0.287	0.293

This study analysed the heterotrait-monotrait (HTMT) ratio (Table 4.26) to assess the discriminant validity. The outcome demonstrated that AVE's square root exceeded latent variable score in the corresponding row and column table, indicating a satisfactory level of discriminant validity (Fornell & Larcker, 1981). As a result, the HTMT ratio is taken into account since it is a potent replacement for the Fornell-Larcker criterion.

Table 4.26: HTMT ratio

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Attitude Towards Technology (1)						
Consumer Acceptance Toward Self-Checkout (2)	0.766					
Customer Literacy (3)	0.832	0.777				
Perceived Ease of Use (4)	0.841	0.714	0.838			
Perceived Usefulness (5)	0.548	0.506	0.54	0.53		
Speed (6)	0.554	0.51	0.539	0.529	1.278	

4.6 Structural Model Test

To assess the significance of estimated path analysis and process coefficients, SmartPLS employs bootstrapping. This process is repeated until a significant number of random sub-samples typically about 5,000 have been generated. The 95% confidence intervals are derived from the parameter estimates obtained from the sub-samples in order to perform significance testing. Additionally, the estimates' standard errors are provided by bootstrapping, allowing t-values to be computed to determine the significance of each estimate. The t-value between perceived usefulness and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 0.420, speed and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 0.915, perceived ease of use and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 1.266, attitude towards technology and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 3.172 and customer literacy and consumer's acceptance towards self - checkout system at IKEA Batu Kawan is 4.080.

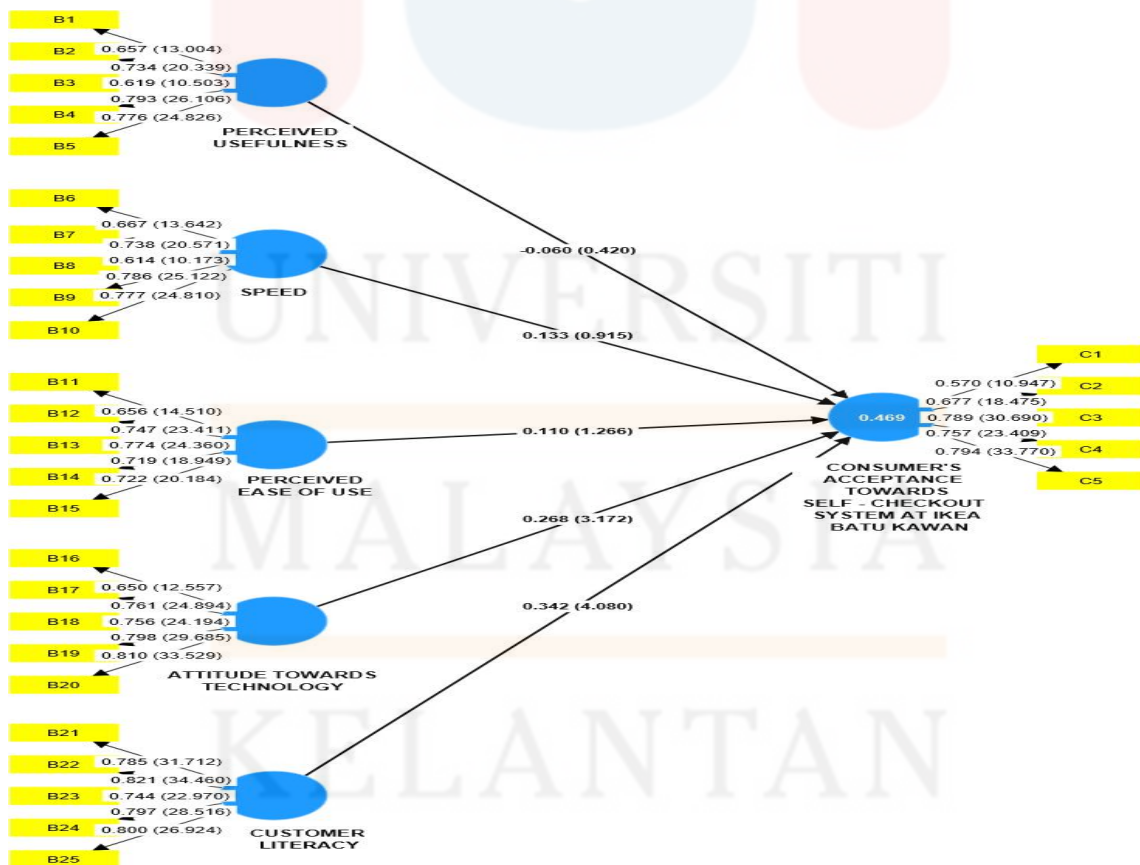


Figure 4.10: Modal of bootstrapping

4.6.1 Hypothesis Testing

Before testing the structural model, it is critical to ensure that collinearity is not a problem. The structural model for collinearity issues should be checked by examining the VIF values of all sets of predictor constructs in the structural model (Hair, 2017). All values for the VIF of each sample construct are smaller than 3.0. The present analysis confirms that collinearity was not a problem and can progress to the testing of hypotheses.

The research hypotheses may be supported if the beta values are in accordance with the hypothesis's direction, t-values, and p-value. In the present analysis, a bootstrapping approach with resampling of 5,000 was used which the findings for the direct effect show that three hypothesized relationships were supported and two hypothesized relationship was not supported. Table 4.27 below shows that the first hypothesis, perceived usefulness was not related to consumer's acceptance towards self - checkout system at IKEA Batu Kawan ($\beta = -0.06$, $t = 0.334$, $p < 0.739$). The second hypothesis, speed was not related to consumer's acceptance towards self - checkout system at IKEA Batu Kawan ($\beta = 0.133$, $t = 0.741$, $p < 0.459$). Next, third hypothesis, perceived ease of use was positively related to consumer's acceptance towards self - checkout system at IKEA Batu Kawan ($\beta = 0.11$, $t = 2.024$, $p < 0.044$). This is followed by the fourth hypothesis, attitude towards technology was positively related to consumer's acceptance towards self - checkout system at IKEA Batu Kawan ($\beta = 0.268$, $t = 4.843$, $p < 0.000$). Lastly, the fifth hypothesis, customer literacy was positively related to consumer's acceptance towards self - checkout system at IKEA Batu Kawan ($\beta = 0.342$, $t = 6.036$, $p < 0.000$). Table 4.27 below indicates that fourth direct hypotheses developed for the model were significant; thus H3, H4, and H5 were accepted, and two hypothesis was not supported; thus, H1 and H2 was rejected.

The hypothesis 1 was rejected which is relationship between perceived usefulness and consumer’s acceptance towards self - checkout system at IKEA Batu Kawan because self - checkout system is a new facility to the consumers. They could not adopt to the technology very easily. Besides of that, consumer’s of IKEA Batu Kawan are more prefer use counter service instead of using self - checkout system.

The hypothesis 2 was rejected which is relationship between speed and consumer’s acceptance towards self - checkout system at IKEA Batu Kawan because the self - checkout system is not perform efficiently. This is because consumer’s are make payment in self - checkout system very slowly. Therefore, the process is become delay and it’s affect other’s valuable time too.

Table 4.27 : Hypothesis testing

Hypothesis relationship	Standard Beta	Standard Error	T value	P value	Decision
H1: PU -> CASCS	-0.06	0.18	0.334	0.739	Not Accept
H2: SPEED -> CASCS	0.133	0.18	0.741	0.459	Not Accept
H3: PEOU -> CASCS	0.11	0.054	2.024	0.044	Accept
H4: ATT -> CASCS	0.268	0.055	4.843	0.000	Accept
H5: CL -> CASCS	0.342	0.057	6.036	0.000	Accept

Note: PU - Perceived Usefulness, PEOU - Perceived Ease of Use, ATT - Attitude Towards Technology, CL - Customer Literacy, CASCS - Consumer’s Acceptance Towards Self - Checkout System at IKEA Batu Kawan

4.6.2 R - Squared

R-squared (R²) is a statistical indicator that reveals the percentage of the range of a dependent variable in a regression model is described by one or more independent variables. R-squared, as related to correlation, which demonstrates the strength of the relationship between independent and dependent variables, assesses whether the variations of one variable accounts for the variance of the second. One may consider a low R-Squared value of 0.5 to be reasonably resilient.

For an acceptable R-Squared reading, other areas may have much higher standards, such as 0.9 or higher. In the financial industry, an R-Squared score above 0.7 is often seen as suggesting a high level of correlation, while one below 0.4 is interpreted as showing a poor level of correlation (FERNANDO, 2021). According to table 4.28, the R - squared of this study was 0.469.

Table 4.28 : R - squared

	Consumer's Acceptance Towards Self - Checkout System At IKEA Batu Kawan
R-square	0.469
R-square adjusted	0.463
Durbin-Watson test	1.99

4.6.3 Collinearity Statistics (VIF)

A variance inflation factor, or VIF, is used in regression analysis to determine the level of multicollinearity. Multicollinearity occurs when there is a relationship among several independent variables in a multiple regression model. A big VIF on an independent variable denotes a highly collinear link to the other variables, which should be taken into account or accounted for in the model's structure and independent variable selection (POTTERS, 2022). A VIF under 5 denotes a low correlation between the predictor and other predictors. When the VIF value is between 5 and 10, there is a moderate correlation and when it is greater than 10, there is a high, intolerable correlation of the model predictors. Based on table 4.29, three independent

variables are low correlate with the dependent variable which are perceived ease of use (2.188), attitude towards technology (2.276) and customer literacy (2.384). This is because the VIF value is below 5. Besides that, other two independent variables are high correlate (greater than 10) with dependent variable which are perceived usefulness (24.011) and speed (24.05).

Table 4.29 : Collinearity statistics (VIF)

	VIF
Perceived Usefulness	24.011
Customer Literacy	2.384
Speed	24.05
Attitude Towards Technology	2.276
Perceived Ease of Use	2.188

4.7 Summary

Data analysis on the knowledge gained via a cross-sectional review was conducted in this chapter. To assess the accuracy and stability of the data and the equipment, data quality and dependability test investigations were completed. The results demonstrated that each and every aspect in this investigation was reliable and pleasant. The links between the independent and dependent components were then confirmed in a hypothesis test using bootstrapping analysis. According to the findings, three independent variables positively relate to the dependent variable. Additionally, a descriptive analysis was completed to illustrate and clarify the segment profile and responses for the thing under investigation. The results and limitations of the study will be covered in the following chapter, which will also offer conclusions and recommendations.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

The bootstrapping analysis from chapter four was used to explain and describe the study's findings in this chapter. The issues from part 2 rundown are used to work through the list. Additionally, the researcher has talked about testing research hypotheses and whether they are accepted or rejected. The interpretation of results and hypothesis, limitation, recommendation, and research conclusion are the four sections that make up this chapter's discussion of the findings from the preceding chapter.

5.2 Key Findings

According to result of the reliability and validity analysis shows perceived usefulness has a reliable Cronbach's Alpha of 0.764. The results of bootstrapping analysis shows that p obtained in this test is $p = 0.739$. It also shows that the perceived usefulness is statistically not significant value. Therefore, the research objective was not reached. We may conclude, there is no substantial correlation between the perceived usefulness and consumers acceptance towards self - checkout system at IKEA Batu Kawan as the research purpose and question have been not satisfied.

Table 5.1 : Relationship between perceived usefulness and consumer's acceptance towards self - checkout system at IKEA Batu Kawan

<p>Research Objective: To identify the relationship between perceived usefulness and consumers acceptance towards self - checkout system at IKEA Batu Kawan.</p> <p>Research Question: What is the relationship between perceived usefulness and consumers acceptance towards self - checkout system at IKEA Batu Kawan?</p>
--

According to result of the reliability and validity analysis shows speed has a reliable Cronbach's Alpha of 0.765. The results of bootstrapping analysis shows that p obtained in this test is $p = 0.459$. It also shows that the speed is statistically not significant value. Therefore, the research objective was not reached. We may conclude, there is no substantial correlation between the speed and consumers acceptance towards self - checkout system at IKEA Batu Kawan as the research purpose and question have been not satisfied.

Table 5.2 : Relationship between speed and consumer's acceptance towards self - checkout system at IKEA Batu Kawan

Research Objective: To identify the relationship between speed and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

Research Question: What is the relationship between speed and consumers acceptance towards self - checkout system at IKEA Batu Kawan?

According to result of the reliability and validity analysis shows perceived ease of use has a reliable Cronbach's Alpha of 0.774. The results of bootstrapping analysis shows that p obtained in this test is $p = 0.044$. It also shows that the perceived ease of use is statistically significant value. Therefore, the research objective was reached. We may conclude, there is substantial correlation between the perceived ease of use and consumers acceptance towards self - checkout system at IKEA Batu Kawan as the research purpose and question have been satisfied.

Table 5.3 : Relationship between perceived ease of use and consumer's acceptance towards self - checkout system at IKEA Batu Kawan

Research Objective: To identify the relationship between perceived ease of use and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

Research Question: What is the relationship between perceived ease of use and consumers acceptance towards self - checkout system at IKEA Batu Kawan?

According to result of the reliability and validity analysis shows attitude towards technology has a reliable Cronbach's Alpha of 0.812. The results of bootstrapping analysis shows that p obtained in this test is $p = 0.000$. It also shows that the attitude towards technology is statistically significant value. Therefore, the research objective was reached. We may conclude, there is substantial correlation between the attitude towards technology and consumers acceptance towards self - checkout system at IKEA Batu Kawan as the research purpose and question have been satisfied.

Table 5.4 : Relationship between attitude towards technology and consumer's acceptance towards self - checkout system at IKEA Batu Kawan

Research Objective: To identify the relationship between attitude towards technology and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

Research Question: What is the relationship between attitude towards technology and consumers acceptance towards self - checkout system at IKEA Batu Kawan?

According to result of the reliability and validity analysis shows customer literacy has a reliable Cronbach's Alpha of 0.849. The results of bootstrapping analysis shows that p obtained in this test is $p = 0.000$. It also shows that the customer literacy is statistically significant value. Therefore, the research objective was reached. We may conclude, there is substantial correlation between the customer literacy and consumers acceptance towards self - checkout system at IKEA Batu Kawan as the research purpose and question have been satisfied.

Table 5.5 : Relationship between customer literacy and consumer's acceptance towards self - checkout system at IKEA Batu Kawan

Research Objective: To identify the relationship between customer literacy and consumers acceptance towards self - checkout system at IKEA Batu Kawan.

Research Question: What is the relationship between customer literacy and consumers acceptance towards self - checkout system at IKEA Batu Kawan?

5.3 Discussion

Research Question 1: Is there any significant relationship between perceived usefulness and consumer's acceptance towards self-checkout system at IKEA Batu Kawan.

In this study, the first research objective is to examine the significant relationship between perceived usefulness and the acceptance towards self-checkout system at IKEA Batu Kawan. According to the result shown in Table 4.27, there is a modest significant correlation of perceived usefulness with consumer acceptances towards self-checkout system, which is -0.06 and the p-value is 0.739 ($p > 0.05$). The result shows a negative relationship between the perceived usefulness and consumers acceptance towards self-checkout system at IKEA Batu Kawan. Perceived usefulness not shows a significant impact on the consumer's acceptance towards self-checkout system at IKEA Batu Kawan. Thereby, it also makes hypothesis (H1) not supported because of perceived usefulness of the system is related to the productivity and effectiveness of the system and according to questionnaire data some respondents not having a benefits toward self-checkout system on improve user performance. In other words, the perception of utility directly affects intention to try and use the self-checkout system. If buyers feel the benefits, they will intend to use the system; otherwise, if they do not feel the benefits of the system, then they will not intend to use it (Prastiawan, Aisjah & Rofiaty, 2021). To clarify this evident person believes that using a technology will improve the performance of his/her work. Therefore, the more useful a technology is the higher the users' desire to use it (Abu, AlHadid, Alkhaldeh, Khwaldeh, Masa'deh, Alrowwad & Al-Eidie, 2022). The key element affecting attitudes toward the usage of new technology is perceived usefulness. As a result, perceived usefulness may be defined as an individual's opinion that employing a certain technology would bring some benefits for enhancing its performance.

Research Question 2: Is there any significant relationship between speed and consumer's acceptance towards self-checkout system at IKEA Batu Kawan.

The second exploration objective is to look at the critical connection between speed and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. In the light of outcome displayed in Table 4.27, there is an unassuming huge connection speed with consumer acceptance towards self-checkout system, which is 0.133 and the p-value is 0.459 ($p > 0.05$). The outcome shows a negative connection between speed and consumer's acceptance towards self-checkout service at IKEA Batu Kawan. Subsequently, it likewise makes hypothesis (H2) are not accepted. This can be explained by some customers are still depend on human interaction. Constantly, long queues have been an issue (Cebeci, Ertug & Turkcan, 2020). In research result, respondents showed what makes self-service checkout alternatives so tempting. Shoppers have more expectations than ever before, making it more difficult to stand out and just by offering pleasant and consistent customer service. Customers demand a high level of service from every firm with which they deal and the competition has changed to see who can give the best level of service as rapidly as possible (Clint, 2021). They also discussed what would discourage people from adopting self-service checkout and why a lack of sufficient self-service checkout choices can put them off in bad term. Even though the self-service checkout has the high ease to use and more faster, they need an employee to assist in some part of the checkout process (Fernandes & Pedroso, 2016).

Research Question 3: Is there any significant relationship between perceived ease of use and consumer's acceptance towards self-checkout system at IKEA Batu Kawan.

The third research objective is to examine the significant relationship between perceived ease of use and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. Correlation test was conducted to identify whether perceived ease of use related to the consumer's acceptance towards self-checkout system at IKEA Batu Kawan. Based on the previous result that showed in Table 4.27, there is a modest significant correlation of perceived ease of use with consumer's the acceptance towards self-checkout system, which is 0.11 and the p-value is 0.044, ($p < 0.05$). The result shows a positive relationship perceived ease of use and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. Thereby, it also makes hypothesis (H3) supported. By this result, the researcher believed that buyers at IKEA Batu Kawan would shop more often and concentrate on good results and that their innovativeness will drive them to try out self-checkout systems in hypermarkets or shopping malls. Customers who are cautious and uneasy utilizing the self-checkout system at IKEA Batu Kawan may limit their adoption and use of the self-checkout system. Customers' discomfort may heighten their fear and diminish their use of the self-checkout system (Mukerjee, Deshmukh & Prasad, 2018). In this study, they felt that perceived ease of use may successfully boost customer satisfaction with new technologies and indirectly alter consumers' attitude toward the continuous use of new technologies and that perceived usefulness, in particular is a key mediator (Cebeci, Ertug & Turkcan, 2020). This suggests that if less resources or less time are necessary to learn how to use self-checkout system, customers will consider they are beneficial and their attitude about using them constantly will be impacted (Peng & Yan, 2022).

Research Question 4: Is there any significant relationship between attitude towards technology and consumer's acceptance towards self-checkout system at IKEA Batu Kawan?

The fourth exploration objective is to look at the huge connection between attitude towards technology and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. Correlation test was directed to recognize whether the component of instrument control connected with the attitude towards technology and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. As per the outcome in Table 4.27, there is a critical connection in perceived ease of use with the consumer's acceptance towards self-checkout system, which is 0.268, and the p-value is 0.00, ($p < 0.05$). The outcome shows a positive connection between attitude towards technology and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. The fourth hypothesis (H4) was supported. In this research, attitudes toward technology were more positive influence on consumer acceptance of self-checkout systems. A person's positive or negative evaluation of an attitude object is an attitude. The attitude towards technology in the context of technology is one's favourable or negative judgement of the advent of new types of technology in any setting (Jalil & Yeik, 2019). In fact, the impact of consumer acceptance of self-checkout systems and technology-specific perceptions, such as self-efficacy, may differ across societies and attitudes.

Research Question 5: Is there any significant relationship between customer literacy and consumer's acceptance towards self-checkout system at IKEA Batu Kawan?

Overall, the fifth research objective is to identify the significant relationship between customer literacy and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. According to the result shown in Table 4.27, there is a modest significant correlation of customer literacy with consumer's acceptance towards self-checkout system at IKEA Batu Kawan, which is 0.342, and the p-value is 0.000 ($p < 0.01$). The result shows a positive relationship between the customer literacy and consumer's acceptance towards self-checkout system at IKEA Batu Kawan. Customer literacy shows a significant impact on consumer's acceptance towards self-checkout system at IKEA Batu Kawan. Thereby, it also makes hypothesis (H5) supported. To supported this hypothesis within customer literacy, the IKEA Batu Kawan consumers' has the capacity to discover, organize, comprehend, assess and analyse information. It entails having a working grasp of current modern technology as well as knowing how to apply it (Himmelweit, 2014). Furthermore, each customer is aware of the unique factors that influence society and human behaviour. The effect of customer literacy with consumer at IKEA Batu Kawan is concerned with larger features that go beyond individual knowledge and are related with learning how to successfully locate, utilize, summarize, evaluate, generate, and transmit information while utilizing digital self-checkout system (Nam & Hwang,2021).

5.4 Implications of the Study

The implications of this study can be used to highlight the factors affecting the self-checkout system at IKEA Batu Kawan. As a result, when reviewing the review's overall conclusion, some of the most important have a good relationship with perceived usefulness, speed, perceived ease of use, attitude towards technology and customer literacy. Implementing it helps consumers' acceptance towards self-checkout system at IKEA Batu Kawan.

Perceived usefulness has a negative relationship with self-checkout system. Self-checkout system surely takes up less space than registers in terms of cost of space. Since self-checkout tends to be quicker than register, fewer checkout systems are needed, which frees up additional space. Another that, speed also has a negative relationship with the consumers' acceptance of self-checkout service in IKEA Batu Kawan. Due to the Covid-19 pandemic, it is more crucial than ever for businesses to operate in a clean and safe environment, and self-checkout system can help to safeguard both consumers and employees.

Additionally, customer literacy has a positive relationship with regard to consumers' adoption of self-checkout service in IKEA Batu Kawan. Self-checkout systems increase the rate at which orders are processed by enabling more consumers to order and pay once without the need for additional workers. Customers may perceive self-checkout as being quicker than waiting in line or for a cashier to scan their products. However, with reduced costs and constantly improving security, this percentage is decreasing over time. Perceived ease of use and attitude towards technology have good relationships with consumers' acceptance towards self-checkout system at IKEA Batu Kawan.

5.5 Limitations of the Study

Even though this research provided many helpful management and theoretical, it still has several flaws that will require additional study in the future. The current study is limited more than 300 respondents, which are thought to represent a small number of markets in Batu Kawan, Penang. Finding a constraint might be a crucial chance to spot fresh literature gaps and highlight the need for additional research.

The first limitation is the limited sample size to represent the customers from IKEA Batu Kawan. In this study, we found out 401 respondents. As a results, the study's data accuracy will be a concern because respondents in each age group may have opinions and perceptions of self-checkout systems. Besides that, we also give the questionnaire via google form with face to face to get some data from respondent. The questionnaire have bilingual which language English and Malay. Many people skim the questionnaire's material without really reading it. As a result, they select a response to the questionnaire without fully comprehending the question.

Lastly, the questionnaire was designed with a tight end, anticipating respondent to check the option that best describes their thoughts or level of fulfillment. Despite the fact it was advantageous for the respondents to complete the survey quickly and profitably, the specialists were unable to effectively analyse and interpret the data due to time and resource constraints. As a result, it is difficult for research to gather data and establish a framework for comprehending the research problem in self-checkout service IKEA Batu Kawan.

5.6 Recommendations/ Suggestion for Future Research

There are some recommendations made in order to significantly enhance the caliber of the future research on related subject. The first recommendation is that future researcher should concentrate on all age groups of target respondents rather than just one particular age group of respondents, which are those who shop at IKEA from the youngest to the oldest. Thus, researcher will have more accurate data and learn more about respondents' acceptance of the self-checkout system. Additionally, this study primarily focused on the IKEA Batu Kawan community, thus it is unlikely to be sufficiently thorough to address the full population. In order to ensure that the results are accurate and trustworthy, the future researcher will need to select every IKEA store in Malaysia.

A multi-language approach is recommended in this review to eliminate bias, the survey should be available in English, Malay, Chinese, and Tamil. The application multi-language is justified because the target respondent is Malaysian, they come from different races, and some of them do not understand English. Furthermore, the respondents can easily understand their language to respond, and they can comprehend the question paper, resulting in the accuracy of the outcome. Moreover, this study only used a quantitative research method. Therefore, future researchers should replicate this study using qualitative or mixed-method approaches to gain a more in-depth understanding of consumer acceptance factors.

Future researchers for this study may look into another industry that has a self-checkout system, such as a fast-food restaurant. Second, there are numerous other factors that influence consumer acceptance of the self-service checkout system.

5.7 Conclusion

In a nutshell, the objective of investigating the factors that affect consumer's acceptance of self-checkout system at IKEA Batu Kawan has been met. Perceived usefulness, Perceived ease of use, attitude toward technology, speed and customer literacy are adopted to study the factor that affect consumer's acceptance of self-checkout system at IKEA Batu Kawan. This research has several advantages. For example, entrepreneurs can use the result to consider implementing self-checkout technology in other industries and improving their service to meet customer want. According to the findings, perceived ease of use, attitude toward technology and customer literacy have positive relationship with consumer's acceptance towards self-checkout system at IKEA Batu Kawan.

REFERENCES

- Abu-Taieh, E. M., AlHadid, I., Alkhaldeh, R. S., Khwaldeh, S., Masa'deh, R., Alrowwad, A. A., & Al-Eidie, R. (2022). An empirical study of factors influencing the perceived usefulness and effectiveness of integrating e-learning systems during the COVID-19 pandemic using SEM and ML: A case study in Jordan. *Sustainability*, 14(20), 13432. <https://doi.org/10.3390/su142013432>
- Alenka Brezavscek, P. S., Anja Znidarsic. (2016). *Factors Influencing the Behavioural Intention to Use Statistical Software: The Perspective of the Slovenian Students of Social Sciences*. 34. <https://www.ejmste.com/download/factors-influencing-the-behavioural-intention-to-use-statistical-software-the-perspective-of-the-4699.pdf>
- Alinda, K. and David , A.C. (2013) *Using self-service technology to reduce customer waiting times*. Available at: https://www.researchgate.net/publication/235981086_Using_self-service_technology_to_reduce_customer_waiting_times(Accessed: November 2, 2022).
- Alvi, M. (2016). A manual for selecting sampling techniques in research. <https://mpira.ub.uni-muenchen.de/id/eprint/70218>
- Anderson, G. (2012) *IKEA bags self-checkouts*, *RetailWire*. Available at: <https://retailwire.com/discussion/ikea-bags-self-checkouts/> (Accessed: November 7, 2022).
- Anitsal, I., & Paige, R. C. (2006). An exploratory study on consumer perceptions of service quality in technology-based self-service. *Services Marketing Quarterly*, 27(3), 53-67.
- Bernardita , C. (2022, August 25). *What is data analysis? methods, techniques, types & how-to*. datapine. Retrieved November 12, 2022, from <https://www.datapine.com/blog/data-analysis-methods-and-techniques/>
- Besley, J.C., (2013). The state of public opinion research on attitudes and understanding of science and technology. *Bull. Sci. Technol. Soc.* 33, 12–20. <https://journals.sagepub.com/doi/10.1177/0270467613496723>
- Bowe, C. (2011). What Is The Importance Of Consumer Literacy For College Students. <https://www.bartleby.com/essay/What-Is-The-Importance-Of-Consumer-Literacy-FJTXP53M2Q6>
- Blog, F. (2022). Nominal, Ordinal, Interval & Ratio Variable. <https://www.formpl.us/blog/nominal-ordinal-interval-ratio-variable-example#:~:text=A%20measurement%20variable%20is%20an,take%20qualitative%20values%20in%20statistics>
- Cebeci, U., Ertug, A., & Turkcan, H. (2020). Exploring the determinants of intention to use self-checkout systems in Super Market chain and its Application. *Management Science Letters*, 1027–1036. <https://doi.org/10.5267/j.msl.2019.11.007>
- Company, T. B. R. (2022). *Self-Service Technologies Global Market Report 2022*. https://www.reportlinker.com/p06325446/Self-Service-Technologies-Global-Market-Report.html?utm_source=GNW
- Collins. *Self - checkout*. <https://www.collinsdictionary.com/dictionary/english/self-checkout#:~:text=A%20self%2Dcheckout%20is%20a,times%20and%20improved%20customer%20flow>
- Collier, J. E. (2020). Introduction to structural equation modeling. *Applied Structural Equation Modeling Using AMOS*, 1–16. <https://doi.org/10.4324/9781003018414-1>
- Corgi, S. (2020) *Technological innovation: Self-service checkouts: Free Essay example*, *StudyCorgi.com*. Available at: <https://studycorgi.com/technological-innovation-self-service-checkouts/> (Accessed: November 7, 2022).
- Creswell, J.W., & Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed. Thousand Oaks, CA: Sage. https://www.researchgate.net/publication/237658796_An_Introduction_to_Mixed_Method_Research

- Curran, J. M., Meuter, M. L., & Surprenant, C. F. (2003). Intentions to use self-service technologies: a confluence of multiple attitudes. *Journal of Service Research*, 5(3), 209-224.
- Customer Adaptation in the Context of Electronic Banking.*
<https://doi.org/https://doi.org/10.5897/AJBM.9000634>
- Damen, A. (2021) *The future of checkout: How retailers are innovating the payment experience, Shopify.* Available at: <https://www.shopify.com/retail/trend-watch-the-death-of-the-checkout-line> (Accessed: November 5, 2022).
- Daoud, J. I. (2017). Multicollinearity and Regression Analysis. *Journal of Physics: Conference Series*, 949, 012009. <https://doi.org/10.1088/17426596/949/1/012009>
- Davis, F. D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, 13 (3): 319–340, doi:10.2307/249008, JSTOR 249008, S2CID 12476939 <https://www.sciencedirect.com/topics/social-sciences/technology-acceptance-model>
- Dea Clarissa Safitria, Z. N., Roozbeh Babolian Hendijan. (2021). *Customer Intention Towards Self-Service Checkout in Indonesian Supermarket.* 12(6), 9. <https://www.tojqi.net/index.php/journal/article/download/1361/669/1505>
- Evans, C. (2016, 22). *Why must sales be involved with customer acceptance?*
<https://graydon.co.uk/resources/blog/strategy-policy/why-must-sales-be-involved-customer-acceptance>
- Fathema, N., Shannon, D. and Ross, M. (2015) *Expanding the technology acceptance model (TAM) to examine faculty use ...*, *Expanding The Technology Acceptance Model (TAM) to Examine Faculty Use of Learning Management Systems (LMSs) In Higher Education Institutions* Available at: https://www.researchgate.net/publication/281842180_Expanding_The_Technology_Acceptance_Model_TAM_to_Examine_Faculty_Use_of_Learning_Management_Systems_LMSs_In_Higher_Education_Institutions (Accessed: November 2, 2022).
- Fernandes, T., & Pedroso, R. (2016). The effect of self-checkout quality on customer satisfaction and repatronage in a retail context. *Service Business*, 11(1), 69–92. <https://doi.org/10.1007/s11628-016-0302-9>
- Fernandes, T., & Pedroso, R. (2017). The effect of self-checkout quality on customer satisfaction and repatronage in a retail context. *Service Business*, 11(1), 69-92. <https://link.springer.com/article/10.1007/s11628-016-0302-9>
- Fernandes, T., & Oliveira, E. (2021). Understanding consumers' acceptance of automated technologies in service encounters: Drivers of digital voice assistants adoption. *Journal of Business Research*, 122, 180-191. <https://doi.org/https://doi.org/10.1016/j.jbusres.2020.08.058>
- FERNANDO, J. (2021). R-Squared Formula, Regression, and Interpretations. <https://www.investopedia.com/terms/r/r-squared.asp>
- Fontanella, C. (2021, June 15). *Product quality or speed of service: Which one is more important for your business?* Product Quality or Speed of Service: Which One Is More Important for Your Business? Retrieved November 6, 2022, from <https://blog.hubspot.com/service/speed-of-service>
- GANTI, A. (2022). Central Limit Theorem (CLT): Definition and Key Characteristics. https://www.investopedia.com/terms/c/central_limit_theorem.asp
- Gagliardi, N. (2012). IKEA checks out of self-service. <https://www.retailcustomerexperience.com/articles/ikea-checks-out-of-self-service/>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/eb-11-2018-0203>

- Hassan, H., Sade, A.B. and Rahman, M.S. (2013) “Self-service technology for Hypermarket Checkout Stations,” *Asian Social Science*, 10(1). Available at: <https://doi.org/10.5539/ass.v10n1p61>.
- Hartmann, L., Kerseffischer, F., Fritsch, T., & Nguyen, T. (2013). User acceptance of customer self-service portals. *Journal of Economics, Business and Management*, 1(2), 111-121.
- Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, 116(1), 2–20. <https://doi.org/10.1108/imds-09-2015-0382>
- Henseler, J., Hubona, G. & Ray, P. A. (2015). Using PLS Path Modeling in New Technology Research: Updated Guidelines. *Industrial Management & Data*
- Himmelweit, S. M. (2014). Consumer literacy. *International Journal of Market Research*, 56(6), 709–716. <https://doi.org/10.2501/ijmr-2014-051>
- Ibrahim, M. (2015, April). *Data analysis using SPSS*. Share and Discover Knowledge on SlideShare. Retrieved November 11, 2022, from <https://www.slideshare.net/MuhammadIbrahim15/data-analysis-using-spss>
- Jahangir, N., & Begum, N. (2008). *The Role of Perceived Usefulness, Perceived Ease of Use, Security and Privacy, and Customer Attitude to Engender*
- James, G., Witten, D., Hastie, T., and Tibshirani, R. (eds.). (2013). *An introduction to statistical learning: with applications in R*. New York: Springer.
- Jalil, N. A., & Yeik, K. K. (2019). Systems, design and technologies anxieties towards use of self-service checkout. *Proceedings of the 2019 3rd International Conference on Education and E-Learning*. <https://doi.org/10.1145/3371647.3371664>
- J. F., M., H. G. T., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (Pls-Sem) using r: A workbook*. Springer.
- Jordan, M. (2021, May 21). *What is SPSS and how does it benefit survey data analysis?* Alchemer. Retrieved November 13, 2022, from <https://www.alchemer.com/resources/blog/what-is-spss/>
- Jie, N.X. and Kamsin, I.F. (2021) “Self-checkout service with RFID technology in supermarket,” *Atlantis Highlights in Computer Sciences* [Preprint]. Available at: <https://doi.org/10.2991/ahis.k.210913.062>.
- J.W.Siah, S. F. F. (2019). Service Quality of Self-Checkout Technology in Malaysian Retail Industry. <https://www.ijrte.org/wp-content/uploads/papers/v8i1S5/A00330681S519.pdf>
- KENTON, W., & (2021). Customer: Definition and How to Study Their Behavior for Marketing. <https://www.investopedia.com/terms/c/customer.asp>
- Kwak, J. K. (2017). Analysis on the effect of express checkouts in retail stores. *Journal of Applied Business Research (JABR)*, 33(4), 767-774. <https://www.clutejournals.com/index.php/JABR/article/view/9998>
- Lai, P. C. (2017). The literature review of technology adoption models and theories for the novelty technology. *JISTEM-Journal of Information Systems and Technology Management*, 14, 21-38.
- Lathiya, K. (2022) *What is average variance extracted in R, R-Lang*. Available at: <https://r-lang.com/average-variance-extracted-in-r/> (Accessed: January 10, 2023).
- Lee, S. Y., Looi, N. Y., & Woo, C. Y. (2018). *Factors that influence consumers’ acceptance towards Self-Checkout System (SCS) in hypermarket Malaysia [UTAR]*.
- Lee, Y., Kozar, K. A., & Larsen, K. R. (2003). The technology acceptance model: Past, present, and future. *Communications of the Association for information systems*, 12(1), 50. <https://aisel.aisnet.org/cgi/viewcontent.cgi?article=3217&context=cais>

- Lee, H. J., & Yang, K. (2013). Interpersonal service quality, self-service technology (SST) service quality, and retail patron-age. <https://www.sciencedirect.com/science/article/pii/S0969698912001257>
- Lin C, Hsieh P (2006) The role of technology readiness in customers' perception and adoption of self-service technologies. *Int J Serv Ind Manag* 17(5):497–517. doi:10.1108/09564230610689795 https://www.researchgate.net/publication/238325537_The_role_of_technology_readiness_in_customers'_perception_and_adoption_of_self-service_technologies
- Locky, L., & Natalie, F. (2020). Applying partial least squares structural equation modeling (PLS-SEM) in an investigation of undergraduate students' learning transfer of academic English. *Journal of English for Academic Purposes*, 46, 100884. <https://doi.org/10.1016/j.jeap.2020.100884>
- Marzocchi, G. L., & Zammit, A. (2006). Self-scanning technologies in retail: determinants of adoption. *The Service Industries Journal*, 26(6), 651-669. <https://doi.org/10.1080/02642060600850790>
- Masood Ul Hassan, M. S. I., & Habibah, a. U. (2020). *Self-Service Technology Service Quality: Building Loyalty and Intention Through Technology Trust in Pakistani Service Sector*. 19. <https://journals.sagepub.com/doi/abs/10.1177/2158244020924412>
- Malik, A.N. and Annuar, S.N. (2021) "The effect of perceived usefulness, perceived ease of use, reward, and perceived risk toward E-wallet usage intention," *Eurasian Studies in Business and Economics*, pp. 115–130. Available at: https://doi.org/10.1007/978-3-030-65147-3_8.
- Meuter, M. L., Ostrom, A. L., Bitner, M. J., & Roundtree, R. (2003). The influence of technology anxiety on consumer use and experiences with self-service technologies. *Journal of Business Research*, 56(11), 899-906. <https://www.sciencedirect.com/science/article/abs/pii/S0148296301002764>
- Meyersohn, N. (2022) *Nobody likes self-checkout. here's why it's everywhere* | *CNN business*, CNN. Cable News Network. Available at: <https://edition.cnn.com/2022/07/09/business/self-checkout-retail/index.html> (Accessed: November 8, 2022).
- McFarlane, G. (2022) *How ikea makes money*, *Investopedia*. Investopedia. Available at: <https://www.investopedia.com/articles/investing/012216/how-ikea-makes-money.asp> (Accessed: November 4, 2022).
- McCombes, S. (2019). Research Design: Types, Methods, and Examples <https://research.com/research/types-of-research-design>
- McLeod, D. S. (2019). Likert Scale Definition, Examples and Analysis. <https://www.simplypsychology.org/likert-scale.html>
- Mukerjee, H. S., Deshmukh, G. K., & Prasad, U. D. (2018). Technology readiness and likelihood to use self-checkout services using smartphone in retail grocery stores: Empirical evidences from Hyderabad, India. *Business Perspectives and Research*, 7(1), 1–15. <https://doi.org/10.1177/2278533718800118>
- Nam, S.-J., & Hwang, H. (2021). Consumers' participation in information-related activities on social media. *PLOS ONE*, 16(4). <https://doi.org/10.1371/journal.pone.0250248>
- Okafor, D. J., Nico, M. & Azman, B. B. (2016). The influence of perceived ease of use and perceived usefulness on the intention to use a suggested online advertising workflow. https://www.academia.edu/34069318/The_influence_of_perceived_ease_of_use_and_perceived_usefulness_on_trust_and_intention_to_use_mobile_social_software

- Olivia, M., & Marchyta, N. K. (2022). The influence of perceived ease of use and perceived usefulness on E-wallet continuance intention. *Jurnal Teknik Industri*, 24(1), 13–22. <https://doi.org/10.9744/jti.24.1.13-22>
- Osman, Z., Alwi, N. H., & Khan, B. N. A. (2016, November). A study of mediating effect of attitude on perceived ease of use and students intention to use online learning platform among online learning institutions in Malaysia. Paper presented at the Pan-Commonwealth Forum 8, Kuala Lumpur.
- Pantano, E., & Di Pietro, L. (2012). Understanding consumer's acceptance of technology-based innovations in retailing. *Journal of technology management & innovation*, 7(4), 1-19.
- Parkley, V. (2022) *How to use self-checkout at retail stores: 9 simple steps to take, Simple Lifesaver*. Available at: <https://simplelifesaver.com/how-to-use-self-checkout-at-retail-stores-9-simple-steps-to-take/> (Accessed: November 5, 2022).
- Pedamkar, P. (2022, June 29). *What is SPSS?: Features, types, and statistical methods of SPSS*. EDUCBA. Retrieved November 10, 2022, from <https://www.educba.com/what-is-spss/>
- Peng, M. Y.-P., & Yan, X. (2022). Exploring the influence of determinants on behavior intention to use of multiple media kiosks through Technology Readiness and acceptance model. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.852394>
- POPULATION AND SAMPLE <http://ddekou.edu.in/Files/2cfa4584-5afe-43ce-aa4b-ad936cc9d3be/Custom/Sampling.pdf>
- Precious Bolanle Bolodeoku, E. I., Paul Odunayo Salau, Charles Kelechi Chukwudi, Sandra Efeomo Idia. (2022). Perceived usefulness of technology and multiple salient outcomes: the improbable case of oil and gas workers. <https://www.sciencedirect.com/science/article/pii/S2405844022006107>
- Prastiawan, D. I., Aisjah, S., & Rofiaty, R. (2021). The effect of perceived usefulness, perceived ease of use, and social influence on the use of mobile banking through the mediation of attitude toward use. *Asia Pacific Management and Business Application*, 009(03), 243–260. <https://doi.org/10.21776/ub.apmba.2021.009.03.4>
- POTTERS, C. (2022). Variance Inflation Factor (VIF). [https://www.investopedia.com/terms/v/variance-inflation-factor.asp#:~:text=A%20variance%20inflation%20factor%20\(VIF\)%20is%20a%20measure%20of%20the,in%20a%20multiple%20regression%20model.](https://www.investopedia.com/terms/v/variance-inflation-factor.asp#:~:text=A%20variance%20inflation%20factor%20(VIF)%20is%20a%20measure%20of%20the,in%20a%20multiple%20regression%20model.)
- Roberto Graña-Alvarez, E. L.-V., Miguel Gonzalez-Loureiro &, & Coronado, F. (2020). Financial literacy in SMEs: A systematic literature review and a framework for further inquiry. *Journal of Small Business Management*. <https://www.tandfonline.com/doi/full/10.1080/00472778.2022.2051176>
- Salleh, M. B. (2022). PDRM: Over RM5.2 billion lost to scams in two years. <https://www.theedgemarkets.com/article/pdrm-over-rm52-billion-lost-scams-two-years>
- Sample size definition*. (2019). <https://www.omniconvert.com/what-is/sample-size/>
- SAMPLING TECHNIQUE. (2001). <https://stats.oecd.org/glossary/detail.asp?ID=2380>
- Sandra Huedo-Martínez, R. M.-C. F. L.-L. (2018). Study on the Attitude of Young People Towards Technology. https://link.springer.com/chapter/10.1007/978-3-319-91152-6_3#:~:text=In%20the%20context%20of%20technology,different%20models%20have%20been%20defined.
- Sanaz, S. (n.d.). *Steps in research process (partial least square of structural ... - IJSSB*. Steps in Research Process (Partial Least Square of Structural Equation Modeling (PLS-SEM)). Retrieved November 25, 2022, from <https://ijssb.com/images/vol1no2/5.pdf>

- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling. *Handbook of Market Research*, 1–40. https://doi.org/10.1007/978-3-319-05542-8_15-1
- Shrum, A. (2019) *Inside IKEA's Supply Chain & Inventory Management, Dynamic Inventory*. Available at: <https://www.dynamicinventory.net/ikea-supply-chain-management/> (Accessed: November 4, 2022).
- Tan, D. (2019). IKEA Batu Kawan to open on March 14. <https://www.thestar.com.my/business/business-news/2019/02/20/ikea-batu-kawan-to-open-on-march-14>
- Tan, G. W. H., Ooi, K. B., Sim, J. J., & Phusavat, K. (2012). Determinants of mobile learning adoption: An empirical analysis. *The Journal of Computer Information Systems*, <https://www.tandfonline.com/doi/abs/10.1080/08874417.2012.11645561>
- Teherani A, Martimianakis T, Stenfors-Hayes T, Wadhwa A, Varpio L (2015). Choosing a qualitative research approach. *J Grad Med Educ*. 2015; 7 4: 669– 670. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4857496/>
- tye, T. (2019). IKEA Batu Kawan. <https://www.penang-traveltips.com/ikea-batu-kawan.htm>
- van Aalderen-Smeets, S. I., Walma van der Molen, J. H., & Asma, L. J. F. (2012). Primary teachers' attitudes towards science and technology: Towards a new theoretical framework. *Science Education*, 96, 158–182. <https://onlinelibrary.wiley.com/doi/full/10.1002/sce.20467>
- What is a research instrument? (2020). <https://www.editage.com/insights/what-is-a-research-instrument>
- Xu, Z., Zhang, K., Min, H., Wang, Z., Zhao, X., & Liu, P. (2018). What drives people to accept automated vehicles? findings from a field experiment. *Transportation Research Part C: Emerging Technologies*, 95, 320–334. <https://doi.org/10.1016/j.trc.2018.07.024>
- Yuen, K. F., Koh, L. Y., Anwar, M. H. D. B., & Wang, X. (2022). Acceptance of autonomous delivery robots in urban cities. *Cities*, 131, 104056. <https://doi.org/https://doi.org/10.1016/j.cities.2022.104056>

APPENDIX 1 - DRAFT OF QUESTIONNAIRE

SECTION A: DEMOGRAPHIC PROFILE

1. Gender

Male

Female

2. Age

19 - 21 years old

22 - 25 years old

26 - 29 years old

30 - 33 years old

34 years old and above

3. Race

Malay

Chinese

Indian

Others

4. Occupation

Government Sector

Private Sector

Unemployed

Others

FKPP



5. Education Level

Malaysian Certificate of Education

Malaysian Higher School Certificate

Diploma

Degree

Master

PHD

6. Monthly Income

0 - RM999

RM1,000 - RM1,999

RM2,000 - RM2,499

RM2,500 - RM2,999

RM3,000 and above

7. How many times will you use self - checkout system in a year? /

0 - 3 times

4 - 7 times

Above 8 times

Never

8. What type of cashless payment method that you prefer when make payment in self - checkout system?

QR Payment

Debit card or credit card

SECTION B: INDEPENDENT VARIABLES

PERCEIVED USEFULNESS

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The self-checkout system at IKEA would be advantageous to me in today society.					
In IKEA, using the self-checkout system would help optimize the time.					
My efficiency of buying things would rise if I used the self-checkout system at the IKEA.					
The self-service checkout at IKEA would greatly improve my shopping experience.					
When I use self-checkout system at the IKEA, it allow me to complete my shopping more quickly.					

SPEED

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Self – checkout system is saving time.					
Customers no need stands in a long queue to make payment when using self - checkout system.					
Self – check system can reduce the Covid – 19 cases.					
Self – checkout system increase customer satisfaction.					
Customers will purchase the goods repeatedly at IKEA Batu Kawan.					

PERCEIVED EASE OF USE

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel that using self-checkout system in IKEA Batu Kawan would be easy for me.					
I feel that my interaction with self-checkout system would be clear and understandable.					
I feel that it would be easy to become skillful at using self-checkout system in IKEA Batu Kawan.					
Learning to use a self-checkout system would be easy for me.					
Using self-checkout system in hypermarket might be effortless.					

ATTITUDE TOWARDS TECHNOLOGY

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I will use the "self-checkout system" in IKEA Batu Kawan when make purchase.					
I will use the self-checkout system in IKEA Batu Kawan as it is responsive and reliable.					
I like the idea of using self-checkout system in IKEA Batu Kawan.					
I believe it is a good idea to use self-checkout system in IKEA Batu Kawan.					
Using a self-checkout system in a IKEA Batu Kawan the right move in the present.					

CUSTOMER LITERACY

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I know how to make cashless payment when using self – checkout system.					
I feel that self - checkout system at IKEA is faster than the cashier assisted line.					
I believe that self-checkout systems at IKEA are an excellent concept.					
I like the self-checkout system because I can have my privacy around the purchase.					
It's a good idea for IKEA to have a self-checkout system.					

SECTION C : DEPENDENT VARIABLE

CONSUMERS ACCEPTANCE TOWARDS SELF - CHECKOUT SYSTEM AT IKEA BATU KAWAN

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I intend used self-checkout system multiple times during this year.					
I using self-checkout system because it is easy to use.					
I use self-checkout system frequently when buying things at IKEA Batu Kawan.					
I am very comfortable using self-checkout system when buying at IKEA Batu Kawan.					
I encourage my family or friend to use self-checkout system when buying at IKEA Batu Kawan.					

APPENDIX 2 - GANTT CHART

NO	ACTIVITIES / WEEK	OCTOBER			NOVEMBER			
		1	2	3	4	5	6	7
1	Determination of students and supervisors by the PPTA Course Coordinator according to student registration and specialization							
2	<ul style="list-style-type: none"> ● Final Year Research Project Briefing I and II ● Distribution of Final Year Research Project Guidelines / online 							
3	<ul style="list-style-type: none"> ● Meetings and discussions with Supervisors ● Verification of the appropriate field/title of the research project 							
4	Writing a draft of a Research Project Proposal							
5	<ul style="list-style-type: none"> ● Submission of draft Research Project Proposal to Supervisor ● Review by Supervisor ● Correction by students 							
6	Submission of two (2) Research Project Proposal Reports to the PPTA supervisor and examiner							
7	Presentation and assessment							

NO	ACTIVITIES / WEEK	DECEMBER				JANUARY			
		8	9	10	11	12	13	14	15
8	Data Collection								
9	<ul style="list-style-type: none"> ● Data analysis ● Writing a draft of a research project ● Findings report ● Interpretation and discussion of findings ● Implications of the findings ● Conclusion 								
10	<ul style="list-style-type: none"> ● Submission of draft research project results to the Supervisor ● Turnitin filter Review by Supervisor Correction of research project report that has been reviewed by the Supervisor								
11	Submission of two (2) copies of the final report of the research project without a volume together with the Turnitin result slip to the coordinator								
12	Presentation and evaluation of the final report of the research project								
13	Submission of one (1) copy of the final report of the bound research project to the supervisor of the specialization								

NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL	
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)			
1.	Content (10 MARKS) (Research objective and Research Methodology in accordance to comprehensive literature review) Content of report is systematic and scientific (Systematic includes Background of study, Problem Statement, Research Objective, Research Question) (Scientific refers to researchable topic)	Poorly clarified and not focused on Research objective and Research Methodology in accordance to comprehensive literature review.	Fairly defined and fairly focused on Research objective and Research Methodology in accordance to comprehensive literature review.	Good and clear of Research objective and Research Methodology in accordance to comprehensive literature review with good facts.	Strong and very clear of Research objective and Research Methodology in accordance to comprehensive literature review with very good facts.	____ x 1.25 (Max: 5)		
		Content of report is written unsystematic that not include Background of study, Problem Statement, Research Objective, Research Question and unscientific with unsearchable topic.	Content of report is written less systematic with include fairly Background of study, Problem Statement, Research Objective, Research Question and less scientific with fairly researchable topic.	Content of report is written systematic with include good Background of study, Problem Statement, Research Objective, Research Question and scientific with good researchable topic.	Content of report is written very systematic with excellent Background of study, Problem Statement, Research Objective, Research Question and scientific with very good researchable topic.	____ x 1.25 (Max: 5)		
2.	Overall report format (5 MARKS)	Submit according to acquired format	The report is not produced according to the specified time and/ or according to the format	The report is produced according to the specified time but fails to adhere to the format.	The report is produced on time, adheres to the format but with few weaknesses	The report is produced on time, adheres to the format without any weaknesses.	____ x 0.25 (Max: 1)	
		Writing styles (clarity, expression of ideas and	The report is poorly written and difficult to read. Many points are not explained well.	The report is adequately written; Some points lack clarity. Flow of ideas is less	The report is well written and easy to read; Majority of the points is well	The report is written in an excellent manner and easy to read. All of the	____ x 0.25 (Max: 1)	

		coherence)	Flow of ideas is incoherent.	coherent.	explained, and flow of ideas is coherent.	points made are crystal clear with coherent argument.	
		Technicality (Grammar, theory, logic and reasoning)	The report is grammatically, theoretically, technically and logically incorrect.	There are many errors in the report, grammatically, theoretically, technically and logically.	The report is grammatically, theoretically, technically and logically correct in most of the chapters with few weaknesses.	The report is grammatically, theoretically, technically, and logically perfect in all chapters without any weaknesses.	____ x 0.25 (Max: 1)
		Reference list (APA Format)	No or incomplete reference list.	Incomplete reference list and/ or is not according to the format.	Complete reference list with few mistakes in format adherence.	Complete reference list according to format.	____ x 0.25 (Max: 1)
		Format organizing (cover page, spacing, alignment, format structure, etc.)	Writing is disorganized and underdeveloped with no transitions or closure.	Writing is confused and loosely organized. Transitions are weak and closure is ineffective.	Uses correct writing format. Incorporates a coherent closure.	Writing include a strong beginning, middle, and end with clear transitions and a focused closure.	____ x 0.25 (Max: 1)
3.	Research Findings and Discussion (20 MARKS)		Data is not adequate and irrelevant.	Data is fairly adequate and irrelevant.	Data is adequate and relevant.	Data is adequate and very relevant.	____ x 1 (Max: 4)
			Measurement is wrong and irrelevant	Measurement is suitable and relevant but need major adjustment.	Measurement is suitable and relevant but need minor adjustment.	Measurement is excellent and very relevant.	____ x 1 (Max: 4)
			Data analysis is inaccurate	Data analysis is fairly done but needs major modification.	Data analysis is satisfactory but needs minor modification.	Data analysis is correct and accurate.	____ x 1 (Max: 4)
			Data analysis is not supported with relevant output/figures/tables and etc.	Data analysis is fairly supported with relevant output/figures/tables and etc.	Data analysis is adequately supported with relevant output/figures/table and	Data analysis is strongly supported with relevant output/figures/table and etc.	____ x 1 (Max: 4)

				etc.			
		Interpretation on analyzed data is wrong.	Interpretation on analyzed data is weak.	Interpretation on analyzed data is satisfactory.	Interpretation on analyzed data is excellent	___ x 1 (Max: 4)	
4.	Conclusion and Recommendations (15 MARKS)	Implication of study is not stated.	Implication of study is weak.	Implication of study is good.	Implication of study is excellent	___ x 1.25 (Max: 5)	
		Conclusion is not stated	Conclusion is weakly explained.	Conclusion is satisfactorily explained.	Conclusion is well explained.	___ x 1.25 (Max:5)	
		Recommendation is not adequate and irrelevant.	Recommendation is fairly adequate and irrelevant.	Recommendation is adequate and relevant.	Recommendation is adequate and very relevant.	___ x 1.25 (Max:5)	
	TOTAL (50 MARKS)						

19%

SIMILARITY INDEX

14%

INTERNET SOURCES

5%

PUBLICATIONS

11%

STUDENT PAPERS

PRIMARY SOURCES

1	discol.umk.edu.my Internet Source	2%
2	Submitted to University of Sunderland Student Paper	1%
3	Submitted to Berjaya University College of Hospitality Student Paper	1%
4	etd.uum.edu.my Internet Source	1%
5	Submitted to Coventry University Student Paper	1%
6	www.koreascience.or.kr Internet Source	1%
7	Submitted to Multimedia University Student Paper	<1%
8	Submitted to Higher Education Commission Pakistan Student Paper	<1%
9	Submitted to National Economics University	