THE INFLUENCE OF CONSUMERS' TRUST AND E-COMMERCE PLATFORMS

SYSTEM QUALITY ON BUYING DECISION DURING COVID-19 PANDEMIC

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FYP2 202201 GROUP 2

A RESEARCH PROJECT
SUBMITTED IN
PARTIAL FULFILLMENT FOR THE AWARD OF
BACHELOR OF COMMUNICATION (HONOURS) PUBLIC RELATIONS
FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN

OCTOBER 2021

ACKNOWLEDGEMENTS

DECLARATION

I declare that the material contained in this paper is the end result of my own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

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The Influence of Consumers' Trust and E-commerce Platforms System Quality on Buying Decision during Covid-19 Pandemic

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This research paper attached hereto, entitled "The Influence of Consumers' Trust and E-commerce Platform System Quality on Buying Decision during Covid-19 Pandemic" prepared and submitted by "Kwong Cai Yan" in partial fulfillment of the requirements for the Bachelor of Communication (Hons) Public Relations is hereby accepted.

<div style="text-align: right;">Date: <u>15/4/2022</u></div>

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Abstract

The study concerns about the Covid-19 pandemic have shifted many businesses away from traditional (offline) models and toward modern (E-commerce) models, which has also shifted customers' purchasing platforms from physical to online. Trust in E-commerce platforms and satisfaction with their system quality influence customers' purchasing decisions in this situation. Individuals assume they are in control of their purchases, but there are some factors that influence them. As a result, this study sought to discover how consumer trust influences buying decisions on E-commerce platforms, as well as how system quality influences buying decisions on E-commerce platforms. As far as the researchers are aware, previous research has primarily focused on purchasing behaviour rather than purchasing decision; as a result, this study focuses on how the two variables mentioned above influence purchasing decision. An online survey was distributed to 330 respondents from various age groups in order to investigate the differences in perceived usefulness and perceived ease of use between age groups, as well as the influence of E-commerce platforms on consumer purchasing decisions (below 24, 25-44 and 45 and above etc.) The responses were analysed using multiple linear regression and the ANOVA test, respectively. The findings revealed few significant findings: the actual E-commerce platform use had a positive effect on purchasing decisions, and the perceived usefulness and ease of use of E-commerce platforms varies greatly depending on the age group as age group 45 and above differs greatly from the age groups 24 and below and 25 to 44. Furthermore, the systemic quality of E-commerce platforms has been demonstrated by using the TAM model to positively influence purchasing decisions. Consequently, public relations professionals can benefit from it as they can create more effective messages for their clients' audiences and more accurately target the potential audience as a result of the research.

Keywords: *E-commerce Platforms, System Quality, Trust, TAM Model, Purchasing Decision*

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CHAPTER 1

1.1 Introduction

E-commerce is gradually developing and penetrating to society when human economic activities are greatly affected by the pandemic outbreak of coronavirus, or known as Covid-19, the major offline business has been brought down and forced everyone to transform to online trading. The expansion of E-commerce throughout the time of the Covid-19 pandemic raised the need for research to study how the influences on the acceptance of information and technology by users impact their actual use of the system. In this chapter, it will explain the background of the Covid-19 pandemic, economic business consequences of the external condition of the Covid-19 pandemic and the effects on E-commerce uses by consumers.

It will have seven components for discussion in Chapter One of this research, including background of the research, the problem statement regarding the pandemic and effects on E-commerce, research questions and research objectives will be stated, research significance that highlighted the purposes of study, scope of study that involved the investigating elements' coverage, as well as the definition and key terms that presented in table form.

1.2 Background

Covid-19, one of the most fatal viruses known to humans, has already killed a large number of humans and withdrawn the country's economic progress in nearly half of the country (Hasanat et al., 2020; Shah et al., 2020). The Covid-19 pandemic had a substantial impact on various sectors, resulting in an unanticipated shock to the global economy (Koh et al., 2020; Hasanat et al., 2020). Numerous countries, including Malaysia, are bearing the brunt of the scenario's consequences (Shah et al., 2020).

The government implemented a Movement Control Order (MCO) and various Standard Operating Procedures (SOP) across the country in order to minimize the economic and social repercussions of the Covid-19 pandemic, restrain the development of Covid-19 virus, and protect citizen health (Shah et al., 2020). However, the MCO has imposed a limit on movements of citizens and hindered innumerable businesses from operating regularly (Hasanat et al., 2020; Masum et al., 2021). When consumers are unable to purchase in the traditional manner, the probability of their E-shopping behaviour will be increased and make purchase decisions in various online purchasing venues such as E-commerce sites. As a result, consumers are increasingly turning to E-commerce platforms to fulfill their purchasing requirements (Alhaimer, 2021; Gu et al., 2021). As a reason, it is critical to examine the impact of trust and system quality in E-commerce on consumer purchasing decisions, not only to aid merchants in adjusting their business models, but also to assist customers in comprehending the significance of their purchase decisions and assisting Malaysia's economy to thrive.

The global economy has unexpectedly changed since the Covid-19 pandemic. Many countries have suffered severe economic recession, including Malaysia. Malaysia not only faced economic recession, but also the money depreciation, and high unemployment rate to a

great extent (Landau, 2020). According to Nambiar (2021), the first lockdown period of the Covid-19 pandemic in March 2020 caused severe economic recession in Malaysia, resulting in a 5.3 percent increase in the country's unemployment rate. Consequently, the Covid-19 pandemic resulted in a 6.1 percent depreciation of the country's currency, as shown by the ringgit path. The Covid-19 pandemic has caused it to decline from a median of RM4.10 per US dollar prior to the pandemic to RM4.35 per US dollar by April 2020 (Mohamed & Shahrier, 2020).

Various companies, especially small and medium-sized enterprises (SMEs), have been completely closed down because the government implemented the Movement Control Order (MCO) to inhibit the spread of Covid-19 virus. As per the report Small and Medium Enterprises (SMEs) Performance 2020, the proportion of SMEs remained at 48 percent in 2020, a 0.9 percent reduction from already. Additionally, Figure 1 shows that in the year of 2020, SMEs GDP registration had a decline to negative 7.3 percent which is the first time lower than Malaysia's GDP in the past 17 years. Specifically, this means that only 7.25 million people worked in small and medium enterprises for the year, compared to 65,000 (7.32 million) in 2019 (Sunil, 2021). The steeper decline in SMEs employment compared to the decline in Malaysian or national employment showed that SMEs have been hit hard by the Covid-19 health crisis. SMEs are experiencing deficiencies of labor and creation inputs as Covid-19 misshapes and upsets supply chains, contrarily influencing their deals and capacity to meet monetary commitments and pay their employees (Adam & Alarifi, 2021). Private ventures as examples: SMEs should be aware and apprised on how they should pursue for help to improve and redesign their commercial activity, deal and market segmentation. According to the Chief Economist of Bank Islam Malaysia mention about all aspects of the business to ensure that technology will be embedded in ("SMEs need new ways to rebuild business in COVID-19 era", 2021).
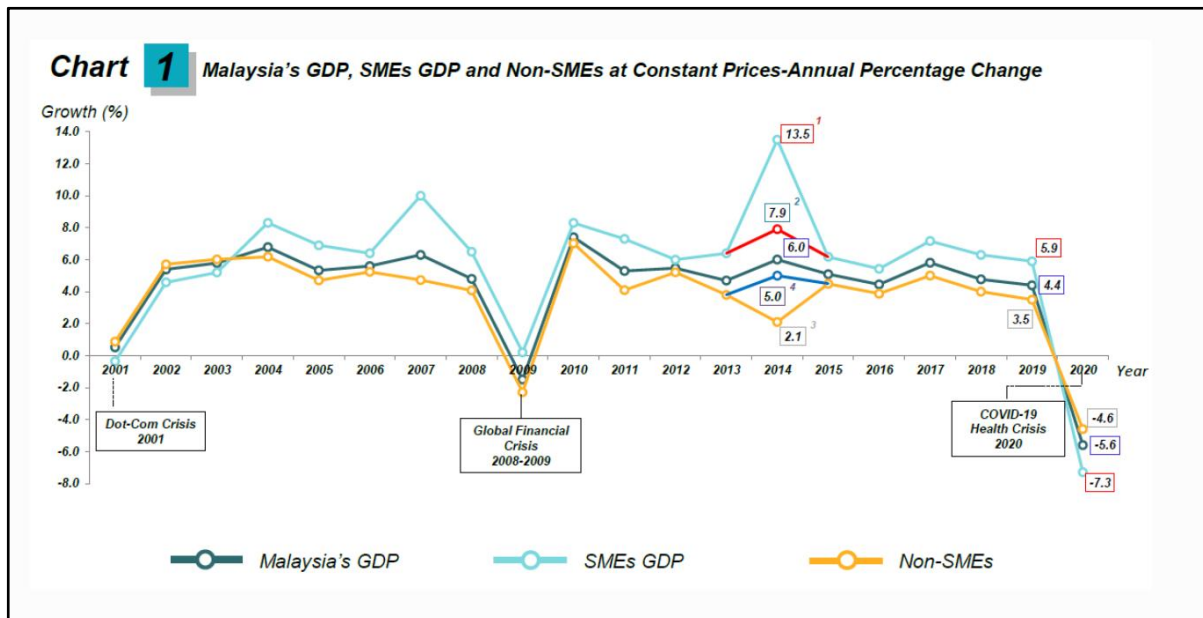
Figure 1: Malaysia's GDP, SMEs GDP and Non-SMEs at Constant Prices- Annual Percentage Change.

Numerous businesses have transformed their business models from traditional (offline) models into E-commerce platforms. The main reason for changing the business model to E-commerce is E-commerce trends which have become the new emerging trends since the advancement of technology and the Covid-19 pandemic. High utilization on the Internet also definitely leads to high E-commerce utilization in Malaysia. Around 50 percent of the populace (16.53 million) are dynamic internet based customers, and 62 percent of mobile phone clients utilize their gadgets to make online decisions (*Malaysia - eCommerce*, 2021). Additionally, another factor of changing the business model to E-commerce that must be indispensable is the soaring customer demand. This has brought benefits to Malaysia's overall GDP because it provides a new gold breakthrough for merchants. Malaysia's E-commerce business' revenue is projected to reach US $4.179 billion out of 2020 and is projected to develop at a 17.8 percent yearly development rate (CAGR 2020-2024), with an expected market size of US $805.9 billion by 2024 (*Malaysia - eCommerce*, 2021). Undoubtedly, the value of E-commerce in helping an increasingly depleted economy and the

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convenience of people buying necessities during the MCO period are clearly visible. According to GlobalData (2020), the Covid-19 pandemic has caused the Malaysian E-commerce market to grow at least 30 percent by 2020. Malaysia is the 38th greatest E-commerce industry, with revenue of US$4 billion in 2020, trailing only Portugal and ahead of South Africa.

On the other hand, not only the country and companies, but even customers are inevitably affected by the Covid-19 pandemic. The purchasing behaviour of customers have been altered by the Covid-19 pandemic and its effects are unstoppable and uncontrolled (Shahzad et al., 2020). Due to MCO, Malaysians are forced to not go out to buy groceries. As the convenience to the E-commerce trend, selling and buying groceries online has become a need for Malaysians. During the MCO period, over 30 percent of Malaysian adults shopped for groceries online, resulting in a massive increase of 144 percent in online grocery shopping (*Impact of Covid-19 on Malaysian E-commerce Consumers*, 2021). Malaysians are principally propelled by item quality, value advantage, item range, and accessible audits. Customers will be mostly influenced by select arrangements, free delivery, convenience and what online stores offer (*Malaysia - eCommerce*, 2021). For certain merchandise, clients are constantly ready to pay extra to get their products rapidly. Raising the base cost of the products, yet offering free delivery, causes customers to feel it merits paying more (Wright, 2017). E-commerce assists customers with setting aside cash, yet in addition assists them with saving time and energy (Jaiswal & Singh, 2020). Another researcher, Srinivasan, defines convenience in the E-commerce business as the extent to which clients perceive a site to be straightforward, exotic, and simple to understand (Salehi et al., 2012).

As of the most recent Juwai IQI questionnaire on the Covid-19 pandemic, 57 percent of Malaysians have used E-commerce more frequently than pre-pandemic. This resulted in an unprecedented surge in E-commerce in the country. For example, Lazada Malaysia reported a

300 percent growth rate of fresh online merchants, which was one of the effects of the E-commerce industry's unexpected explosive growth ("Survey: More Malaysians shopping online", 2021). Likewise, Bank Negara mentioned that retail sales on E-commerce nearly doubled during the Covid-19 pandemic. This demonstrated that E-commerce has expanded rapidly as a contributor toward the country's economy (Idris, 2021).

Villa and Monzon (2021) stated that globalization and E-commerce have facilitated the development of an open market where products could be acquired from any location in the setting of urban merchandise distribution, resulting in rapid increase in road transport. The Covid-19 issue has exacerbated this effect, customers have been forced to follow new buying and consumption behaviours, resulting in an increase in the percentage of users who purchase tangible things online (Villa & Monzon, 2021). According to recent studies stated in Sumarliah et al. (2021), the environmental elements surrounding the Covid-19 outbreak have a substantial impact on consumers' desire to shop online (Ali et al., 2021; Nguyen et al., 2020; Sumarliah et al., 2021). Yet, when referring to E-commerce, features such as platforms design and utilities, commodities, service, and security problems remain one of the most important factors (Phan & Nguyen, 2021). Leong and Chaichi (2021) mentioned that the growing popularity of online buying has indeed been progressively modified by computer equipment, including mobile applications in the area of E-commerce that facilitate customer internet shopping experiences said by Li et al. (2020).

1.3 Problem Statement

In this research, it will look into the issue of how E-commerce platforms usage could be affected by trust and system quality if they are ignored by consumers. Rasheed and Abadi (2014) declared in Rita et al. (2019) that trust is a precedent of service quality which studied the impact of e-service quality on trust in service. Kim et al. (2008), Mou et al. (2017), and WOLOR et al. (2020) as cited in Fan et al. (2021) expressed that many shoppers are wary of E-commerce as perceived risk is relatively high and uncertainties. Based on Qalati et al. (2021), given the increase in internet and online shopping consumption around the world, shoppers in certain nations are still hesitant to shop online due to the absence of reliability (Stouthuysen et al., 2018), confidentiality (Regner & Riener, 2017), schooling (Badwan et al., 2017), potential risk (Pelaez et al., 2019), and quality perception (Sahoo et al., 2018). In compliance with Falahat et al. (2019), online transaction security, organization credibility and the deficiency of privacy and policy are the key issues that people do not participate in online commerce claimed by the Better Business Bureau.

The E-commerce system's expected features are assessed with system quality dimensions (Hwang et al., 2012). Accompanied with the rise of E-commerce, online sellers alter, control, and manipulate a number of indications in order to provide customers with a pleasant buying experience (Hwang et al., 2012). In addition, an E-commerce system which is an online-based information system permitted the customers to conduct electronic banking (Sun, 2010). Thus, the underpinning website layout has been determined to be a vital aspect in influencing customer understanding, as well as having a substantial effect on a retailer's overall performance (Underhill, 2001). An argument also being raised by DeLone and McLean (2004) that business benefits will be influenced by information system, service quality and system quality indirectly via perceived ease of use of E-commerce systems. However, there is a lack of researchers sharing this view point.

Trust is one of the crucial elements in E-commerce that influences consumer purchase intention from Chen and Ching (2013 as cited in Dachyar & Banjarnahor, 2014). Referring to Li et al. (2020), consumers' intention to buy commodities and services is captured by the trust which is significant (Ariffin et al., 2020). Website trust can lead to a positive attitude since it lowers customers' perceived risk that is disclosed by Hsu et al. (2014). As shown by Al-Debei et al. (2015), a high level of trust can cause consumers to modify their behaviour in order to reflect a positive attitude. Koufaris and Hampton-Sosa (2004, as cited in Kwek et al., 2011) said that the success or failure of any E-commerce transaction in the market is primarily affected by the level of trust placed in online platforms. The growth of online trades requires not just the trust of consumers, but also the trust of merchants and ongoing use of e-marketplaces by Sun (2010 as cited in Cui et al., 2019). As per Dasan and Chung (2015), online customers will avoid purchasing from online stores they do not trust, as noticed by Gefen et al. (2003, as cited in Fang et al., 2011), since they anticipate that online sellers will not be ethical and act appropriately. It also stated that both parties must have trust if online retailers are not to use their websites for unfair pricing, misleading information, or security and privacy violations (Weisberg et al., 2011).

The term "system quality" indicates the overall value of information processing, which is identified by the application of cutting-edge technology, a system containing key functions and features, and software that is user-friendly, simple to understand, and sustainable (Al-Mamary et al., 2014). When analyzing the E-commerce platforms, the information quality, system quality and service quality are all important elements that have to be considered (Sharma & Wang, 2015). Saha et al. (2012) found that the desirable attributes of an E-commerce system are measured by system quality in the online environment (DeLone & McLean, 2003, 2004a). Koufaris and Hampton-Sosa (2004, as cited in Daud et al., 2011) said that the success or failure of any E-commerce transaction in the market is

primarily affected by the level of trust placed in online platforms. Based on Cao et al. (2005), if the performance is unsatisfactory, there are absolutely no restrictions to switching to another website (Bhatti et al., 2000). Some scholars have examined the quality of online information (Bhatti et al., 2000; Gullikson et al., 1999), the appropriateness of information (Perkowitz & Etzioni, 1999), as well as the utilization of multimedia features (Bhatti et al., 2000; Gullikson et al., 1999) when studying web information (Huizingh, 2000). Roy et al. (2001), Slatin (2001), and Wen et al. (2001) said in terms of performance, there are additional studies of many search engines (Thelwall, 2000), waiting duration (Weinberg, 2000), reaction times (Lin & Lu, 2000), and interface design (Lin & Lu, 2000). As a result, it is essential to evaluate the characteristics that an E-commerce website must possess in recruiting and maintaining potential clients (Smith & Merchant, 2001).

In conclusion, the occurrence of Covid-19 pandemic has led numerous businesses in Malaysia to transform their business models from traditional models into E-commerce. The Covid-19 pandemic also caused the customer to change their buying platforms from physical to E-commerce platforms. Customers' purchasing decisions, regrettably, will be influenced by their trust in E-commerce and the quality of the E-commerce platforms' system, as discussed in Chapter Two. Individuals always believe that their purchasing decisions are in their hands, but in reality, there are some factors influencing people's purchasing decisions. Thereby this research is aimed to study how consumer's trust influences consumer buying decisions in E-commerce platforms; to find out how system quality affects the consumer buying decisions on E-commerce platforms; and study how the difference of age groups between perceived usefulness and perceived ease of use that influence attitude to use E-commerce platforms. In this way, the readers are able to understand how their buying decision will be affected by these trust and system quality.

Derived from the gap statement by Gu et al. (2021), the respondents' perceptions will alter from time to time. E-commerce, as a crucial component, will influence customer purchasing decisions (Gu et al., 2021). Individuals' lifestyles and purchasing behaviour are changing as the Covid-19 pandemic spreads around the world (Alhaimer, 2021; Gu et al., 2021). Since there is fluctuation due to the uncontrollable environment, the customers follow the trend passively as the economic activities are switched to online. Their ultimate purchasing decisions are subjected to the changes in technology adoption they are compatible with. In this perspective, TAM has only been used in a limited but encouraging situation to estimate consumer acceptance of Internet technologies (Klopping & McKinney, 2004). The TAM was proven to be effective in analysing online buying at a specific "virtual" on-line shop by Chen et al. (2002). The TAM has also been employed to assess attitudes regarding Internet purchasing (Childers et al., 2001). The research is focused on the consumer's buying decision towards E-commerce with TAM. It studied different age groups from different generations of Malaysians by examining the external variables of trust and system quality that are affecting the consumers' attitude and intention on the actual use of the E-commerce platforms and lead to the final buying decision. From the research, it can fill up the gap by knowing the perceptions of respondents on the acceptance of the perceived technology which are affected by their attitude and behavioural intention to utilize the E-commerce system.

1.4 Research Questions

1. Does consumer's trust influence E-commerce platforms use?

2. Does E-commerce system quality influence E-commerce platforms use?

3. Do E-commerce platforms influence consumer buying decisions?

4. Does age group have a difference in perceived usefulness and perceived ease of use?

1.5 Research Objectives

1. To examine the influence of consumer's trust on E-commerce platforms use.

2. To examine the influence of E-commerce system quality on E-commerce platforms use.

3. To examine the influence of E-commerce platforms use on the buying decisions of consumers.

4. To examine the differences of perceived usefulness and perceived ease of use by age group.

1.6 Research Significance

1.6.1 Theoretical Significance

The current research is a new extension of TAM. TAM's stinginess has been criticised by many researchers, who argue that it only explains a small percentage of customers' intentions to adopt new technology Venkatesh (2000 as cited in Rehman et al., 2013). Therefore, Technology Acceptance Model 2 (TAM 2) and Theory of Planned Behavior (TPB) have been developed to address the difference of TAM. Despite these models improve predictability by capturing greater diversity in behavioural intentions, they are more complex and involve the integration of a large number of factors or variables. Additionally, in this research, extension in TAM of influencing the consumers' buying decision can be considered as a new contribution. Based on the observations of some studies, there is a lot of extended research using the TAM model, such as Tong (2010), and Rehman et al. (2013) to observe the external variables that influence the customer's intention. Therefore, current research is expected to contribute to the academic field or researchers for further research.

1.6.2 Practical Significance

The current research is expected to contribute to the communication field. During the advancement of the technological era, individuals switch their purchase method from face to face communication to online communication within E-commerce platforms. Consumers have expanded their activities on the online applications related to shopping in Malaysia (Hasanat et al., 2020). It indicates that the individuals related to the communication field have to communicate and convey the messages to the consumer through a transition channel. However, there was a significant increase of inactive and new users in the use of online shopping applications and E-commerce mobile applications based on the research studies (Hasanat et al., 2020). In this case, the information related to products and services have to be

created and organized well for an effective online communication purpose between the decoders and the users who are the potential clients. The interfered communities are needed to design more effective digital marketing or business strategies that suit the multiple kinds of online targeted audiences respectively. Hence, public relations practitioners are benefited as they can produce more effective messages by publicizing the goods during the online interaction on behalf of their organization with customers. It also benefits the public relations practitioners by providing them as a helpful reference from the influence of different age groups on the E-commerce adoption and purchasing decision. They are able to know more about the trust level and their perceived simplicity on utilizing the system quality from different age groups and the useful messages for communication. Since major tasks have to rely on a digital system to complete nowadays, it is encouraged to conduct research to answer the questions of this study.

1.7 Scope of study

       This study adopted the quantitative method to conduct according to the designed methodology. Different age groups are targeted, which include age below 24, 25-44 and 45 and above in order to find out whether the moderator of age could affect the influence of perceived usefulness and perceived ease of use on the attitude and intention to use E-commerce platforms. A total of 330 respondents will be targeted to collect the data and each 110 respondents are from the three age groups. Meanwhile, descriptive research will be applied to describe the age group versus the relationship between perceived ease of use and perceived usefulness and cross-sectional survey will be implemented to collect the data and gather respondent opinions regarding the situation of Covid-19 pandemic which may affect the Malaysian buying decision based on E-commerce platforms use. All of the surveys will be distributed via an online platform to the respondents in Malaysia due to safety purposes. The theory, TAM, which was developed by Davis also will be used to explain the six hypotheses, the relationship between the 8 variables as stated in the conceptual framework. The duration for coming up with this study will be three months which include the conducting of a survey, collecting the data, measurement and evaluating the data and coming up with the conclusion.

1.8 Definitions of key terms

Table 1: Summarized definition of key terms

Key Term	Definition	Citation
Consumer Trust	Trust is the readiness to become vulnerable to E-commerce.	(Shia et al., 2015)
System Quality of E-commerce Platforms	System quality refers to the quality of information systems which have impact towards perceived usefulness and perceived ease of use.	(Gorla et al., 2010; Lee et al., 2017)
Perceived Usefulness	A variable which could be influenced by consumer satisfaction and have an impact on consumers' inclination to continue purchasing.	(Davis et al., 1992; Shia et al., 2015)
Perceived Ease of Use	The degree to which the user believes that the technology or system can be used easily and without problems.	(Davis, 1989; Iriani & Andjarwati, 2020)
Attitudes towards Using E-commerce	The emotions of an individual while using E-commerce.	(Kim & Woo, 2016)
Behavioural Intention	The fervour with which a user intends to engage in a particular behaviour.	(Kim & Woo, 2016)
E-commerce Platforms use	The use of E-commerce platforms that is influenced by behavioural intention.	(Alharbi & Drew, 2014; Dishaw & Strong, 1999)
Buying Decision	The process of making decisions on purchasing behaviour.	(Puspitasari et al., 2018)

1.9 Summary

In brief, the outbreak of the Covid-19 pandemic brought quick changes to society and in expanding E-commerce. By going through Chapter One, the problem statement improved understanding of the cause of the Covid-19 pandemic, which has repercussions on the Malaysian economy and E-commerce. The research tends to discover whether the aim of attitudes towards using E-commerce platforms will affect the consumer buying decision. The study is going into detail to develop the research objectives and research questions which are derived from discussing the effects of using E-commerce.

CHAPTER 2

2.1 Introduction

For the entire Chapter Two, it will discuss the definitions and concepts that focus on the study attached with relevant facts and examples. The research will develop the theoretical framework with the TAM to adapt the situation of usage on E-commerce platforms. Additionally, innumerable past studies are used to support the statements as the explanation and elaboration for the following subtopics.

2.2 E-commerce

E-commerce has been described as companies or individuals undergoing business through the Internet, promoting products and services supplied offline along with those which are "digitized" and provided online (Coppel, 2000). Individuals can indeed access E-commerce at any time and from any location by simply clicking a button on their device, and the transaction is performed (Omar & Anas, 2014). E-commerce has become an essential tool for individuals to purchase goods and services, particularly groceries, cosmetics, and other necessities (Galhotra & Dewan, 2020; Shahzad et al., 2020), whereas many businesses choose to facilitate online marketing and sales operations since it can enable the firm to accurately identify the client in order to fulfill the expectations and requirements of fresh online customers (Chua et al., 2006).

According to Wong (2013), E-commerce was first introduced in its most primitive form approximately four decades ago. Wong also stated that E-commerce appears to have developed in Malaysia since 2011, since more global E-commerce companies entered the market. The Internet has become more popular, and more businesses are turning to E-commerce (Khan, 2016). Handley (2017) indicated that the Malaysian E-commerce marketplace is anticipated to develop by 10.8 percent in 2016. Based on the article, the government plans to double this increase to 20.8 percent by 2020, with the help of Alibaba's

Jack Ma, who was recently appointed Malaysia's Digital Economy Advisor. Furthermore, the speedy increase withinside the wide variety of computer systems in Malaysia, in addition to the percentage of computer systems related to the Internet, has led to an boom in E-commerce, according to Chua et al. (2006). Users benefit from it because they have access to foreign markets, allowing them to compare prices and find the best deal. This is one of the reasons why individuals are currently more prone to utilize E-commerce (Khan, 2016). In addition, individuals are more prone to utilize E-commerce since it can meet their needs, according to Davis (1989), who claimed that people believe their performance will improve when they can utilize the system. In brief, the function of the system and other external concerns may influence the use of E-commerce.

In accordance with Chua et al. (2006), the first E-tailing via the Internet, sometimes known as online shopping, began in 1994. The research stated that this was a novel concept in non-store selling that drew the attention and interest of a large number of retailers. Slowly but steadily, more merchants and retailers are accepting and adopting this new way of purchasing and selling in order to grow their businesses (Rowley, 2020). E-commerce sites like Shopee and Lazada, for instance, have risen in importance in Malaysia. Numerous wholesalers, retailers, and businesses register as E-commerce vendors to conduct their business and promote not only their products, and indeed their brand. Individuals prefer to conduct research in E-commerce before making purchasing decisions because the barrier to entry is lower, resulting in lower product prices.

2.3 Four Features of E-commerce

A. **Ubiquitous**

E-commerce is ubiquitous as individuals are able to access E-commerce anytime, anywhere through the Internet currently (Shafiyah et al., 2013) instead of limiting their purchase in physical shops. The consumer base of a physical firm is cramped to the urban area in which it is located, whereas the arrival of an E-commerce business is global (Bhasin, 2019). As a result, customers can purchase products from all across the globe, and as a result of this feature, an increasing number of people are turning to E-commerce to trade and make purchases. The widespread use of E-commerce made individuals able to fulfil their purchasing desires in a more convenient manner. For example, individuals are unable to shop across borders due to the pandemic. Everyone's desire to make contactless transactions and have products delivered to their door without leaving the house or travelling abroad, on the other hand, can still be met by E-commerce platforms with the engagement and product lines of plenty of nations. Simultaneously, the ubiquitousness of E-commerce highlights its advantages; it can be disguised as advertising to promote the products of e-businesses in order to entice customers to buy.

B. **Universal Standards**

According to Shafiyah et al. (2013), there is a universal standard that all nations around the world adhere to. The researchers stated that the significantly lower market entrance cost, which means merchants must pay the cost of the commodities they bring into the market, is one of the universal standards shared in E-commerce. At the same time, from the consumer's perspective, universal standards may lower search costs, i.e., the time and effort required for consumers to find suitable and desired products (Shafiyah et al., 2013; UKEssays, 2018). The standards make it easy for people to start a business using current

technology, which lowers the barrier to entry, resulting in a plethora of competitors (Shafiyah et al., 2013). As a result, merchants must make the price and product introduction more outstanding in order to impress customers in a wide sea of people, as well as make finding suitable products easier, convenient, and quick. An example could be shown is Shopee, one of the E-commerce platforms. When searching for products on Shopee, there is always a filter button on the page. It not only assists customers in finding the perfect products, but it also assists merchants in comparing their selling prices in order to adjust and grow their business.

C. **Richness**

The intricacy and content of a message are referred to as richness (Shafiyah et al., 2013; UKEssays, 2018). According to Shafiyah et al. (2013), branding and advertising are critical in E-commerce to entice customers. They had stated that whether it's video, audio, or animation, it can all be used to promote a business and advertise in E-commerce to reach a large audience. When compared to traditional markets, they are able to give personal, face-to-face services while selling to customers via aural and visual clues (Shafiyah et al., 2013; UKEssays, 2018). Therefore, traditional markets have a powerful selling or commercial atmosphere due to their richness (Shafiyah et al., 2013). However, in E-commerce, material and information in the form of video, music, animation, and other forms of media could be rich to attract customers. For example, Lazada, an E-commerce site, has advertisements that appear in phone alerts, television, radio, and other forms of media. Individual's interest is readily piqued, and they click or search for the related products they want on certain E-commerce platforms. Moreover, consumers that are well-informed and aware always look for such information before making a purchase (Bhasin, 2019). It demonstrates how content and information richness may be used to entice customers through E-commerce.

D. **Interactivity**

The technology that facilitates two-way communication between the merchant and the customer is referred to as interactivity (Bhasin, 2019; Shafiyah et al., 2013; UKEssays, 2018). The engagement with people is how interactivity works (UKEssays, 2018). It allows customers to communicate with online merchants in a way that is analogous to face-to-face discussion but in an electronic format. Furthermore, it has a larger and more global scale (UKEssays, 2018) since customers can connect with online merchants from all over the world, unlike in traditional stores. In addition, the traditional commerce technologies could merely reach a limited number of customers compared with E-commerce as the Internet could deliver messages and information to audiences all around the world. Thus, the research of Shafiyah et al. (2013) has stated that "E-commerce technologies have changed the traditional trade-off between reach and richness". For instance, consumers could communicate for inquiries and details via an E-commerce-specific platform such as customer service, feeds, or reviews. These are the sites where customers may ask questions or share their shopping experiences, and where the merchant can respond.

2.4 The roles of E-commerce during Covid-19

Countless individuals have adopted the culture of working from home and E-shopping in order to maintain a social distance and protect themselves from the pandemic. It has resulted in increased E-commerce usage in Malaysia ("COVID-19 Accelerates E-commerce Growth in Malaysia, says Global Data", 2020). Besides, a research stating that 52 percent of consumers keep away from shopping in crowded areas and brick and mortar shopping. Additionally, 36 percent of consumers declare that they will avoid going for brick and mortar shopping before getting vaccinated (Bhatti et.al, 2020). Moreover, according to Galhotra and Dewan (2020), industry experts have labelled E-commerce as the best support system to help

citizens combat the pandemic. They believe that after overcoming a number of obstacles, E-commerce will reach its full potential throughout the pandemic and beyond. Thus, E-commerce has become an indispensable tool for individuals to purchase goods and services, particularly groceries, cosmetics, and other necessities (Galhotra & Dewan, 2020; Shahzad et al., 2020).

Furthermore, according to The Star news online, Malaysia moves beyond MCO, bridging the gap between online and offline retailing. Retail businesses had to transmit online in order to survive ("Bridging online and offline retailing as Malaysia moves beyond MCO", 2021). According to Lazada Malaysia CEO Leo Chow, Shopee conducted a survey showing that out of the 11,850 sellers polled, 5,406 are new entrepreneurs empowered by E-commerce who run their businesses entirely online and despite being fully employed, 35.4 percent of respondents used E-commerce as a second or third source of income (Nathan, 2020). Despite this, there are approximately 45,000 new micro-SMEs added to various E-commerce platforms such as Lazada and Shopee in the year 2020, which means more than 245 businesses benefited from E-commerce ("Bridging online and offline retailing as Malaysia moves beyond MCO", 2021). Hence, Covid-19 has led to a surge in E-commerce in having its own role via a buying or selling perspective.

2.5 Comparison of perception of different age groups

According to the research by Tarhini et al. (2014), age is a significant demographic factor that influences behavioural intention, adoption, and acceptance of technology in both direct and indirectly ways (Chung et al., 2010; King & He, 2006; Porter & Donthu, 2006; Venkatesh et al., 2003; Wang et al., 2009). The applying age as a moderator to a TAM would enhance its moderating effect hypothesized by a number of scholars (Chung et al., 2010). The Internet and E-commerce are changing consumer behaviour and gaining significant attention

in society and the economy (Rybaczewska & Sparks, 2021). Internet usage has been embedded in the society in Malaysia, with 87 percent of Generation X using the Internet for a wide range of purposes including online shopping, online purchasing and so on (Rahman & Hussain, 2014). Naseri et al. (2021) also stated that the majority of E-commerce consumers are between the ages of 20-30 years old based on the findings of a survey by Malaysian Communications and Multimedia Commission (2018). However, Stafford et al. (2004) discovered that there is no obvious influence of gender on purchasing behaviour, and investigated whether older consumers declined to purchase online in spite of their country of origin as well as determined the major active online shopper is the age group of 25-34 years old that have the statistical variance on Internet purchasing level from the 18-24 years old of age group (Wan et al., 2012).

A. Perception of Generation X

Generation X is defined as 41 years old to 56 years old (*Age Range by Generation,* 2021). Referring to Rahman and Hussain (2014), 37.1 percent of 30-44 years old completed online buying and 26.3 percent of 45-59 years old, compared to 24.1 percent of 18-29 years old and 12.6 percent of 60 years and elders. As a result, Generation X has the highest number of domain users for online shopping (Rahman & Hussain, 2014). Research by Lissitsa and Kol (2016) and Heaney (2007) mentioned that traditional search and decision making procedures are still being used by Generation X. They want to hear about the product's characteristics and the reason with a description of these characteristics (Himmel, 2008). Besides, value other people's opinions is one of Generation X's traits as they might require confirmation from the others that their decisions are acceptable (Lissitsa & Kol, 2016). Instead, Generation X prefers to do some research before making a purchase decision on the Internet, they will tend to refer to users' comments and visit network sites compared to other

generations (Peralta, 2015). This has been demonstrated by the discussion from Sorce et al. (2005) that once elderly customers have sought a product online, the less favoured in seeking a product online of them will be more likely to buy it online than younger customers. Moreover, there was a study that proved the hypothesis, and came out with the findings that indicate the elders have lower perceived ease of use and have more access obstacles related to the Internet (Porter & Donthu, 2006). Although elder population may take longer for the adoption process, they have the advantage of spending less time researching items as a result of their extensive shopping experience in an offline environment (Wan et al., 2012).

B. Perception of Generation Y

Generation Y or known as Millennials are born between 1981 and 1986 with the age range from 25 years old to 40 years old (*Age Range by Generation*, 2021). Malaysian Communications and Multimedia mentioned that young adults (Generation Y) are the leading mobile phone users with 18.8 percent from the age group of 20-24 years old from the survey conducted in 2014 (Hussein, 2016). It said that the age group of 25-29 years old with 16.3 percent from the overall population is the second largest group which both are considered as Generation Y. There is an age range from youths to adults regardless of genders claimed as major Shopee users supported by Sawitri and Giantari (2020 as cited in Kiew et al., 2021). Bakewell et al. (2006) found that Generation Y is raised in a materialistic environment and Parment (2009) found they have vast social networks since Generation Y is well-educated in numerous areas (Wolburg & Pokryvczynski, 2001). They place a high value on technical information (Rahulan et al., 2015), and make buying decisions after doing extensive study on the subject (Lissitsa & Kol, 2016). As said by Caplan (2005), Generation Y prefer the items that fit their personal preferences and lifestyle regardless of the brands concerned. It has been proven when the buying preference of Generation Y will fluctuate rapidly according to the

latest fashion, trend, brand reputation, valuing style and quality over price (Lissita & Kol, 2016). Hence, compared with young consumers, elderly consumers probably gained lesser enjoyment and utilitarian benefits from online purchasing since they just perceived the value of shopping rather than evaluating Internet search or buying behaviour explored by Roy Dholakia and Uusitalo (2002 as cited in Sorce et al., 2005).

C.   **Comparison between both Generation X and Generation Y**

In comparison with the older generations, the younger generations are not only more familiar with E-commerce, but also possess the ability to process website information five times faster, according to Kim & Ammeter (2008 as cited in Muda et al., 2016). Elderly consumers are much more inclined to purchase online compared to younger consumers when they are browsing a product via the Internet. On the contrary, younger consumers purchase less online compared to elderly consumers, although they searched for more items online (Sorce et al., 2005). According to the discussion of Hussein (2016), it concluded that the mobile shopping was preferred by the Generation Y with the reasons of technology user-friendly, feasible and simple supported by Bigne et al. (2007) which the study stated that younger generations are more prone to utilize Internet shopping sites than elders when they perceived the Internet shopping sites easily and realistically. Furthermore, it comes up with the result that the users from Generation Y are more likely to make E-purchases as they perceive the system to be helpful, functional, durable (Rehman et al., 2013) and simple to use (Chiu et al., 2009). Moreover, based on Chang and Samuel (2004) observed, individuals who shopped frequently were more inclined to the middle age group and individuals who spent lot of money on each online transaction were more inclined to the oldest age group when they divided the population into three age groups: below 24, 25 to 44, and 45 and above in their studies of online consumers (Rahman & Hussain, 2014).

2.6 Customer Decision Process

Consumer decision process is the process through which consumers look for, choose, buy, utilize and dispose of products and services in order to meet their needs and desires (Stankevich, 2017). Based on Kim and Srivastava (2007), it contains five stages of the decision making process for E-commerce that include need recognition, information search, alternatives evaluation, purchase decision and post purchase evaluation. The concept of the customer decision stages is stated in the table below.

Table 2: Concept of Customer Decision Process

Stage	Concept	Citation
Need Recognition	Problem recognition occurs when there is a gap between a desired condition and reality that is enough to stimulate and activate the decision making.	(Song, 2016)
Information Search	Consumers search for both memorized and external information intentionally to solve their consumption issues, due to consumers being highly motivated, so some internet information is not valued as highly as internal information.	(Soloman, 2012; Rose & Samouel, 2009, as cited in Gómez-Díaz, 2016)
Alternatives Evaluation	Online consumers emerge to assess the sufficient gathered information (internal or memory, as well as external, such as advertising and other recommendations) in order to make the best selection.	(Gómez-Díaz, 2016)
Purchase Decision	Consumers have made the decision to purchase a product after acquiring information from a wide range of sources, reviewing it, and determining the place and item to purchase. Consumers purchase the brand or commodity that has the highest ranking during the review process.	(Qazzafi, 2019)
Post Purchase Evaluation	Consumers have the concept of being satisfied or dissatisfied regarding their perceptions and expectations after using the product.	(Qazzafi, 2019)

2.7 Advantages of E-commerce toward the business

In general, the significant benefits gained through E-commerce are perceived as the source of motivation for businesses to implement E-commerce in their respective businesses. According to the literature review, we have divided the benefits into four categories as stated below.

A. **Rise in sales**

Since merchants do not have to run a physical store, they can devote more time and effort to their online stores. With the advancement of the Internet, merchants can find more inspiration on how to run their online stores on the Internet. Besides, the vendors can have more sales online with a higher profit margin as they are not managing a physical store and eliminate the fixed costs of operating brick-and-mortar stores (Franco & BulomineRegi, 2016).

B. **24/7, 365 days**

E-commerce is a platform that never closes, serving the consumer which leads to profit keep rising (Franco & BulomineRegi, 2016). E-commerce can take place at any time of day or night, seven days a week (Bloomenthal, 2021). Accompanying this condition, E-commerce allows vendors to run their businesses from anywhere and at any time without having to hire employees to keep an eye on the store and protect the items. Although the physical products sold will still need to be stored anywhere, storage spaces are frequently less expensive than retail spaces. Vendors did not have to worry about things like traffic or parking areas (Khurana, 2019). Thus, merchants can set their business hours based on their free time, rather than being restricted to a specific time.

C. Instant transactions

The transactions can be made immediately and there is no cash needed for the payments via E-commerce platforms unless they choose for cash on delivery. E-commerce eliminates the need to wait for a check to clear. Online transactions are approved instantaneously, with the money clearing through all the financial systems in two to three days at the most (Franco & BulomineRegi, 2016).

D. Low cost of advertising

E-commerce is a low-cost medium of communication that businesses use to promote a product. E-commerce is growingly being used against business corporations or organizations throughout the world to advertise and market all these products and services (Svobodová & Rajchlová, 2020). In this situation, E-commerce enables vendors to advertise their products and services on social media with the least amount of money.

2.8 Consumer Trust

Aside from financial factors, trust should be the distinguishing feature of the connection, impacting its fundamental existence and nature (Reichheld & Schefter, 2000, as cited in Gefen et al., 2003). At the same time, trust can be defined as users' readiness to become receptive to E-commerce after analysing the characteristics, as consumers are unwilling to make purchases unless they have trust in the platforms (Shia et al., 2015). Trust could be built when the party achieved the expected performance of an individual. Besides, studies have examined whether having trust is equally willing to take the risk (e.g., Li & Betts, 2011; Shia et al., 2015); nonetheless, trust is perceptually vulnerable because it demands accepting uncertainty (Li & Betts, 2015).

Consumer trust is vital in fostering consumer loyalty (Nguyen et al., 2013). Trust can be developed when a company knows its consumers' needs and desires (Azahari & Nayan, 2020). When consumers acquire trust in platforms, they are more inclined to use it again in the future. Hoffman et al. (1999) provided an example, stating that some websites require visitors to fill in their information before viewing the sites, yet approximately 63 percent of individuals are unwilling to provide their individual information on the web site due to a lack of trust in the site.

2.9 System Quality of E-commerce Platforms

According to Lee et al. (2017), system quality is an external variable that TAM researchers frequently employ. The word "system quality" refers to an information system's good and positive quality in terms of its operational aspects (Gorla et al., 2010). Refer to system quality, software programs and data components are the overall quality of the information system processing. (Gorla et al., 2010; Shih, 2004). Furthermore, there are studies that indicate that system quality has a significant impact on both the consumer's perceived usefulness and perceived ease of use at online stores (e.g., Ahn et al., 2004; Elik & Ylmaz, 2011; Lee et al., 2017). For instance, users require a stable and effective platforms to make purchases in order to assure financial security. Further, they also require platforms that are simple to use in order to better comprehend and discover what they want to buy.

Additionally, qualities such as usability, functionality, reliability, data quality, flexibility, and integration could be used to assess system quality (DeLone & McLean, 2003). Shih (2014) further asserts that the information search assistance function can quantify consumers' perceptions of system quality. As a result, the system quality of the E-commerce platforms can predict its success. Improved system quality, according to DeLone and Mclean (2003), can lead to increased customer satisfaction and the use of E-commerce platforms. The

higher the quality of the system, the more successful E-commerce platforms will be.

2.10 Perceived Usefulness

Davis (1989) initiated perceived usefulness as a component used in TAM to assess consumers' behavioural intentions. He also defined perceived usefulness as "the degree to which a person believes that utilising a certain system will improve his or her job performance." In other words, it is the standard to which system users believe that by utilising the system, they would be able to improve their work performance and productivity (Kabir et al., 2017; Mou et al., 2016). Perceived usefulness is known to be the primary construct in the original depiction of the TAM (Alsabawy et al., 2016). Consumer perceptions of the encounter's conclusion could also be referred to as perceived usefulness (Davis et al., 1992). Shia et al. (2015) mentioned that it has a direct impact on consumer satisfaction; the intent to continue purchasing from E-commerce and would be influenced by perceived ease of use and the external variables.

2.11 Perceived Ease of Use

Perceived ease of use is another component used in TAM which refers to the level for which the user believes the technology or system can be operated easily and without issues based on (Davis, 1989; Iriani & Andjarwati, 2020). It had been considered as individuals' perception that utilizing new technology is relatively devoid of effort (Dasan & Chung, 2015; Perea Y Monsuwé et al., 2004). Le et al. (2020), and Nguyen (2020) claimed it can help to boost consumer acceptance of a good or service. Derived from Iriani and Andjarwati (2020), Singh et al. (2016), and Suleman (2018), they identified it has an impact on online buying decisions. In addition, it is defined as the process leading to the ultimate outcome of online

purchasing in the context of online shopping (Dasan & Chung, 2015; Perea Y Monsuwé et al., 2004).

2.12 Attitude Towards Using E-commerce

The term "attitude" denotes one's foremost thoughts regarding the consequences of one's action (Leonard, 2015; Pennington et al., 2004). Davis (1989, as cited in Nikou and Economides, 2017) also explained "attitude towards using" was used to describe and forecast technology system adoption. Moreover, Kim and Woo (2016) stated that attitude means the users' entire emotion about executing the goal behaviour. The use of technology (e.g., a computer and the internet) for enhanced marketing effectiveness is known as online shopping or marketing. Additionally, merchants are combining techniques to fulfil the needs of online shoppers; they are busy researching customers in the field of online buying, examining consumer attitudes regarding online shopping, and evaluating the elements that influence consumers to purchase online. Akbar and James (2014, as cited in Ahamed and Islam, 2016) found out that consumers' attitudes inside this area are influenced by their understanding of E-commerce platforms, their perceived credibility and convenience of use, as well as the perceived hazards of payment and refund security.

2.13 Behavioural Intention

As stated in Kim and Woo (2016), behavioural intention indicates the intensity of a user's intention to engage in a certain behaviour. To enhance the explanation, behavioural intention, which is the product of a person' attitude towards the behavioural and subjective standards around its performance in which the meaning is driven by the Theory of Reasoned Action (TRA) (Pai & Huang, 2010). Hung et al. (2005) ascertained that attitude and behaviour attentions are intensely influenced by perceived usefulness and perceived

simplicity of use. Since attitude alludes to one's positive or negative evaluation of a specific response, consumers who are more impulsive in using the Internet to research goods and buy goods will have a greater behavioural intention to do online shopping (Wu & Liao, 2011).

2.14 Actual System Use

TAM claims that the actual use of an Information System (IS) is identified by behavioral intention to determine the technology acceptance (Alharbi & Drew, 2014). The description of an individual's technology IS acceptance behaviours by TAM is modified by TRA (Dishaw & Strong, 1999), arguing that the user's beliefs shape their attitudes towards system use. Namely, behavioural intentions are influenced by attitudes to employ the system, which then in turn impact actual system use (Joo & Sang, 2013). It is supported by Goodhue and Thompson (1995) that the elaboration of the system will be seen as more valuable and task productivity will likely improve if the system's attributes fit the task's criteria (Gefen et al., 2003).

2.15 Buying Decision

Client behaviour that is being understood well includes the consumer's thoughts, reactions and picks among the available alternatives to assist markets in optimizing their efforts (Stankevich, 2017). It said the purchasing decision making process will be driven by consumer behaviour (Puspitasari et al., 2018). Davis (1989, as cited in Bakar & Bindi, 2014) introduced the TAM before the buying decision was made when there were the needs for better understanding the usage and usefulness of the goods and services. There was a suggestion by Keh and Shieh (2001), and Naresh et al. (2015) borrowed from (Nguyen et al., 2019), that trust in Internet purchase and websites plays a significant role in consumer decisions. Information Technology has assisted purchasers in making decisions after

enhancing the quality of product messages which it applied in the way of the Internet (Mittal, 2013). It is vital to meet consumers' needs and desires in order to influence their purchase decisions (Indriani, 2016). Other factors, such as system quality (Indriani, 2016), and trust (LE & HOANG, 2020), have the potential to influence demands and desires, as well as their purchasing decisions.

2.16 Original Theoretical Framework
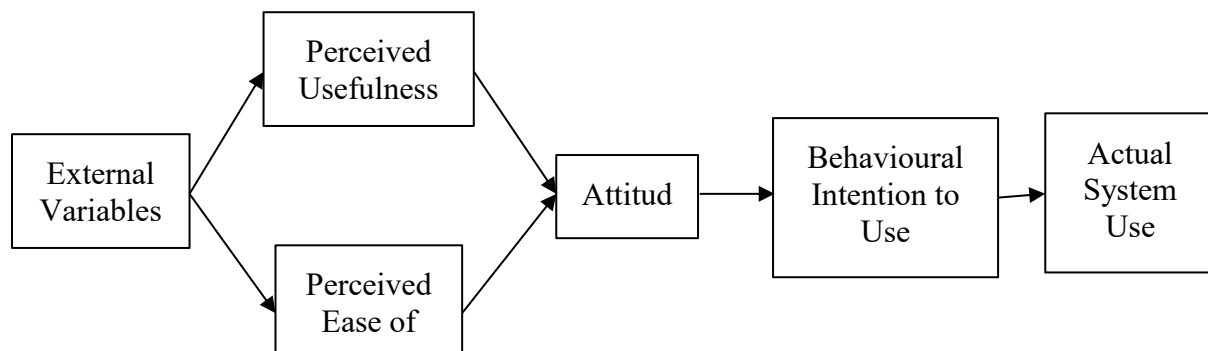
Figure 2: Original Framework

Figure 2 shows the original framework of The Technology Acceptance Model (TAM) developed by Davis (1989) which predicts the usage and the acceptance from technological or information system users. The TAM model believes that when a new technology is introduced to the user, several factors will influence the decisions of users about when and how to use the technology (Ardiansah et al., 2020). TAM is the most influential and widely used theory for explaining the acceptance of information systems (Lee et al., 2003), which has been extensively studied and verified by various studies. Davis, according to (Chuttur, 2009), was inspired by the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975) and other research results, and thereby adapted as well as improved the framework of the TAM model he formulated to the conceptualised TAM model that exists today. This is to assume that the model contains two major variables: (a) Perceived Ease of Use (PEOU), and (b) Perceived Usefulness (PU), which determine from the individual's

information system (Lee et al., 2003). During the proposal of the new TAM model, Davis (1989) proposed that the two variables can be affected by external variables. Continuing with the variables will lead to affecting the attitude toward using the system followed by the intention to use the system and lastly, Actual use of the system by the individuals.

2.17 Hypothesis development

2.17.1 The relationship between trust and perceived usefulness

Developing and maintaining long-term strong relationships with customers is a necessity for all businesses, regardless of its size. A positive relation is sufficient to influence the customer's consumption level, thereby influencing sales. Therefore, trust can be considered as fundamental throughout this process. According to Singh and Keswani (2016), trust has played an essential part in E-commerce since the level of trust has a direct and significant impact on the sales E-commerce platforms. Customers will have a high level of trust in E-commerce if they have a strong relationship with the merchants. As a consequence, they seem to be more likely to buy from their E-commerce platforms. Additionally, trust has been regarded as a stimulant in buying and selling transactions as trust has become the most crucial issue during the communications (Benassi, 1999; Folkman, 2020) and e-transactions processes (FarajollahEsfahani & Lafvat, 2016; Fung & Lee, 1999).

According to both the findings of Ashraf et al. (2014), and Goundar et al. (2021), trust was tested as a variable that has a positive and significant impact on perceived usefulness while the researchers investigated the cases related to E-commerce. Ashraf et al. (2014) investigated the application of the TAM model in cultural contexts, using online shopping adoption as a case study. According to their findings, regardless of implementation stage, building trust and making consumers feel at ease when visiting a website is essential. Further to that, their research also mentioned Stewart (2003) has stated the higher the trust level of

customers, the more useful the customer perceives the websites. Besides, as stated by Goundar et al. (2021), trust might encourage online consumers to engage in E-commerce and to conduct transactions through the Internet. In their research, they also refer to the research of Broutsou and Fitsilis (2012), who found that trust is fundamental for E-commerce since it can influence the desire for online purchases, making trust much more significant. As per Figure 2, trust, as a variable, plays a role in influencing perceived usefulness. The trust of customers is hypothesised to have a direct impact on perceived usefulness of the E-commerce platforms.

H1: Customers' trust towards E-commerce platforms positively influence perceived usefulness of E-commerce platforms.

2.17.2 The relationship between system quality of E-commerce platforms and perceived ease of use

An E-commerce platform is a platform that operates with the use of complex systems. As a result, the system quality of the E-commerce platforms must be maintained at a high-quality level in order to provide a positive trading experience on E-commerce platforms for customers and vendors. System quality has generally been recognised as one of the most desirable characteristics of a system (Al-Mamary et al., 2014). According to Kuan et al. (2008), system quality focuses on a technical level that reflects E-commerce system features on the networking site that generates information about the product. System flexibility, accessibility, responsiveness, and logistics rate are examples of these characteristics. For example, the ability to customize a system based on circumstances and externally and internally adjustments, in which the higher the flexibility of the system, the higher the customer satisfaction (Al-Mamary et al., 2014).

System quality as an external variable has the direct impact on the variable's perceived ease of use. Alsamydai (2014) and Yılmaz and Çelik (2011) have investigated the relationship between system quality and perceived ease of use and came out with the same argument that system quality has a positive relationship with perceived ease of use.

H2: System quality of E-commerce platforms positively influence perceived ease of use of E-commerce platforms.

2.17.3 The relationship between perceived usefulness and attitude toward use of the E-commerce platforms

Perceived usefulness is the use of certain systems that will improve their ability to perform their duties (Davis, 1989, p. 320). It also means that the level to which a person believes that using a given system will improve their job performance (Md Johar & Ahmad Awalluddin, 2011, p. 5). In short, perceived usefulness is to define the practicability of the E-commerce platforms. Perceived usefulness of a system is related to its overall benefits for improved performance and efficiency and user productivity (TAHAR et al., 2020, p. 540).

According to the research's framework, the variable of perceived usefulness depends on attitudes towards the use of E-commerce platforms. Users realize that the interaction of the customer services of the E-commerce platforms innovation will improve their task performance by easily solving their problem, as well as the fast transaction of the payment. The more practical the E-commerce platforms are, the more positive it is. Based on Singh and Keswani (2016), these studies had related research about the significant effect of perceived usefulness and Attitude Toward use.

H3: Perceived usefulness of E-commerce platforms positively influence attitude toward use of E-commerce platforms.

2.17.4 The relationship between perceived ease of use and attitude toward use of the E-commerce platforms and perceived usefulness

Based on Davis studies, the extent to which one believes it is easy to use a certain system is the definition of PEOU (Davis, 1989, p. 320). In other sayings, it is to describe how simplistic it is for a person to use the information system. Based on our research it is determined that our E-commerce platform is easy to be used by the platform users. In the TAM, this variable, PEOU, is the one of the most important factors in any acceptance system (TAHAR et al., 2020, p. 539).

Based on our research's framework, the variables of perceived ease of use will have a significant impact on the attitude toward using the E-commerce platforms. A superior system of E-commerce platforms which mostly performed smoothly and conveniently for platform users is referred to as ease of use. The more user-friendly the E-commerce platforms, the more positive the customer's attitude toward the platforms will be. In accordance with research from Cho and Son (2019), and Singh and Keswani (2016), they found that perceived ease of use had a positive effect on attitudes toward use.

Besides attitude toward using, perceived usefulness also will be affected by perceived ease of use. If platforms application is perceived as easier to use, which means that the user is likely to be accepted (Mohd.Yusoff et al., 2009, p. 78). There are two related studies from Cheema et al. (2013), and Mohd.Yusoff et al. (2009), stating that perceived ease of use gives a positive effect to perceived usefulness.

H4: Perceived ease of use towards E-commerce platforms positively influence attitude toward using E-commerce platforms.

H5: Perceived ease of use towards E-commerce platforms positively influence perceived usefulness of E-commerce platforms.

2.17.5 The relationship between attitude toward use of the E-commerce platforms and behavioural intention to use E-commerce platforms

A person's attitude toward a particular behaviour is determined by the individual's beliefs and evaluations of the manifest consequences of this particular behaviour (Singh & Keswani, 2016). Ajzen and Fishbein (2000) define attitude is best regarded as the variation of an individual's positive or negative influence on a psychological object or target behaviour, attitude toward use of the E-commerce platforms is an important central feature in the TAM model, which will lead to the intention of using it and be affected by the two variables. Davis (1989) had suggested that the impact of the two variables, perceived usefulness and perceived ease of use on the intention is mediated through attitude. So, positively rated outcomes often reinforce feelings about the behaviour that leads to the outcome.

In this research's TAM framework, attitude shows as a variable that affected the intention to use the E-commerce platforms. The direct influence of attitude on intention to use has been proven by Jackson et al. (1997), and Singh and Keswani (2016) and it mentioned that the platform users are more likely to have a stronger intention to shop online will be more like to use it when they have a positive view or attitude about the E-commerce platforms.

H6: Attitude towards using E-commerce platforms positively influence behavioural intention to use by platform users.

2.17.6 The relationship between behavioural intention to use E-commerce platforms and actual E-commerce platforms use

Behavioural intention can be meant by a measure of the intensity of the intention to execute a certain behaviour (Fishbein & Ajzen, 1977; Miniard & Cohen, 1981). A stronger linking between intention and behaviour happens when the measurements of intent are specific to the behaviour of interest, when the performance of the behaviour in a timely manner approximates the measure of intent, and when the behaviour is under the control of the will (Miniard & Cohen, 1981). In the TAM, behavioural intention to use the system is determined in a direct way by an individual's attitude toward using the E-commerce platforms and the subjective likelihood that the use of a particular E-commerce platform or application will increase the perceived usefulness (Jackson et al., 1997).

According to Figure 2, the framework shows the behavioural intention to use the E-commerce platforms will lead to the buying decision by the customers. Sheppard et al. (1988) stated that behavioural intention could indeed effectively forecast actual behaviours. They cited Fishbein and Ajzen (1975) in their research for their argument that researchers only have to be concerned with the immediate determinants of such a particular behaviour when they want to explore if the individuals will perform the behaviour. The more positive the immediate determinants, the more probable individuals will perform in the behaviour. This can be adapted in this research, where the more positive the behavioural intention toward using E-commerce platforms, the more possible it is that individuals will perform the action of the actual E-commerce platforms use.

H7: Behavioural intention to use E-commerce platforms positively influence actual E-commerce platforms use.

2.17.7 The relationship between actual E-commerce platforms use and buying decision

According to Zhu et al. (2011), their study assumed that consumer attitudes toward online purchases would positively influence purchasing intentions. According to their research, trust has become a critical factor in consumers' online purchase decisions, which is supported by their research findings that lower trust in an E-vendor can minimise their purchase attitude toward the website. For this study, the researchers hypothesised that the attitude toward using E-commerce platforms will positively affect the behavioural intention to use E-commerce platforms, which will then influence the actual E-commerce platforms use and, finally, their purchasing decision.

Nevertheless, the effects of trust and system quality on purchasing decisions were not clearly stated in previous studies, with the majority of previous studies merely mentioning the effects of trust and system quality on online purchase intention. None of them attempt using the TAM model to investigate the effects of consumer trust and system quality on purchasing decisions. As a result, one of the goals for this research was to determine the actual effects of trust and system quality on consumer purchase decisions on E-commerce platforms. To the best of the researchers' knowledge, this will be the first study to examine the effects of trust and system quality on purchasing decisions using the TAM model.

RQ3: Can E-commerce platforms influence buying decision of consumers?

2.17.8 Difference between age and perceived ease of use and perceived usefulness

Aside from the system quality and trust, consumers' purchasing decisions will be influenced by their age. Bansal (2015), and Slabá (2019), addressed the argument that consumer decision making and purchasing behaviour will be influenced by their age as

different ages will have different perceptions on the same subject. Nevertheless, there has been very limited research on the effect of age on perceived usefulness and perceived ease of use in a TAM model. Consequently, age was chosen as a new moderator capable of influencing perceived usefulness and perceived ease of use.

As a moderator, age has been assumed to be able to influence the perceived ease of use and perceived usefulness since different ages affect the perceived ease of use and perceived usefulness of E-commerce platforms. Their relationship with age, on the other hand, is still in flux. As a result, the study will look into the relationship between age and perceived usefulness and ease of use.

RQ4: Can age groups moderate the difference between perceived usefulness and perceived ease of use of E-commerce platforms?

2.18 Proposed Theoretical Framework
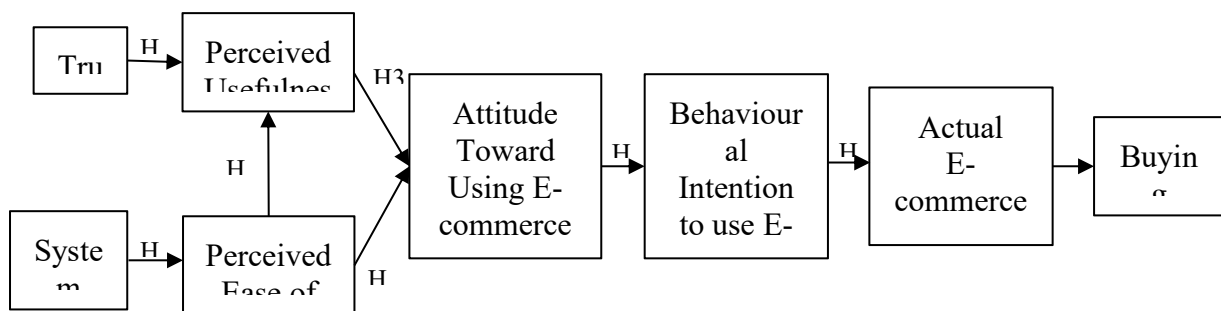
Figure 3: Conceptual Framework

The TAM (figure 3) was extended in this research to identify and understand the variables that influence purchasing decisions. Numerous researchers have been using the TAM model as a framework for measuring the quality of E-commerce platforms and understanding user behaviour (Ahn et al., 2004). In this study, the TAM will be used to

explain how customer trust and the system quality of E-commerce platforms affect perceived usefulness and perceived ease of use, and thus affect their attitude toward using E-commerce platforms, behavioral intention to use, and, ultimately, their buying decision. Additionally, the relationship of perceived ease of use and perceived usefulness also will be explained.

2.19 Summary

In conclusion, E-commerce is widely adopted by businesses since there are many benefits from the vast borderless of interactive online trading with various commodities compared to the limited accessibility of offline trading that is only available for certain products. The E-commerce activity was also boosted by the burst out of the pandemic due to the favourable impacts on business supported by the actual statements. Moreover, perceptions of age groups towards E-commerce and the occurrence of customer decision process are discussed as the causes that might influence the outcomes of the E-commerce usage. Hence, the factors for the outcomes will be examined with the application of the TAM with a set of possible hypotheses.

CHAPTER 3

3.1 Introduction

Methodology will outline the systematic procedure for the conduction of the theoretical work. In Chapter Three, it will further discuss the research method in research design, adoption of measurement scales according to the tailoring questions and hypotheses, sampling methods, sample size and respondent. The process will describe in detail the way in collecting data and evaluating the data with specific techniques. All the components will be highlighted with their respective measuring position and past studies will be used to strengthen the study scope of the research.

3.2 Research design

Quantitative research will be carried out to study consumer's trust and E-commerce platforms system quality will affect their buying decision on E-commerce during Covid-19 pandemic. Quantitative method is suitable for this research as Sukamolson (2007) said the goal of quantitative research is to measure social reality. Quantitative researchers, according to his observation, see the world as a reality that can be objectively assessed, hence tight guidelines in the data collecting and analysis process are critical. Furthermore, the Covid-19 is still under control, a Quantitative method that may distribute the questionnaire via the Internet, can prevent the researcher from becoming infected.

In Quantitative research methods, there are different kinds of research that can be designed for a study, such as descriptive research, experimental research and causal research. Descriptive research will be taking part in this study. According to Williams (2007), the descriptive research approach is a basic research method for investigating the current situation. Descriptive studies include identifying the attributes of a particular phenomenon based on observations or studies of the correlation between two or more phenomena. This

study aimed to describe the characteristics of relevant groups such as age group for this study which examine the relationship between age and two variables: perceived ease of use and perceived usefulness, and the external variables, Customers' trust and platforms' system quality affected their final buying decision. As we specifically focus on the two external variables, these variables illustrate "what" the consumer will affect on their purchasing decision while in the Covid-19 pandemic.

Cross-sectional survey will be used for this study as this survey involves a one-time connection of the information. This is the reason using this survey is that the study is targeted on three different age group as Cross-sectional survey is adaptable and flexible, can cover various spaces of human conduct and conditions, and can be utilized with numerous populaces (Connelly, 2016, p. 369; Polit & Beck, 2014) The effectiveness of using internet, online surveys will be distributed for respondents in order to follow the SOP and avoid physical contact. This survey will be collecting the data in order to gather public opinions regarding the situation of Covid-19 pandemic which may affect the Malaysian buying decision based on the E-commerce platforms.

3.3 Measurement

According to Malhotra and Birks (2007), stated that measurement is assigning numbers or other symbols to the characteristics of objects in accordance with predefined rules. In other words, quantitative data collected by using survey methods is the measurement for the study. Same as this research online survey, Google Form, will be the measurements tool. Measurement can be used for a variety of objectives, including quality control, monitoring, safety, making things fit in design or assembly of the data, and problem resolution. It is worth noting that measuring might have numerous purposes (Bakker et al., 2011).

3.3.1 Demographics

For measuring the age for this study, a ratio scale will be used. When equidistant rank ordered data categories may be placed on a scale with absolute zero, it's called a ratio scale (de Land & Chase, 1990). The absolute zero means that the smallest number in the scale is only zero, and it does not have negative numbers. Our study is targeting three different age groups which are below 24, 25-44 and 45 and above. Three choices will be selected either one for the respondents to select.

Besides, Gender and Ethic group will be measured by using nominal scale. When observations become data, a nominal scale is used to classify them by providing them a unique name or numerical label (de Land & Chase, 1990). In other words, the numbers serve only as labels or tags for identification and classification, as it has a strict one to one correspondence between the objects and numbers.

3.3.2 Variables Test

In this study, an interval scale will also be used for measuring variables. The term "interval scale" refers to the level of measurement in which the variables' qualities are assessed on specified numerical scores or values and the equal distances between attributes (Salkind, 2010). In other words, Interval scale is the difference between the objects which can be compared with an arbitrary zero point. For this survey, Likert scales under interval scales will be implemented. Likert scales will be applied for measuring the hypotheses except for buying decisions, there are two questions for buying decisions will be measured by using ratio scale. Likert scales are often used to assess attitudes or opinions, as they provide a range of responses to a particular question or statement. Typically, there are five response categories, ranging from 1 (strongly disagree) to 5 (strongly agree) (Jaimeson, 2020). There are some arguments for using a five points scale or seven points scale. Based on Joshi et al.

(2015) observation, the seven points scale gives more assortments of choices which thus increase the likelihood of meeting the true truth of individuals. A seven-point scale uncovers more depictions of the theme and in this manner requests for all intents and purposes from the "faculty of reason" of the members. So, this research will be conducted by using seven points Likert scales.

Table 4: Number of questions for each variable

Variables	Number of questions
Trust	6
System Quality	8
Perceived usefulness	5
Perceived ease of use	6
Attitude toward use	6
Behavioural intention to use	6
Actual E-commerce use	6
Buying Decision	5
Total	48

Most of the variables are adapted from some of the past studies which are similar or related to our research. Table 4 shows that the total number of questions are adapted for this study.

Table 5: Questionnaire for customer's trust variables

Questions
1. Products as shown on the E-commerce platforms are reliable.
2. The E-commerce platforms are authentic and dependable in its claims.
3. Infrastructure of the E-commerce platforms is dependable.
4. E-commerce platforms offers to secure my personal privacy.
5. E-commerce platforms give the feeling that it keeps guarantees and responsibilities.
6. I believe E-commerce platforms keeps my best selection in mind.

Table 5 shows the questions to measure the trust variables, there were four of the questions which were adapted from Chen and Lee (2008). The changes made for the original questions were the word "the websites" to "E-commerce platforms". There were two questions which were not suitable for our studies due to the suitability which are asking about products rather than platforms. Last two questions were adapted from Dachyar and Banjarnahor (2017). The changes made from the word "site" to "E-commerce platforms". Unselected two questions were not suitable for this study due to the duplicate question from Chen and Lee (2008) and the asking is about the seller, not for the platform.

Table 6: Questionnaire for system quality variables

Questions

1. E-commerce platforms have an appropriate style of design for business types.
2. E-commerce platforms have an easy navigation to information.
3. E-commerce platforms have fast response and transaction processing.
4. E-commerce platforms keeps error-free transactions
5. E-commerce platforms keep transactions secure from exposure.
6. I can use an E-commerce platforms when I want to use it.
7. E-commerce platforms have good functionality relevant to site type.
8. E-commerce platforms provide an appropriate video-audio presentation.

Table 6 shows the questions for measuring system quality with eight questions adapted from Ahn et al. (2004). These questions were adapted by changing the word "the web site" to "E-commerce platforms". There is a question which was not included due to the duplication of the question.

Table 7: Questionnaire for perceived usefulness variables

Questions

1. The E-commerce platforms can improve my performance when searching for and purchasing goods.
2. The E-commerce platforms will make it easier to search for and purchase goods.
3. The E-commerce platforms will probably enhance my effectiveness in goods

searching and purchasing.
4. Using the E-commerce platforms to acquire a product would allow me to do my shopping more quickly.
5. The E-commerce platforms will increase my productivity when searching for and purchasing goods.

Table 7 shows the questions for measuring the perceived usefulness. There are five questions adopted from Cheema et al. (2013) which also adapted from Davis (1989). However, Davis's (1989) questionnaire is focussing on electronic mail while Cheema's is focusing on online shopping which is more related to this study. The changes involved in the word "internet" to "E-commerce platforms".

Table 8: Questionnaire for perceived ease of use variables

Questions
1. The E-commerce platforms would be easy to use to do my shopping.
2. It would be easy for me to become skilful at using the E-commerce platforms to buy a product.
3. Does not require a lot of mental effort.
4. Learning to use the E-commerce platforms is easy.
5. The interactions with E-commerce platforms are clear and understandable.
6. E-commerce platforms are flexible to interact with.

Table 8 shows the questions for measuring perceived ease of use. There are three questions that are adapted from Cheema et al. (2013), and Heijden et al. (2003). Every change has been made to the questions from the words "website" and "internet" to "E-commerce platforms". Three questions from Cheema et al. (2013) were not included as the questionnaires for this study because of the lanty of wording, which will be replaced by Heijden's questionnaire. Two questions in Heijden et al. (2003) are not suitable for this study as the questions were not clear enough to picture the answer for respondents.

Table 9: Questionnaire for attitude toward use variables

Questions
1. Using E-commerce platforms saves my time.
2. Using E-commerce platforms saves my money.
3. Using E-commerce platforms for online shopping is beneficial for me.
4. I think that purchasing on an E-commerce platforms is a wise action.
5. I think that purchasing on an E-commerce platforms is pleasant.
6. I think that purchasing on an E-commerce platforms is enjoyable.

Table 9 shown is to measure the Attitude toward use of the E-commerce platforms. There were three of the questions which were adapted from Yılmaz and Çelik (2011). The changes made for the original questions were the word "virtual store" to "E-commerce platforms". One of the questions was a negative statement, in order to make this study questionnaire consistent, a positive statement was changed. As well as the fourth question, the word "I think" to centralize the overall questions. One question had been rejected by adapting it due to the duplication of the question made for the trust variable. The last three questions were adapted from Chen and Lee (2008). The changes made from the word "website" to "E-commerce platforms". Unselected two questions were not suitable for this study due to the duplicate question from Yılmaz and Çelik (2011).

Table 10: Questionnaire for behavioural intention to use variables

Questions
1. I intend to use the E-commerce platforms frequently to shop for products.
2. I intend to use the E-commerce platforms whenever appropriate to do shopping.
3. I intend to purchase products using the E-commerce platforms to get experience about online shopping.
4. If I could, I would like to continue purchasing products using the E-commerce platforms in the future.
5. I am willing to spend more money than I had planned on the E-commerce platforms.
6. I would recommend an E-commerce platforms to my friends.

Table 10 shows the questions to measure the behavioural intention to use the E-commerce platforms, there were four of the questions which were adapted from Cheema et al.

(2013). The changes made for the original questions were the word "internet" to "E-commerce platforms". There were two questions which were adapted from Chen and Lee (2008). The changes made on the word "the store" and "the website" to "E-commerce platforms". Four questions were not adapted for this study because of the duplicated questions.

Table 11: Questionnaire for actual E-commerce use

Questions
1. I would use an E-commerce platforms to find my products.
2. I would use an E-commerce platforms to inquire the seller for more information about the products.
3. I would use an E-commerce platforms to inquire about product rating and store rating.
4. I would use my credit card to purchase from E-commerce platforms.
5. I would not hesitate to provide information about my habits to E-commerce platforms.
6. I am very likely to buy products from an E-commerce platforms.

Table 11 shows there are six measurements to measure the actual E-commerce use. These six questions were adapted from Gefen (2000). The changes for these questions were mostly changing the words from "Amazon.com" to "E-commerce platforms" and the "books" to "products". For the first two questions, changes were made to restructure the questions to relate to online shopping as the originals are focussing about the book sold.

Table 12: Questionnaire for customer's buying decision

Questions
1. How many items have you purchased using e-shopping over the E-commerce platforms in the past one month?
2. How much money have you spent on E-commerce platforms in the past one month?
3. My feelings in overall experiencing the purchase through E-commerce platforms.
4. My experience with using E-commerce platforms was better than what I had expected.
5. Buying on E-commerce platforms is convenient.

Table 12 shows the total of five questions to measure the consumer's buying decision. The first two questions were using ratio scales for measure which were adapted from Lim and Lim (2005). The changes of these two questions were from the word "internet" to "E-commerce platforms" and the word "year" to "month". For the next two questions we will be continuing to use Likert scales to measure. These questions are adapted from Kim et al. (2009). The reconstructed changes were made for question three. The words "how do you feel" were cancelled in the sentences to "My feelings" to be consistent with other questions to become a first person pronoun. As for question 4 the changes made are the same as others, which is the word "website" to "E-commerce platforms", following the last question which was adapted from LE and HOANG (2020).

3.4 Sampling Method

Non-probability sampling methods will be applied in this study as the probability of a subject being chosen is unknown, resulting in selection bias in the study. Under Non-probability sampling methods, the most commonly used samplings are convenience or purposeful sampling, quota sampling, snowball sampling, and random sampling (Acharya et al., 2013).

Quota sampling has been chosen in this study to understand how consumer's trust and system quality of E-commerce platforms affect buying decisions on E-commerce during Covid-19 pandemic. Similarly to stratified sampling, the population is first segmented into mutually exclusive sub-groups in quota sampling. Then, based on a predetermined proportion, judgement is used to select the subjects or units from each segment. Strata, a heterogeneous population that is divided into a number of homogeneous groups, are sampled at non-random levels in this method (Singh & Masuku, 2014).

According to Acharya et al (2013), the investigator wishes to have 40 percent men and 60 percent women in a sample of 100. He would stop when 40 men were recruited which meant the "quota" for men was met. In other words, each stratum, each different age group, below 24, 25 years old to 44 years old and above 45, will stop to be collected when it meets their quota. In this situation, quota samples enable researchers to more easily investigate the differences between subgroups (Berndt, 2020).

3.4.1 Sample size

A sample of correlated data which contains the equivalent number of independent observations is accounted for by effective sample size. Thus, the sample size is important as its quantity needs to be estimated before conducting a sample survey or statistical study. It evaluates the number of respondents in a research study in order to evaluate the variables of interest (Vallejos & Acosta, 2021). In this study, G*Power was used to estimate the number of respondents required. G*Power which is widely used in the field of social and behavioural research for statistical tests is used to calculate the sample size. It can cover a large range as well as run in a variety of general computer operating systems. In addition, G*Power had an improvement and extension to G*Power 3.1 which is free and available on an online platform (Faul et al., 2007). By using G*Power, it shows that the minimum sample size needed is 107. However, a sample size of 330 will be used in this study as a larger sample size can minimize the measurement error (Bartlett, 2019).

3.4.2 Respondent

This study is targeted on three different age groups which are below 24, 25 years old to 44 years old and above 45. Hence, there will be a total of 330 respondents, 110 of respondents from each age group are going to be collected as mentioned in the sample size. The reason for targeting these age groups is to study whether different age groups of peoples have different perspectives, attitudes, or behaviours in acknowledging online shopping platforms, which Weiss and Zhang (2020) stated that individuals have diverse attitudes and assumptions regarding different age groups and generations. Refer to Chapter Two with the comparison of generation X and Y, which have a clear indication of their differences in preferences before having a decision to buy at E-commerce platforms. Therefore, this research is to study the relationship between these different age groups and perceived usefulness and perceived ease of use of the E-commerce platforms which assume that either their experience, perceptions or preferences will influence the usage of E-commerce platforms.

3.5 Data analysis

Statistical Package for the Social Sciences, also known as SPSS is a software platform that provides highly developed statistical analysis, a large library of machine learning algorithms, text analysis, open data extensibility, big data integration, and seamless application deployment. SPSS is accessible to users of all skill levels due to its ease of use, flexibility, and scalability. Furthermore, it is adequate for projects of all sizes and levels of complexity, and it can assist the study in identifying new opportunities, improving efficiency, and reducing risk (George & Mallery, 2021).

SPSS requires the implementation of a set of variables, followed by the creation of cases based on appropriate data input into these variables. The SPSS datasheet primarily

contains four types of variables which includes independent variables, dependent variables, intervening variables, and moderator variables (Bala, 2016). Independent variable is a cause while the dependent variable effect whose value is affected by changes in the independent variable. An intervening variable, also known as a mediating variable, is a hypothetical variable that is typically used to explain causal links between other variables in research. Follow up with the moderating variable, it can change the relationship between independent and dependent variables (Rahman & Muktadir, 2021).

According to Kulas et al. (2021), through SPSS, researchers are able to analyze the study with the six steps of hypothesis testing process and SPSS output which includes the descriptive statistics, hypothesis testing, Z- and T- Tests, Anovas, correlation and regression (Inferential Analyses). The latest version of it is IBM SPSS 28 which is the most stable SPSS version as new features meta-analysis, power analysis, ratio statistics, relationship maps, statistics workbook, search, table side-pane editor, and high contrast support are provided (IBM, 2021).

3.5.1 Descriptive analysis

Descriptive analysis, as known as descriptive statistics, which is to show the properties of a group of observations in a descriptive way (Marshall & Jonker, 2010), also assists researchers in making sense of enormous amounts of data. Descriptive statistics is the scientific approach for gathering, organising, analysing, and interpreting data for the purposes of description and decision-making (Kaushik & Mathur, 2014). This analysis will look at the relationship between each of the age groups in this study, which are assumed to have a relationship with perceived usefulness and perceived ease of use. Descriptive analysis is dealing with the presentation of numerical facts, or data, in the form of tables or graphs, as

well as the methodology for data analysis (Kaushik & Mathur, 2014). Therefore, descriptive analysis will be used in this study.

3.5.2 Regression analysis

Researchers can use regression analysis to determine the effect of one independent variable on a dependent variable while controlling for any number of other independent variables or controls (Kremelberg, 2011). There are several types of regression. Linear regression, the most fundamental types of regression in machine learning. It consists of a predictor variable and a dependent variable that are related to each other in a linear fashion; Logistic regression, it will be used when there is binary dependent variable (Menard, 2002); Ordered logistic regression, it sub from logistic regression. The specific of it is dependent variable more than two levels; Multinomial logistic regression is the simple extent from binary logistic regression that allows for the dependent or outcome variable to have more than two categories (Starkweather & Moske, 2011); Negative binomial regression or Poisson regression, which used in explaining over-dispersion in multivariable count data (Kremelberg, 2011).

Linear regression will be practised in this study as the best strategy for estimating the causal effects of buying decision on binary outcomes. It was shown when linear regression is safer compared to the others as correlation values are directly interpretable in terms of probabilities, and when correlations or fixed effects are included (Gomila, 2021). Under linear regression, there are two terms likely to meet in quantitative method studies. A regression model with a single independent variable is referred to as simple linear regression, whereas a regression model with two or more independent variables is referred to as multiple linear regression (Kremelberg, 2011).

In this study, multiple linear regression, also known as classical linear regression model is being chosen to determine numerical targets and one or more numerical predictors

(Stehlik-Barry & Babinec, 2017). The variable to be predicted (dependent variable) has a linear relationship with the independent variable in the multiple linear regression model (Perdana et al., 2021). By using multiple linear regression, this study ought to know the influence of each variable, including how customer trust and the system quality of E-commerce platforms affect perceived usefulness and perceived ease of use, and affect their attitude toward using E-commerce platforms, behavioural intention to use, and, ultimately, their buying decision. Instead, perceived ease of use will affect the perceived usefulness as well.

3.5.3 ANOVA

ANOVA is similar to the t-tests which is used to compare two groups of means scores of independent variables. The difference is that ANOVA can compare more than two sets of scores which t-tests cannot. ANOVA is focused on the differences between means rather than differences between variances. To determine whether the means differ, the technique of variance is applied (Woodrow, 2014). In this study, ANOVA examines the means within an age group or between age groups to see if the means of the groups differ significantly. Under ANOVA types, one-way ANOVA is frequently used (Woodrow, 2014), testing several independent variables (IV) with three or above three groups and a continuous dependent variable (DV) (Allen et al., 2009). The reason for using this test is to determine whether there are significant differences in the buying decisions among the group of the independent variables. Thus, it examines the null hypothesis that samples from various groups were drawn from the same population. Accompanying the computing of an F-statistic, comparison group means will be done as the variability between groups is compared to the variability within the groups (Verma, 2012).

3.6 Pilot study

Each researcher had determined the number of respondents, also called sample size, to ensure the accuracy of the study. For every study, a pilot test was conducted before the actual parent study. A pilot study studied a small sample size quantitative investigation that preceded a larger scale study or clinical trial (Polit & Beck, 2004). According to our research which targeted 330 of the respondents in sample size, however for the pilot study 10 percent of the sample size had been studied, which was 33 of the respondents, to ensure there were no accidental errors in the parent study. Connelly (2008) had said that experts recommended that the sample size for a pilot study be 10 percent of the sample size expected for the bigger parent study. The selection of the respondent's gender and age were not strictly conducted in the pilot test, excluding the age. Age was strictly conducted to be an equal amount of the respondent to ensure every age group of the respondent was understandable to the research going in the parent study. Same as the parent study, this pilot study used three social media platforms which were WhatsApp, WeChat and Instagram to approach the respondents for distributing the online survey.

Conducting a pilot test was designed to make sure the questionnaire was understandable for the respondents. For the pilot study of this research, a total of 58 questions, which included 7 additional questions (table 13) were asked for the respondents who participated in the pilot test. After the respondents finished up the questionnaires, researchers asked the extra questions regarding language, words used, writing styles and the questions' contents were suitable for them to understand. Respondents' opinions expressed by answering the final section of the questions, allowed the researchers to modify the questionnaires for the accuracy that this study intends. Following the collection of data from the pilot study, researchers used the SPSS system to assess the reliability of the questionnaire. Once the pilot study results were available, researchers assessed the questionnaire's reliability and

determined the next steps, which might include conducting the parent study, modifying the questionnaire, or, in the worst-case scenario, terminating the study.

Table 13: List of additional questions for pilot test

Questions
1. Do you find it difficult to understand when you look at these questions? 2. Do you think these questions relate to our research topic? 3. Do you think which question needs to be reinforced? 4. Do you think the words we use are suitable? If not, state the words out and suggest them. 5. Do you think these questions can be understood by every age group easily? 6. Do you think these questions are applicable for all Malaysian citizens? 7. How do you feel when you answer the questions? Annoying or other emotions?

3.6.1 Reliability of Instrument

The pilot study has a total of 48 items to test on 8 variables for the significant value of Cronbach's Alpha from the sample size of 35 respondents within this reliability part. Supporting statements are found to strengthen the acceptance value of Cronbach's Alpha and the determination for one variable test.

Table 14: Reliability Test

Variable	Cronbach's Alpha	Number of items
Consumer's Trust	.702	6
System Quality	.695	8
Perceived Usefulness	.696	5
Perceived Ease of Use	.745	6
Attitude Toward Use	.775	6
Behavioral Intention to Use	.760	6
Actual System Use	.729	6
Consumer's Buying Decision	.681	5

The researchers had conducted a pilot test, and table 14 was the final results of the reliability test by 35 respondents. Based on the table shows there are somes of the variables that did not meet the alpha value of 0.70. Ursachi et al. (2015) suggested that the acceptable alpha for reliability score is between 0.6 to 0.7 while value at 0.8 or more represents a very good level. Therefore, all the Cronbach's Alpha scores of the variables are beyond the acceptable point that indicated they all are reliable for further research. Referring to the responses of the seven additional questions in pilot study, the overall feedback is good. However, there were two respondents who had mentioned the huge numbers of questions asked. As based on the reliability test results, reducing the numbers of questions was not the consideration for the researchers. Taherdoost (2016) mentioned that repeatability is considered as reliable when repeating measurements for a scale or test are taken under the same conditions which will generate the same result. Besides, the Cronbach's Alpha sampling value would appear good when a very low sample size for a 6 item questionnaire is calculated for the Cronbach's Alpha, however, a 95% confident range for Cronbach's Alpha value might have a lower value that indicated extremely poor reliability (Bonett & Wright, 2014). Hence, there is no relational impact of the question amount on Cronbach's Alpha value, only the concerns on stable and consistent measurement with repeatability as well as sample size determines the reliability value result.

3.7 Summary

In a nutshell, the methodology is designed to examine the influence of trust and system quality on the consumers' buying decisions on E-commerce that are moderated by age groups. Quantitative method of research is used to conduct and surveys are used for collecting data. The study used three types of scales to conduct the survey that included Interval scale, Ratio scale and Nominal scales. Quota sampling will be the sampling method

to assess the variables towards buying decisions on E-commerce platforms. A pilot study will also be conducted prior to the parent study, with a total of 58 questions, including 7 additional questions, being asked of the respondents.

CHAPTER 4

4.1 Introduction

This chapter is about data analysis and findings. It presents the results of Descriptive analysis, Reliability test, Multiple Regression analysis and ANOVA analysis, which are used to test the hypotheses based on the literature review.

4.2 Descriptive analysis

The results of analysis on respondent's demographics were presented in the following diagrams.

Table 15: Gender

Gender	Percentage (%)
Male	47
Female	53

A total of 344 respondents participated in the survey. According to the data presented in Table 15, it shows 53% of female respondents and 47% of male respondents have answered the survey.

Table 16: Age Groups

Age Groups	Percentage (%)
24 years old and below	34.40
25 years old to 44 years old	33.53
45 years old and above	32.07

Based on Table 16 above, there were three separate age groups which were 24 years old and below (age group 1), 25 years old to 44 years old (age group 2), 45 years old and

above (age group 3). The highest percentage of age group, 24 years old and below, has the result at 34.40%. It is followed by the age group with the result at 33.53% from 25 years old to 44 years old. Lastly is the eldest age group, 45 years old and above, possessing the result at 32.07%. However, there was an unknown age group missing from a respondent that showed the result at 0%.

Table 17: Ethnic Groups

Ethnic Groups	Percentage (%)
Chinese	49
Malay	25
Indian	26
Others	0

Table 17 above shows the four ethnics groups which are Chinese, Indian, Malay and Others. The major respondents came from the Chinese ethnic which has the result at 49%, subsequently was the 26% of Indian, followed by 25% of Malay and lastly 0% of others was Iban.

4.3 Reliability analysis

A total sample size of 344 respondents from the actual survey has run the reliability test for the Cronbach's Alpha value with 48 items for the 8 variables.

Table 18: Reliability Test

Variable	Cronbach's Alpha	Number of items
Consumer's Trust	.885	6
System Quality	.852	8

Perceived Usefulness	.874	5
Perceived Ease of Use	.872	6
Attitude Toward Use	.877	6
Behavioural Intention to Use	.888	6
Actual System Use	.831	6
Consumer's Buying Decision	.741	5

Based on Table 18 above, Cronbach's Alpha result for behavioural intention to use is .888, which owns the highest reliability score amongst the 8 variables. The following variable, consumer's trust has Cronbach's Alpha result at .885. Moreover, Cronbach's Alpha result for attitude toward use is .877, perceived usefulness is .874 and perceived ease of use is .872. For system quality, it has the value at .852 whereas actual system use possessed the value at .831. All the variables have relatively high reliability scores, except for the last variable which is the consumer's buying decision, it has the lowest result at .741.

4.4 The influence of consumer trust and system quality on E-commerce platforms use

According to the theoretical framework, the influence of consumer trust and system quality are hypotheses to influence perceived usefulness, perceived ease of use, attitude towards E-commerce platforms, behavioural intention, and E-commerce platforms usage. In this section, the influence of each variable was analysed and the results were presented as well.

Simple linear regression was used to determine if perceived usefulness was positively influenced by consumer trust.

Table 19 : Linear regression analysis of the relationship between trust and perceived usefulness

Independent	Beta (β)	t	Sig.
Consumer Trust	.602	13.933	.000
R^2		.362	
F		194.118	
Sig.		.000	

The results of this linear regression were statistically significant (R^2 = .362, F = 194.12, p < .001), as shown in Table 19. It was discovered that customer trust had a favourable effect on perceived usefulness (β = .602, p < .001), indicating that hypothesis 1 was supported in this setting which was able to answer the research question 1.

The influence of system quality of E-commerce platforms on perceived ease of use was tested using simple linear regression.

Table 20 : Linear regression analysis of the relationship between system quality of E-commerce platforms and perceived ease of use

Independent	Beta (β)	t	Sig.
System Quality	.741	20.407	.000
R^2		.549	
F		416.436	
Sig.		.000	

The results of this linear regression were statistically significant (R^2 = .549, F = 416.44, p < .001), as shown in Table 20. It was discovered that system quality of E-commerce platforms had a favourable effect on perceived ease of use (β = .741, p < .001), indicating that hypothesis 2 was supported in this setting. In addition, this is related to research question 2 regarding this research.

The influence of perceived usefulness and perceived ease of use on attitude towards using E-commerce platforms was tested using multiple linear regression.

Table 21 : Multiple regression analysis of the relationship between perceived usefulness and perceived ease of use to attitude towards using E-commerce platforms

Independent	Beta (β)	t	Sig.
Perceived Usefulness	.319	6.772	.000
Perceived Ease of Use	.545	11.569	.000
R^2		.655	
F		323.627	
Sig.		.000	

The results of this multiple regression were statistically significant (R^2 = .655, F = 323.63, p < .001), as shown in Table 21. It was discovered that perceived usefulness had a favourable effect on attitude toward using E-commerce platforms (β = .319, p < .001), while perceived ease of use also had a favourable effect on attitude toward using E-commerce platforms (β = .545, p < .001), indicating that hypotheses 3 and 4 were supported in this setting, respectively.

Simple linear regression was used to determine if perceived usefulness was positively influenced by perceived ease of use of the E-commerce platforms.

Table 22 : Linear regression analysis of the relationship between perceived ease of use of the E-commerce platforms and perceived usefulness

Independent	Beta (β)	t	Sig.
Perceived Ease of Use	.737	20.174	.000
R^2		.543	
F		406.983	
Sig.		.000	

The results of this linear regression were statistically significant (R^2 = .543, F = 406.98, p < .001), as shown in Table 22. It was discovered that perceived ease of use had a

favourable effect on perceived usefulness (β = .737, p < .001), indicating that hypothesis 5 was supported in this setting.

Simple linear regression was used to determine if behavioral intention to use of the E-commerce platforms was positively influenced by attitude toward use of the E-commerce platforms.

Table 23 : Linear regression analysis of the relationship between attitude toward use of the E-commerce platforms and behavioural intention to use of the E-commerce platforms

Independent	Beta (β)	t	Sig.
Attitude towards using	.836	28.151	.000
R^2		.699	
F		792.455	
Sig.		.000	

The results of this linear regression were statistically significant (R^2 = .699, F = 792.46, p < .001), as shown in Table 23. It was discovered that attitude toward use of the E-commerce platforms had a favourable effect on behavioural intention to use of E-commerce platforms (β = .836, p < .001), indicating that hypothesis 6 was supported in this setting.

The influence of behavioural intention to use E-commerce platforms on actual E-commerce use was tested using simple linear regression.

Table 24 : Linear regression analysis of the relationship between behavioural intention to use E-commerce platforms and actual E-commerce use

Independent	Beta (β)	t	Sig.
Behavioural Intention to use	.810	25.582	.000
R^2		.657	
F		654.414	
Sig.		.000	

The results of this linear regression were statistically significant (R^2 = .657, F = 654.41, p < .001), as shown in Table 24. It was discovered that behavioural Intention to use E-commerce platforms had a favourable effect on actual E-commerce use (β = .810, p < .001), indicating that hypothesis 7 was supported in this setting.

4.5 The influence of E-commerce platforms use on the buying decisions of consumers

Actual E-commerce use was tested using simple linear regression to determine if buying decision was positively influenced by actual E-commerce use as shown in Table 27. The results of this linear regression were statistically significant (R^2 = .427, F = 2555.27, p < .001). Hence, it was discovered that actual E-commerce use had a favourable effect on buying decisions (β = .654, p < .001), and at the same time, it indicates that research question 3 was accepted.

Table 25 : Linear regression analysis of the relationship between actual E-commerce platforms use and buying decision.

Independent	Beta(β)	t	Sig.
Actual E-commerce use	.654	15.977	.000
R^2		.427	
F		255.266	
Sig.		.000	

4.6 The difference of perceived usefulness and perceived ease of use by age group

A one-way ANOVA was performed to compare the age groups between perceived usefulness and perceived ease of use of the E-commerce platforms. The research question 4 was answered in this analysis. Tukey's HSD Test for multiple comparisons found that the mean values of perceived usefulness were significantly different between age group 24 years old and below and age group 45 years old and above (PU_Mean: p <.001) or age group between 25 years old to 44 years old and age group 45 years old and above (PU_Mean: p <.000) while perceived ease of use were significantly different between age group 24 years

old and below and age group 45 years old and above(PEOU_Mean: p < .000) or age group between 25 years old to 44 years old and age group 45 years old and above (PEOU_Mean: p < .000). However, there was no statistically significant difference in means perceived usefulness and perceived ease of use between age group 24 years old and below and age group 25 years old to 44 years old (PU_Mean: p = .993 / PEOU_Mean: p = .887).

Besides, ANOVA revealed that there were statistically significant differences in each mean, perceived usefulness between at least two groups (PU_Mean: $F(2, 340)$ = [5.376], p < .000) and perceived ease of use between at least two groups (PEOU_Mean: $F(2, 340)$ = [8.568], p < .000). Hence, there is a difference in age group between perceived usefulness and perceived ease of use of the E-commerce platforms as the age group 45 years old and above is highly different compared to age group 24 years old and below and 25 years old to 44 years old.

Table 26: Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Age Group	(J) Age Group	Mean Difference (I-J)	Std. Error	Sig.
PU_Mean	24 years old & below	25 years old to 44 years old	-.01091	.09905	.993
		45 years old & above	.37384[*]	.10018	.001
	25 years old to 44 years old	24 years old & below	.01091	.09905	.993
		45 years old & above	.38474[*]	.10081	.000

	45 years old & above	24 years old & below	-.37384*	.10018	.001
		25 years old to 44 years old	-.38474*	.10081	.000
PEOU_Mean	24 years old & below	25 years old to 44 years old	.04979	.10659	.887
		45 years old & above	.50144*	.10781	.000
	25 years old to 44 years old	24 years old & below	-.04979	.10659	.887
		45 years old & above	.45165*	.10848	.000
	45 years old & above	24 years old & below	-.50144*	.10781	.000
		25 years old to 44 years old	-.45165*	.10848	.000

*. The mean difference is significant at the 0.05 level.

Table 27: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
PU_Mean	Between Groups	10.753	2	5.376	9.409	.000
	Within Groups	194.267	340	.571		

	Total	205.020	342			
PEOU_Mean	Between Groups	17.136	2	8.568	12.950	.000
	Within Groups	224.959	340	.662		
	Total	242.095	342			
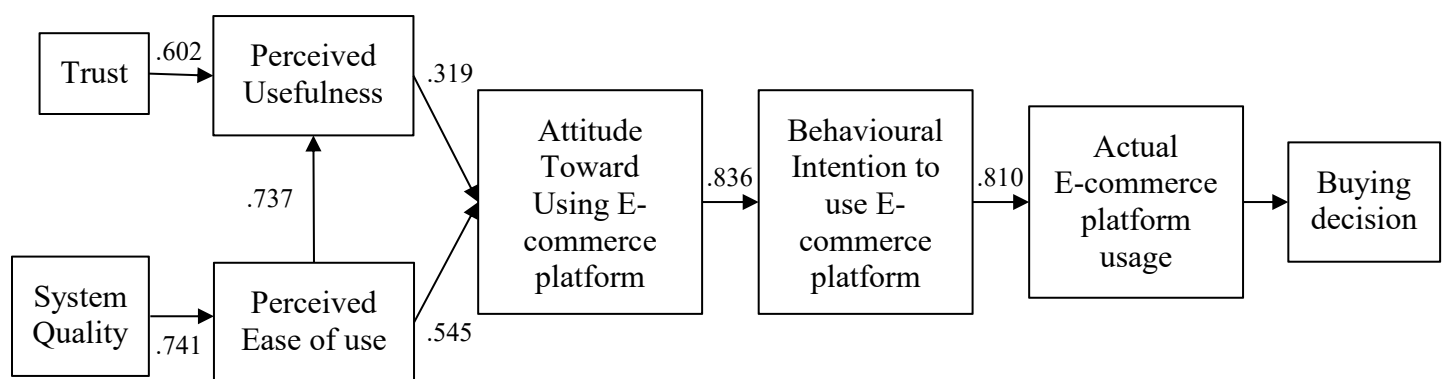
4.7 Theoretical framework with beta value

Figure 4: Conceptual Framework with beta value

4.8 Summary

In short, the findings of descriptive analysis, reliability test, regression analysis and ANOVA analysis by using SPSS version 25.0.0 software were analysed and interpreted in this chapter. All variables demonstrated perfect internal consistency based on the Conbrach's alpha values in the reliability test. Moreover, all hypotheses show positivity effects according to regression analysis.

CHAPTER 5

5.1 Introduction

In this chapter, there will be an in depth discussion which include implications, limitations and recommendations by referring to the findings of the study. A summary is included to conclude all the key points supported with concise explanations.

5.2 The Influence of Consumer's Trust and System Quality of E-commerce platforms toward the Buying Decisions

On the basis of chapter 1, the seven hypotheses were analysed in order to address the first and second research questions. The first research question is to determine whether consumer trust in E-commerce would have an impact on the usage of the service. The second question is whether the E-commerce platforms use would be influenced by the quality of the E-commerce system. These two study issues have a significant impact on both determinants. To our knowledge, these two factors have not previously been explored by other academics in relation to the influence of purchasing decisions on E-commerce platforms. As a result, this research is notable because it is the first of its kind to be conducted.

H1: Consumers' trust towards E-commerce platforms positively influence perceived usefulness of E-commerce platforms.

According to the findings in Chapter 4, hypothesis 1 indicates that consumer trust in E-commerce platforms is a significantly predicted perceived usefulness of the platforms. This is reinforced by a study in the E-commerce field conducted by Liao et al. (2006), in which their research could support our research in that it uses TAM to determine the relationship between consumers' trust and perceived usefulness. As a result, according to the findings of

their research, perceived usefulness will have an impact on consumer trust, which is similar to the findings of this research.

H2: System quality of E-commerce platforms positively influence perceived ease of use of E-commerce platforms.

There is a positive relationship between system quality and perceived ease of use of the E-commerce platforms which were supported by Lee et al. (2017). While their study is centred on a food delivery application, it is also considered to be one of the E-commerce platforms. However, there is a similarity between these two studies, which is that the system quality is examined as one of the variables in the research. It was discovered by Lee et al. (2017) that there is a positive relationship between system quality and perceived ease of use. This is because when a system can be utilised effortlessly and without concern, the customer would predict that it is easy to use. As a result, their research reveals that the perceived ease of use might be influenced by the quality of the system in question.

H3: Perceived usefulness of E-commerce platforms positively influence attitude toward use of E-commerce platforms.

Hypothesis 3 indicates that perceived usefulness significantly predicted attitudes toward the use of E-commerce platforms. It was supported by Wu and Wang (2005). However, despite the fact that their study is more focused on mobile commerce platforms than E-commerce platforms, the two studies have one thing in common: TAM is used to determine whether the public accepts a particular commerce platform of interest. Consequently, their research indicates that attitudes toward using E-commerce platforms, which are equivalent to the attitudes found in this research, will have an impact on perceived usefulness.

H4: Perceived ease of use towards E-commerce platforms positively influence attitude toward using E-commerce platforms.

Based on the results in chapter 4, hypothesis 4 shows that perceived ease of use has significantly predicted attitudes toward using E-commerce platforms. Moreover, the research results of Kanchanatanee et al. (2014) were supportive. Despite the fact that the study's data gathering was weighted towards Thailand rather than Malaysia, the two studies had the similar theme: both used the TAM to determine public acceptance to use the E-commerce platforms of interest in their research. This means that attitudes toward using E-commerce platforms, such as those discovered in this study, would be positively influenced by perceived ease of use, according to the researchers.

H5: Perceived ease of use towards E-commerce platforms positively influence perceived usefulness of E-commerce platforms.

There is a positive relationship between perceived ease of use and perceived usefulness in E-commerce platforms. This is supported by Pavlou (2003) as the study states that both perceived ease of use and perceived usefulness have a significant impact on consumer behaviour, which may help to explain their willingness to accept E-commerce. Due to the fact that Pavlou (2003) examined consumers' acceptance of E-commerce, his findings were similar to those of this study, which employed TAM to examine the relationship between perceived ease of use and perceived usefulness in E-commerce platforms. Consequently, the perceived usefulness of E-commerce platforms will be affected by perceived ease of use, according to the findings of this research.

H6: Attitude towards using E-commerce platforms positively influence behavioural intention to use by platform users.

According to the findings, there is a positive relationship between attitude toward using E-commerce platforms and behavioral intention to use the platforms. This is supported by Yeo et al. (2017). Their research is similar to this study in that it focuses on the customer experience, attitude, and behavioural intention of the consumer. Furthermore, based on their research findings, it has been shown that individual's attitudes toward the platforms, as well as their behavioural intention of making repeat purchases, would gradually change as a result of their experience with the platforms. Thus, the behavioral intention of using the E-commerce platforms will be positively influenced by the attitude towards using the E-commerce platforms.

H7: Behavioural intention to use E-commerce platforms positively influence actual E-commerce platforms use.

Hypothesis 7 indicates that behavioral intention to use E-commerce platforms is a significantly predicted actual E-commerce use. In support of this, Vărzaru et al. (2021) conducted a study in the field of E-commerce, in which their research is complementary to this study in that it utilizes TAM to determine the relationship between behavioural intention to use and actual E-commerce use. This will have an impact on actual E-commerce platforms use, according to the findings of their research, which is similar to the findings of this research. As a result, behavioural intention to use E-commerce platforms will have an impact on actual E-commerce platforms use, according to the findings of their research.

5.3 E-commerce platforms use influence the buying decisions of consumers

New technology and Internet access enabled individuals to keep performing social and professional functions while also influencing the buying decision of consumers (Cheba et al., 2021). Especially during Covid-19, the number of E-commerce platforms has also expanded. As a result of the benefits of building E-commerce platforms, it is the availability around the clock, no geographical limits, and better contact with the end user, particularly when using indirect distribution methods (Belvedere et al., 2021). Moreover, a higher level of satisfaction improves the likelihood of repurchase (Tandonet al., 2020). In this research, it also showed that actual E-commerce use had a favourable effect on buying decisions. Moreover, according to Šneiderienė and Beniušis (2022), consumers expect faster and higher-quality services, therefore organisations must pay more attention to them, and this attention should be focused on customer relationship management. Thus, it is important to remember that investing in customer interfaces on the website and improving service quality while considering user needs boosts customer satisfaction, which helps to the growth of loyalty.

5.4 The differences in perceived usefulness and perceived ease of use by age group

Perceived ease of use is a person's belief that employing information technology will minimise effort and make jobs easier while perceived usefulness can be described as an individual's belief that technology improves their transactional productivity (Olivia & Marchyta, 2022). In this research, it showed a highly different in perceived usefulness and perceived ease of use of the E-commerce platforms in the age group 45 years old and above compared to the remaining age groups 24 years old and below and 25 years old to 44 years old. Although there are several journals like Shang and Wu (2017), and PHUONG et al. (2020) proven that the perceived ease of use has a direct positive influence on the intention to

continue using the product and customer pleasure, as an intervening variable, effects perceived usefulness indirectly and positively, showed similar results with this research, but there is still a need for further research when it relates to the age group. This is because all adult age groups and educated people are turning away from traditional buying and toward online shopping (Manoj et al., 2022). Moreover, some of the studies indicate that there is a difference between age groups but the age range of the studies is not consistent. For example, Mondego and Gide's (2020) assertion that younger populations who are more tech-savvy are more likely to use digital payment technologies than older populations in society. Hence, it still needs to be further discussed for this context.

5.5 Implications

5.5.1 Theoretical Implications

The conceptual framework of this research could be considered as a framework extension which contributes to the research of related fields. The expansion of the TAM framework makes it possible for other researchers to conduct additional research on a topic similar to that of this study. Additionally, the researchers are able to apply this research as their reference study that has been socially experimentally validated with the different extensions of variables in the TAM framework. In this research, the theoretical framework had been extended with three variables: Consumers' trust, System quality and Buying decision. There are a lot of studies implementing the TAM framework, but these studies are more likely to research on perceived ease of use and perceived usefulness with the original framework, such as Vahdat et al. (2020), and Islami et al. (2021). The implementation of system quality as the extended variables for the TAM framework in this research is considered as the second contribution in terms of theoretical implications. To the best of the researchers' knowledge, earlier studies on the influence of system quality of E-commerce

platforms on purchasing decisions are limited. Research by Young Kim and Kim (2004), and Ha and Stoel (2009), for example, utilised TAM framework in-depth research on system quality, site design and e-shopping quality instead of investigating how system quality impacts purchase decisions. A lack of research into the use of TAM theory to examine the impact of system quality on purchasing decisions could be shown by this. As a result, this research will make a contribution to relevant fields and will encourage scholars to conduct similar studies in the future.

5.5.2 Practical Implications

Public relations practitioners can benefit from this study's findings, which can be used to craft more effective messages for their clients' audiences. Instead of directly selling products or services to customers, the primary purpose of a public relations expert is to build and maintain positive brand perceptions that persuade customers to make purchasing decisions on their behalf. According to this research, consumer trust has been found to influence the utilisation of new technologies, and consequently the purchasing decision. As public relations practitioners, they may be able to develop public relations messages that are based on this evidence and are beneficial to the organisation. For example, the XYZ firm has recently brought a brand-new product to the market that was previously unheard of in the industry. The general public is having a wait-and-see approach about this brand-new product that has yet to hit the market. At this point, public relations practitioners can take advantage of the public's trust in XYZ to develop a public relations message that brings public attention to the new product, such as the benefits of promoting the new product to the market and the general public, and after receiving public feedback on the new product. Following the rush of interest, additional information about the device, including a list price, was made available to the general public. If a company does not have the trust of the general public or of consumers,

it must first develop a strategy for gaining that trust. The reason for this is that customers' willingness to accept and use a product is influenced by the degree to which they have trust in the capability of the organisation, as evidenced in this research.

Besides, the current research could help public relations practitioners to target the potential audience accurately. This is supported by the age groups which have significant differences on the mean result of perceived usefulness and perceived ease of use. Public relations practitioners can refer to the characteristics of different age groups by knowing their concerns to tailor their preference, such as actual shoe product images with multiple types available on screen versus conceal from screen; some might consider the present value of product image or reviews before purchase. Products and services in the market are always needed for exposure through communication before they are sold and consumed. It is needed for research before launching in terms of usability, target audience and performance that are workable for everyone. For instance, the public relations practitioners can utilize the strategies of collaborating with favourite celebrities or influencers, discount promotion and offering brand loyalty programs for customers to attract and retain the youngest ages purchase online. When the youngest individuals are enticed by these motivations, they would roam on the online purchase platforms frequently and subsequently enhance the familiarity on those platforms. During the process of online shopping, individuals will gradually discover the products and services offered by merchants through two-way communication with them, and then make purchasing decisions, relying on these E-commerce platforms to process their payments and ensure the security of their transactions. Needless to say, this is also applicable for the other age groups in leading to the final purchase decision. As a result, consumer trust will be increased when they gain a higher conformable level during the two-way communication with the merchants. Communication is critical to build consumer trust, followed by the perceived ease of use of the system; failure to do so would result in the

abandonment of the usage of an E-commerce platform. In other words, the consideration of products offered on online platforms, trust and system usefulness perception should tie with the concerns of age groups in order to help in designing the most suitable business plan and strategy.

5.6 Limitations

There are a range of external elements that can impact E-commerce purchasers' decisions; however, in this study, it focuses on only two determinants: trust and the quality of the system being used. Customers' purchasing decisions can be influenced by various external factors, which can be explored using the TAM approach. It has the potential to have an impact on future research since it narrows their scope, and this is an issue that needs to be addressed. For this, it is critical to encourage academics to explore other external issues in the future.

Another limitation of this study is the voluntariness of completing the survey. The restrictions and problems associated with adopting online data collection might also be technical in nature. External technical issues may develop as a result of the Internet service supplied, or respondents may lack the ability or motivation to participate in online computer surveys. This is because respondents can engage at their leisure, choosing when and when to finish the survey. This freedom granted to participants can have a two-sided effect. The participants are free to answer the questions, however, it can be detrimental if respondents postpone filling out the questionnaire and often unwillingly and forget about it (Lefever et al., 2007). Thus, it will indirectly cause delays when collecting the data.

5.7 Recommendations

For the limitation on determinants, given the expanding number of E-commerce platforms being utilised today, future researchers will need to take into account other variables (e.g., playfulness, habits, and utility) that may have an impact on important components of TAM in order to expand future research. Furthermore, this sort of research can assist more merchants or institutions in promoting their E-commerce businesses in order to raise the overall level of the business.

Instead, to overcome the limitation of voluntariness of completing the survey, approaching the respondents by follow up and or repeating the post is recommended. A follow-up call to remind respondents to participate after they have forgotten to respond to the original request for survey participation has been shown to be successful in raising response in off-line data gathering (Göritz & Crutzen, 2011). A meta-analysis determined an odds ratio (OR) of 1.44, indicating that a reminder increases the ratio of replies to refusers by 44 percent (Edwards et al., 2007). Reminders may be beneficial because the effort made by a researcher to recall potential respondents raises the perceived relevance of the study (Wensing et al., 1999). Furthermore, according to ease-of-processing theory, repeated exposure to a stimulus leaves traces in long-term memory, and if one is exposed to a comparable stimulus again, this stimulus will be processed more smoothly (Whittlesea et al., 1990). Thus, the simplicity of processing as a result of receiving a reminder would lead to people being more likely to participate.

5.8 Summary

The research was conducted by adapting with the added variables of consumer trust and system quality in the Technology Acceptance Model (TAM) framework. The final result shows all hypotheses were supported, however there are still lacking other similar previous studies to consolidate the findings explanation, especially limited on the system quality,

therefore it is still new to be discovered by other researchers. The number of variables is encouraged to include more, and to ask for more survey participants for the contribution of the research data. Throughout the research, the communities from public relations within the communication field can gain the maximum benefit because the findings could assist them to expand their coverage of messages from its organization reaching to consumers and analyse audiences according to different ages for the impact of online purchase platform adoption.

REFERENCES

Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it? *Indian Journal of Medical Specialities, 4*(2). https://doi.org/10.7713/ijms.2013.0032

Age Range by Generation. (2021, October 14). Beresford Research. https://www.beresfordresearch.com/age-range-by-generation

Ahamed, B., & Islam, S. M. M. (2016). Customers' attitude towards E-commerce in Bangladesh: An empirical study on some selected B2C E-commerce sites. *Journal of Business and Technology (Dhaka), 10*(1). 37. 10.3329/jbt.v10i1.26905

Ahn, T., Ryu, S., & Han, I. (2004). The impact of the online and offline features on the user acceptance of Internet shopping malls. *Electronic Commerce Research and Applications*, *3*(4), 405–420. https://doi.org/10.1016/j.elerap.2004.05.001

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-t

Ajzen, I., & Fishbein, M. (2000). Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European Review of Social Psychology, 11*(1), 1-33. https://doi.org/10.1080/14792779943000116

Akbar, S., & James, T. P. (2014). Consumers' attitude towards online shopping: Factors influencing employees of crazy domains to shop online. *Journal of Management and Marketing Research, 14*. 1-11. https://www.aabri.com/manuscripts/131640.pdf

Al-Debei, M. M., Akroush, M. N., and Ashouri, M. I. (2015). Consumer attitudes towards online shopping: The effects of trust, perceived benefits and perceived web quality.

Internet Research, 25(5), 707-733. https://www.emerald.com/insight/content/doi/10.1108/IntR-05-2014-0146/full/html

Alhaimer, R. (2021). Fluctuating attitudes and behaviors of customers toward online shopping in times of emergency: The case of Kuwait during the COVID-19 pandemic. *Journal of Internet Commerce*, 1–26. https://doi.org/10.1080/15332861.2021.1882758

Alharbi, S., & Drew, S. (2014). Using the technology acceptance model in understanding academics' behavioural intention to use learning management systems. *International Journal of Advanced Computer Science and Applications (IJACSA), 5*(1). 10.14569/IJACSA.2014.050120

Ali, S., Khalid, N., Javed, H. M. U., & Islam, D. M. Z. (2021). Consumer adoption of online food delivery ordering (OFDO) services in Pakistan: The impact of the COVID 19 pandemic situation. *Journal of Open Innovation: Technology, Market, and Complexity, 7*, 10. 10.3390/joitmc7010010

Allen, M., Titsworth, S. B., & Hunt, S. K. (2009). *Quantitative Research in Communication* (1st ed.) [E-book]. SAGE Publications, Inc. https://doi.org/10.4135/9781452274881

Al-Mamary, Y. H., Shamsuddin, A., & Aziati, N. (2014). The relationship between system quality, information quality, and organizational performance. *International Journal of Knowledge and Research in Management & E-commerce, 4*(3). https://www.researchgate.net/profile/Yaser-Hasan-Salem-Al-Mamary-d-yasr-hsn-almmry/publication/269463861_The_Relationship_between_System_Quality_Information_Quality_and_Organizational_Performance/links/5530f5380cf27acb0de8b002

/The-Relationship-between-System-Quality-Information-Quality-and-Organizational-Performance.pdf

Alsabawy, A. Y., Cater-Steel, A., & Soar, J. (2016). Determinants of perceived usefulness of e-learning systems. *Computers in Human Behavior*, *64*, 843–858. https://doi.org/10.1016/j.chb.2016.07.065

Alsamydai, M. J. (2014). Adaptation of the technology acceptance model (TAM) to the use of mobile banking services. *International Review of Management and Business Research*, *3*(4), 2042. https://www.irmbrjournal.com/papers/1421123221.pdf

Ardiansah, M. N., Chariri, A., Rahardja, S., & Udin, U. (2020). The effect of electronic payments security on E-commerce consumer perception: An extended model of technology acceptance. *Management Science Letters,* 1473-1480. https://doi.org/10.5267/j.msl.2019.12.020

Ariffin, I., Yajid, M. S. A., and Azam, F. (2020). Impact of trust and perceived risk on online purchasing of medicaments. *System Review Pharmacy, 11*(1), 1144 1156. https://www.sysrevpharm.org/articles/impact-of-trust-and-perceived-risk-on-online-purchasing-of-medicaments.pdf

Ashraf, A. R., Thongpapanl, N. T., & Auh, S. (2014). The application of the technology acceptance model under different cultural contexts: The case of online shopping adoption. *Journal of International Marketing*, *22*(3), 68–93. https://doi.org/10.1509/jim.14.0065

Azahari, A. Z. M., & Nayan, S. M. (2020). Role of trust towards business success. *Journal of Undergraduate Social Science & Technology. http://abrn.asia/ojs/index.php/JUSST/article/view/65/52*

Badwan, J. J., Al Shobaki, M. J., Naser, S. S. A., & Amuna, Y. M. A. (2017). Adopting technology for customer relationship management in higher educational institutions. *International Journal of Engineering and Information Systems, 1*(1), 20–28. http://dstore.alazhar.edu.ps/xmlui/handle/ 123456789/364

Bakar, M. S. A., & Bidin, R. (2014). Technology acceptance and purchase intention towards movie mobile advertising among youth in Malaysia. *Procedia - Social and Behavioral Sciences, 130*. 558 – 567. https://doi.org/10.1016/j.sbspro.2014.04.065

Bakewell, C., Mitchell,V. W., & Rothwell, M.. (2006). UK Generation Y malefashion consciousness. *J.Fash.Mark.Manag, 10*(2). 169–180. https://www.researchgate.net/publication/37795825_UK_Generation_Y_male_fashion_consciousness

Bakker, A., Wijers, M., Jonker, V., & Akkerman, S. (2011). The use, nature and purposes of measurement in intermediate-level occupations. *ZDM, 43*(5), 737–746. https://doi.org/10.1007/s11858-011-0328-3

Bala, J. (2016). Contribution of SPSS in social sciences research. *International Journal of Advanced Research in Computer Science, 7*(6). https://www.proquest.com/openview/82a2deb2d4622d800642515e05837cfd/1?pq-origsite=gscholar&cbl=1606379

Bansal, Y. (2015, April 30). *Influence of Age on Buyer Behaviour*. Academike. https://www.lawctopus.com/academike/influence-of-age-on-buyer-behaviour/

Bartlett, J. (2019). *Introduction to sample size calculation using G* Power*. https://osf.io/zqphw/download

Belvedere, V., Martinelli, E. M., & Tunisini, A. (2021). Getting the most from E-commerce in the context of omnichannel strategies. *Italian Journal of Marketing*, *2021*(4), 331-349. https://doi.org/10.1007/s43039-021-00037-6

Benassi, P. (1999). TRUSTe: An online privacy seal program. *Communications of the ACM*, *42*(2), 56–59. https://doi.org/10.1145/293411.293461

Berndt, A. E. (2020). Sampling methods. *Journal of Human Lactation, 36*(2), 224-226. https://doi.org/10.1177/0890334420906850

Bhasin, H. (2019, July 31). *11 Most important features of ecommerce*. Marketing91. https://www.marketing91.com/features-of-ecommerce/

Bhatti, A., Akram, H., Basit, H. M., Khan, A. U., Naqvi, S. M. R., & Bilal, M. (2020). E-commerce trends during COVID-19 pandemic. *International Journal of Future Generation Communication and Networking.* https://www.researchgate.net/profile/Ahmed-Khan-67/publication/342736799_E-commerce_trends_during_COVID-19_Pandemic/links/5f04603c458515505091c291/E-commerce-trends-during-COVID-19-Pandemic.pdf

Bhatti, N., Bouch, A., & Kuchinsky, A. (2000). Integrating user-perceived quality into web server design. *Computer Networks,* 33(1-6). 1-16. https://www.researchgate.net/publication/222683534_Integrating_user-perceived_quality_into_Web_server_design

Bigne, J. E., Mattila, A. S., & Andreu, L. (2007). The impact of experiential consumption cognitions and emotions on behavioral intentions. *Journal of Services Marketing, 22*(4), 303–315. 10.1108/08876040810881704

Bloomenthal, A. (2021, September 16). *Electronic commerce (E-commerce)*. Investopedia. https://www.investopedia.com/terms/e/ecommerce.asp

Bonett, D. G., & Wright, T. A. (2014). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior*, *36*(1), 3–15. https://doi.org/10.1002/job.1960

Bridging online and offline retailing as Malaysia moves beyond MCO. (2021, April 9). The Star. https://www.thestar.com.my/business/business-news/2021/04/09/bridging-online-and-offline-retailing-as-malaysia-moves-beyond-mco

Broutsou, A., & Fitsilis, P. (2012). Online trust: The influence of perceived company's reputation on consumers' trust and the effects of trust on intention for online transactions. *Journal of Service Science and Management*, *05*(04), 365–372. https://doi.org/10.4236/jssm.2012.54043

Cao, M., Zhang, Q. Y., & Seydel, J. (2005). B2C e-commerce web site quality: An empirical examination. *Industrial Management & Data Systems, 105*(5), 645–661. 10.1108/02635570510600000

ÇElik, H. E., & Yılmaz, V. (2011). Extending the technology acceptance model for adoption of e-shopping by consumers in Turkey. *Journal of Electronic Commerce Research*, *12*(2), 152–164. https://www.researchgate.net/publication/285928878

Chang, J., & Samuel, N. (2004). Internet shopper demographics and buying behaviour in Australia. *Journal of American Academy of Business, 5*(1/2), 171-176. https://www.researchgate.net/publication/258423540_Internet_Shopper_Demographics_and_Buying_Behaviour_in_Australia

Cheba, K., Kiba-Janiak, M., Baraniecka, A., & Kołakowski, T. (2021). Impact of external factors on E-commerce market in cities and its implications on environment. *Sustainable Cities and Society*, *72*, 103032. https://doi.org/10.1016/j.scs.2021.103032

Cheema, U., Rizwan, R., Jalal, R., Durrani, F., & Sohail, N. (2013). The trend of online shopping in 21st century: Impact of enjoyment in TAM model. *Asian Journal of Empirical Research, 3*(2), 131-141. https://www.aessweb.com/pdf-files/131-141.pdf

Chen, L., Gillenson, M., & Sherrell, D. (2002). Enticing online consumers: An extended technology acceptance perspective. *Information & Management, 39*(8), 705-719. https://doi.org/10.1016/S0378-7206(01)00127-6

Chen, M.Y., & Ching, I. T. (2013). A comprehensive model of the effects of online store image on purchase intention in an E-commerce environment. *Electronic Commerce Research, 13*(1), 1-23. https://doi.org/10.1007/s10660-013-9104-5

Chen, S. H., & Lee, K. P. (2008). The role of personality traits and perceived values in persuasion: an Elaboration Likelihood Model perspective on online shopping. *Social Behavior and Personality: An International Journal*, *36*(10), 1379–1399. https://doi.org/10.2224/sbp.2008.36.10.1379

Childers, T., Carr, C., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing, 77*(4). 511-535. https://doi.org/10.1016/S0022-4359(01)00056-2

Chiu, C., Chang, C., Cheng, H., & Fang, Y. (2009). Determinants of customer repurchase intention in online shopping. *Online Information Review*, *33*(4), 761–784. https://doi.org/10.1108/14684520910985710

Cho, E., & Son, J. (2019). The effect of social connectedness on consumer adoption of social commerce in apparel shopping. *Fashion and Textiles, 6*(1). https://doi.org/10.1186/s40691-019-0171-7

Chua, A. P. H., Khatibi, A., & Ismail, H. B. (2006). E-commerce: A study on online shopping in Malaysia. *Journal of Social Sciences*, *13*(3), 231–242. https://doi.org/10.1080/09718923.2006.11892554

Chung, J. E., Park, N., Wang, H., Fulk, J., & McLaughlin, M. (2010). Age differences in perceptions of online community participation among non-users: An extension of the technology acceptance model. *Computers in Human Behavior, 26*(6), 1674-1684. https://doi.org/10.1016/j.chb.2010.06.016

Chuttur, M. (2009). Overview of the technology acceptance model: Origins, developments and future directions. *Sprouts: Working Paper on Information System, 9*(37). http://aisel.aisnet.org/sprouts_all/290

Connelly, L. M. (2008, December). *Pilot Studies*. Medsurg Nursing. https://www.proquest.com/openview/553d762f3224a627486acfbf1a7320e0/1?pq-origsite=gscholar&cbl=30764

Connelly, L. M. (2016). Cross-sectional survey research. *Medsurg Nursing, 25*(5), 369-370. http://www.medsurgnursing.net/archives/16sep/369.pdf

Coppel, J. (2000). E-commerce: Impacts and policy challenges. *OECD Economics Department Working Papers*, No. 252, OECD Publishing, Paris, https://doi.org/10.1787/801315684632.

COVID-19 accelerates E-commerce growth in Malaysia, says Global Data. (2020, September 8). GlobalData. https://www.globaldata.com/covid-19-accelerates-E-commerce-growth-malaysia-says-globaldata/

Cui, Y., Mou, J., Cohen, J., & Liu, Y. P. (2019). Understanding information system success model and valence framework in sellers' acceptance of cross-border E-commerce: A sequential multi-method approach. *Electronic Commerce Research*, *19*(4), 885–914. https://doi.org/10.1007/s10660-019-09331-0

d_approach_3rd_European_Edition

Dachyar, M., & Banjarnahor, L. (2017). Factors influencing purchase intention towards consumer-to-consumer E-commerce. *Intangible Capital*, *13*(5), 948. https://doi.org/10.3926/ic.1119

Dasan, S. R., & Chung, J. F. (2015). Relationship between technology acceptance model (TAM) and online shopping adoption: A case study in Berjaya University College of Hospitality. *Journal of Services & Management, 3*. 37-50. https://www.researchgate.net/publication/335233943_RELATIONSHIP_BETWEEN_TECHNOLOGY_ACCEPTANCE_MODEL_TAM_AND_ONLINE_SHOPPING_ADOPTION_A_CASE_STUDY_IN_BERJAYA_UNIVERSITY_COLLEGE_OF_HOSPITALITY

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319. https://doi.org/10.2307/249008

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace1. *Journal of Applied Social Psychology*, *22*(14), 1111–1132. https://doi.org/10.1111/j.1559-1816.1992.tb00945.x

de LAND, P. N., & CHASE, W. W. (1990). Statistics notebook. *Optometry and Vision Science*, *67*(2), 155. https://doi.org/10.1097/00006324-199002000-00021

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean Model of information systems success: A ten-year update. *Journal of Management Information Systems*, *19*(4), 9–30. https://doi.org/10.1080/07421222.2003.11045748

DeLone, W. H., & McLean, E. R. (2004a). Measuring E-commerce success: Applying the DeLone & McLean information systems success model. *International Journal of Electronic Commerce*, *9*(1), 31–47. https://doi.org/10.1080/10864415.2004.11044317

DeLone, W. H., & McLean, E. R. (2014). The DeLone and McLean Model of information systems success: A ten-year update. *Journal of Management Information Systems.* https://www.tandfonline.com/doi/abs/10.1080/07421222.2003.11045748

Dishaw, M. T., & Strong, D. M. (1999). Extending the technology acceptance model with task-technology fit constructs. *Information and Management, 36*(1), 9–21. https://doi.org/10.1016/S0378-7206(98)00101-3

Edwards, P. J., Roberts, I. G., Clarke, M. J., DiGuiseppi, C., Wentz, R., Kwan, I., Cooper, R., Felix, L., & Pratap, S. (2007). Methods to increase response rates to postal questionnaires. *Cochrane Database of Systematic Reviews.* https://doi.org/10.1002/14651858.mr000008.pub3

Falahat, M., Lee, Y. Y., Foo, Y. C., & Chia, C. E. (2019). A model for consumer trust in E-commerce. *Asian Academy of Management Journal*, *24*(Supp. 2), 93–109. https://doi.org/10.21315/aamj2019.24.s2.7

Famoye, F. (2010). On the bivariate negative binomial regression model. *Journal of Applied Statistics, 37*(6), 969-981. https://doi.org/10.1080/02664760902984618

Fan, M. Y., Ammah, V., Dakhan, S. A., & Liu, R. (2021). Critical factors of reacquainting consumer trust in E-commerce. *Journal of Asian Finance, Economics and Business, 8*(3). 0561–0573.

Fang, Y. H., Chiu, C. M., & Wang, E. T. G. (2011). Understanding customers' satisfaction and repurchase intentions: an integration of IS success model trust. *Internet Research, 21*(4). 479-503. https://www.emerald.com/insight/content/doi/10.1108/10662241111158335/full/html

Faqih, K. M. (2011). Integrating perceived risk and trust with technology acceptance model: An empirical assessment of customers' acceptance of online shopping in Jordan. 2011 international conference on research and innovation in information systems. https://doi.org/10.1109/icriis.2011.6125686

FarajollahEsfahani, H., & Lafvat, M. M. (2016). Trust in e-business performance. *International Academic Journal of Psychology and Educational Studies*, *1*(3), 1–14. https://core.ac.uk/download/pdf/297843006.pdf

Faul, F., Erdfelder, E., Lang, A., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioural, and biomedical sciences. *Behaviour Research Methods, 39*(2), 175-191. https://doi.org/10.3758/BF03193146

Fedorko, I., Bacik, R., & Gavurova, B. (2018). Technology acceptance model in E-commerce segment. *Management & Marketing*, *13*(4), 1242–1256. https://doi.org/10.2478/mmcks-2018-0034

Folkman, J. (2020). *How Trust Affects Your Ability To Communicate And How To Fix It*. Forbes. https://www.forbes.com/sites/joefolkman/2020/04/07/how-trust-effects-your-ability-to-communicate-and-how-to-fix-it/?sh=7d3888e8acae

Franco, C. E., & BulomineRegi, S. (2016). Advantages and challenges of E-commerce customers and businesses: In Indian Perspective. *International Journal of Research - GRANTHAALAYAH*, *4*(3SE), 7–13. https://doi.org/10.29121/granthaalayah.v4.i3se.2016.2771

Fung, R. K. K., & Lee, M. K. O. (1999). Ec-trust (trust in electronic commerce): Exploring the antecedent factors. *AMCIS 1999 Proceedings*. 179. https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1536&context=amcis1999

Galhotra, B., & Dewan, A. (2020). Impact of COVID-19 on digital platforms and change in E-commerce shopping trends. *2020 Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC)*. https://doi.org/10.1109/i-smac49090.2020.9243379

Galib, M. H., Hammou, K. A., & Steiger, J. (2018). Predicting Consumer Behavior: An Extension of Technology Acceptance Model. *International Journal of Marketing Studies*, *10*(3), 73. https://doi.org/10.5539/ijms.v10n3p73

Gefen, D. (2000). E-commerce: the role of familiarity and trust. *Omega*, *28*(6), 725–737. https://doi.org/10.1016/s0305-0483(00)00021-9

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, *27*(1), 51. https://doi.org/10.2307/30036519

George, D., & Mallery, P. (2021). IBM SPSS statistics processes for pc. *IBM SPSS Statistics 27 Step by Step,* 8-25. https://doi.org/10.4324/9781003205333-2

Gómez-Díaz, J. A. (2016). Reviewing a consumer decision making model in online purchasing: An ex-post-fact study with a Colombian sample. *Avances en Psicología Latinoamericana, 34*(2), 273-292. http://dx.doi.org/10.12804/apl34.2.2016.05

Gomila, R. (2021). Logistic or linear? Estimating causal effects of experimental treatments on binary outcomes using regression analysis. *Journal of Experimental Psychology: General, 150*(4), 700-709. https://doi.org/10.1037/xge0000920

Goodhue, D., & Thompson, R. L. (1995). Task-technology fit and individual performance. *MIS Quarterly, 19*, 213-236. http://dx.doi.org/10.2307/249689

Göritz, A. S., & Crutzen, R. (2011). Reminders in web-based data collection. *American journal of evaluation*, *33*(2), 240-250. https://doi.org/10.1177/1098214011421956

Gorla, N., Somers, T. M., & Wong, B. (2010). Organizational impact of system quality, information quality, and service quality. *The Journal of Strategic Information Systems*, *19*(3), 207–228. https://doi.org/10.1016/j.jsis.2010.05.001

Goundar, S., Lal, K., Chand, A., & Vyas, P. (2021). Consumer perception of electronic commerce – incorporating trust and risk with the technology acceptance model. *E-Services*. https://doi.org/10.5772/intechopen.98419

Gu, S. Y., Slusarczyk, B., Hajizada, S., Kovalyova, I., & Sakhbieva, A. (2021). Impact of the COVID-19 pandemic on online consumer purchasing behavior. *Journal of Theoretical and Applied Electronic Commerce Research,* 16. 2263-2281. https://doi.org/10.3390/jtaer16060125

Gullikson, S., Blades, R., Bragdon, M., McKibbon, S., Sparling, M., & Toms, E. G. (1999). The impact of information architecture on academic web site usability. *The Electronic Library, 17*(5). 293 304. https://www.researchgate.net/publication/220677443_The_impact_of_information_a rchitecture_on_academic_Web_site_usability

Ha, S., & Stoel, L. (2009). Consumer E-shopping acceptance: Antecedents in a technology acceptance model. Journal of business research, 62(5), 565-571. https://doi.org/10.1016/j.jbusres.2008.06.016

Handley, H. (2017, January 6). *An Introduction to E-commerce in Malaysia*. ASEAN Business News. https://www.aseanbriefing.com/news/an-introduction-to-E-commerce-in-malaysia/

Hartwick, J., & Barki, H. (1994). Explaining the role of user participation in information system use. *Management Science, 40*(4), 440–465. https://doi.org/10.1287/mnsc.40.4.440

Hasat, M. W., Hoque, A., Shikha, F. A., Anwar, M., Abdul Hamid, A. B., & Huam, H. T. (2020). The impacts of coronavirus (Covid-19) on e-business in Malaysia. *Asian Journal of Multidisciplinary Studies, 3*(1). https://asianjournal.org/online/index.php/ajms/article/view/219/100

Heaney, J. G. (2007). Generations X and Y's internet banking usage in Australia. *Journal of Financial Services Marketing, 11*(3), 196–210. https://doi.org/10.1057/palgrave.fsm.4760052

Hill, R. J., Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention and behavior: An introduction to theory and research. *Contemporary Sociology*, *6*(2), 244. https://doi.org/10.2307/2065853

Himmel, B. (2008). Different strokes for different generations. *Rental Product News*, *30*(7), 42-46. https://doi.org/10.1016/j.jretconser.2016.04.015

Hoffman, D. L., Novak, T. P., & Peralta, M. (1999b). Building consumer trust online. *Communications of the ACM*, *42*(4), 80–85. https://doi.org/10.1145/299157.299175

Hsu, M. H., Chuang, L. W., and Hsu, C. S. (2014). Understanding online shopping intention: the roles of four types of trust and their antecedents. *Internet Research, 24*(3), 332-352. https://www.emerald.com/insight/content/doi/10.1108/IntR-01-2013-0007/full/html

https://www.researchgate.net/publication/313093161_Marketing_Research_an_applie

Huizingh, E. (2000). The content and design of web sites: an empirical study. *Information & Management, 37*(3). 123-34. https://doi.org/10.1016/S0378-7206(99)00044-0

Hung, H. Y., Liang, T. P., & Chang, C. M. (2005). A meta-analysis of empirical research using TAM. *Journal of Information Management, 12*(4). 211–234. 10.1080/09720510.2011.10701561

Hussein, Z. (2016). Assessing the purchase intention of Malaysian generation Y in mobile shopping. *IJASOS- International E-Journal of Advances in Social Sciences, 11*(5). http://ijasos.ocerintjournals.org/tr/download/article-file/232130

Hwang, D., Preiser-Houy, L., & Rong, A. S. (2012). A comprehensive framework for online store functionalities. *Issues In Information Systems*, *13*(2), 336–345. https://doi.org/10.48009/2_iis_2012_336-345

IBM. (2021). *What's New in SPSS Statistics 28*. https://www.ibm.com/downloads/cas/DKA95AXM

Impact of Covid-19 on Malaysian E-commerce Consumers. (2021). VODUS. https://vodus.com/article/covid-19-mco-impact-on-malaysia-E-commerce

Indriani, I. A. D. (2016). Analysis the factors influence consumer buying decision on online shopping clothing for consumer in Manado. *Jurnal EMBA, 4*(1), 1166-1177. https://media.neliti.com/media/publications/2989-EN-analysis-the-factors-influence-consumer-buying-decision-on-online-shopping-cloth.pdf

Iriani, S. S., & Andjarwati, A. L. (2020). Analysis of perceived usefulness, perceived ease of usefulness, and perceived risk toward online shopping in the era of Covid-19 pandemic. *A multifaceted review journal in the field of pharmacy, 11*(12). 313-320. https://statik.unesa.ac.id/simia/uploads/file_artikel/file_artikel_e0af0e94-0c65-43ea-9f42-981e714e7c9b.pdf

Islami, M. M., Asdar, M., & Baumassepe, A. N. (2021, January). Analysis of perceived usefulness and perceived ease of use to the actual system usage through attitude using online guidance application. https://dx.doi.org/10.26487/hjbs.v3i1.410

Jackson, C. M., Chow, S., & Leitch, R. A. (1997). Toward an understanding of the behavioral intention to use an information system. *Decision Sciences, 28*(2), 357-389. https://doi.org/10.1111/j.1540-5915.1997.tb01315.x

Jamieson, S. (2004). Likert scales: How to (ab)use them. *Medical Education*, *38*(12), 1217 1218. https://doi.org/10.1111/j.1365-2929.2004.02012.x

Joo, J., & Sang, Y. (2013). Exploring Koreans' smartphone usage: An integrated model of the technology acceptance model and uses and gratifications theory. *Computers in Human Behavior*, *29*(6), 2512–2518. https://doi.org/10.1016/j.chb.2013.06.002

Joshi, A., Kale, S., Chandel, S., & Pal, D. (2015). Likert scale: Explored and explained. *British Journal of Applied Science & Technology*, *7*(4), 396–403. https://doi.org/10.9734/bjast/2015/14975

Kabir, M. A., Saidin, S. Z., & Ahmi, A. (2017). The influence of perceived usefulness and perceived ease of use on the continuous intention to use electronic collection system in Nigerian hospitals: A conceptual approach. *Asian Journal of Multidisciplinary Studies.* *5*(6). https://www.researchgate.net/publication/318018562_The_Influence_of_Perceived_ Usefulness_and_Perceived_Ease_of_Use_on_the_Continuous_Intention_to_Use_Ele ctronic_Collection_System_in_Nigerian_Hospitals_A_Conceptual_Approach

Kanchanatanee, K., Suwanno, N., & Jarernvongrayab, A. (2014). Effects of Attitude toward Using, Perceived Usefulness, Perceived Ease of Use and Perceived Compatibility on Intention to Use E-Marketing. *Journal of Management Research*, *6*(3), 1. https://doi.org/10.5296/jmr.v6i3.5573

Katawetawaraks, C., & Wang, C. L. (2011). Online shopper behavior: Influences of online shopping decision. *Asian Journal of Business Research*, *1*(2), 66–74. https://doi.org/10.14707/ajbr.110012

Kaushik, M., & Mathur, B. (2014). Data analysis of students marks with descriptive statistics. *International Journal on Recent and Innovation Trends in Computing and Communication,* *2*(5). https://www.researchgate.net/publication/293074171_Data_Analysis_of_Students_ Marks_with_Descriptive_Statistics

Keh, H. T., & Shieh, E. (2001). Online grocery retailing: Success factors and potential pitfalls. *Bus. Horiz, 44*. 73. https://doi.org/10.1016/S0007-6813(01)80050-1

Keisidou, E., Sarigiannidis, L., & Maditinos, D. (2011). Consumer characteristics and their effect on accepting online shopping, in the context of different product types. *Int. Journal of Business Science and Applied Management, 6*(2). https://www.researchgate.net/publication/215550465_Consumer_characteristics_and _their_effect_on_accepting_online_shopping_in_the_context_of_different_product_t ypes

Keswani, S., Singh, P., Singh, S., & Sharma, S. (2016). A study of adoption behavior for online shopping: An extension of tam model. *International Journal Advances in Social Science and Humanities, 4*(7), 11-22. https://www.researchgate.net/publication/331162357_A_Study_of_Adoption_Behavi or_for_Online_Shopping_An_Extension_of_Tam_Model

Khan, A. G. (2016). Electronic commerce: A study on benefits and challenges in an emerging economy. *Global Journal of Management and Business Research: B Economics and Commerce.* https://globaljournals.org/GJMBR_Volume16/3-Electronic-Commerce-A-Study.pdf

Khurana, A. (2019, November 20). *Is E-commerce Right for Your Business? Check the Pros and Cons*. The Balance Small Business. https://www.thebalancesmb.com/ecommerce-pros-and-cons-1141609

Kiew, C. C., Abu Hasan, Z. R., & Abu Hasan, N. (2021). Factors influencing consumers in using Shopee for online purchase intention in East Coast Malaysia. *Universiti Malaysia Terengganu Journal of Undergraduate Research, 3*(1). 45-46. http://doi.org/10.46754/umtjur.2021.01.006

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. *Decision Support Systems*, *44*(2), 544–564. https://doi.org/10.1016/j.dss.2007.07.001

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2009). Trust and satisfaction, two stepping stones for successful E-commerce relationships: A longitudinal exploration. *Information Systems Research*, *20*(2), 237–257. https://doi.org/10.1287/isre.1080.0188

Kim, D., & Ammeter, A. P. (2008). Examining shifts in online purchasing behavior: Decoding the net generation. *Academy of Information and Management Sciences Proceedings, 12*(1). 10.1016/S2212-5671(16)30127-7

Kim, Y. A., & Srivastava, J. (2007). Impact of social influence in E-commerce decision making. *Proceedings of the Ninth International Conference on Electronic Commerce - ICEC '07*. Published. https://doi.org/10.1145/1282100.1282157

Kim, Y. G., & Woo, E. (2016). Consumer acceptance of a quick response (QR) code for the food traceability system: Application of an extended technology acceptance model (TAM). *Food Research International*, *85*, 266–272. https://doi.org/10.1016/j.foodres.2016.05.002

King, W. R., & He, J. (2006). A meta-analysis of the technology acceptance model. *Information & Management, 43*(6), 740-755. https://doi.org/10.1016/j.im.2006.05.003

Klopping, I. M., & McKinney, E. (2004). Extending the technology acceptance model and the task-technology fit model to consumer E-commerce. *Information Technology, Learning, and Performance Journal, 22*(1). https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.121.3397&rep=rep1&type=pdf

Koh, E. B. Y., Pang, N. T. P., Shoesmith, W. D., James, S., Nor Hadi, N. M., & Loo, J. L. (2020). The behaviour changes in response to COVID-19 pandemic within Malaysia. *Malaysian Journal of Medical Sciences*, *27*(2), 45–50. https://doi.org/10.21315/mjms2020.27.2.5

Koufaris, M., & Hampton-Sosa, W. (2004). The development of initial trust in an online company by new customers. *Information & Management*, *41*(3), 377–397. https://doi.org/10.1016/j.im.2003.08.004

Kremelberg, D. (2011). Practical statistics: A quick and easy guide to IBM® SPSS® statistics, STATA, and other statistical software. https://doi.org/10.4135/9781483385655

Kuan, H.-H., Bock, G.-W., & Vathanophas, V. (2008). Comparing the effects of website quality on customer initial purchase and continued purchase at E-commerce websites. *Behaviour & Information Technology*, *27*(1), 3–16. https://doi.org/10.1080/01449290600801959

Kulas, J., Prieto Palacios Roji, R. G., & Smith, A. (2021). IBM SPSS essentials: Managing and analyzing social sciences data. https://doi.org/10.1002/9781119417453

Kwek, C. L., Daud, D., Tan, H. P., Kay, H. K., & Hassan, P. (2011). Perceived risk, perceived technology, online trust for the online purchase intention in Malaysia. *International Journal of Business and Management, 6*(6). 10.5539/ijbm.v6n6p167

Landau, E. (2020, May 2). *Malaysia facing worst economic recession in its history.* NST Online. https://www.nst.com.my/news/nation/2020/05/589338/malaysia-facing-worst-economic-recession-its-history

Le, H. B. H., Ngo, C. T., Trinh, T. T. H., & Nguyen, T. T. P. (2020). Factor affecting customers' decision to use mobile banking service: A case of Thanh Hoa province, Vietnam. *Journal of Asian Finance, Economics and Business, 7*(2), 205-212. https://doi.org/10.13106/jafeb.2020.vol7.no2.205

LE, N. B. M., & HOANG, T. P. T. (2020). Measuring trusts and the effects on the consumers' buying behavior. *Journal of Distribution Science, 18*(3), 5-14. https;//doi.org/10.15722/JDS.18.3.202003.5

Lee, E. Y., Lee, S. B., & Jeon, Y. J. J. (2017). Factors influencing the behavioral intention to use food delivery apps. *Social Behavior and Personality: An International Journal*, *45*(9), 1461–1473. https://doi.org/10.2224/sbp.6185

Lee, E. Y., Lee, S. B., & Jeon, Y. J. J. (2017). Factors influencing the behavioral intention to use food delivery apps. Social Behavior and Personality: An International Journal, 45(9), 1461–1473. https://doi.org/10.2224/sbp.6185

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.* https://doi.org/10.17705/1cais.01250

Lefever, S., Dal, M., & Matthíasdóttir, Á. (2007). Online data collection in academic research: Advantages and limitations. *British journal of educational technology*, *38*(4), 574-582. https://doi.org/10.1111/j.1467-8535.2006.00638.x

Leonard, L. N. K. (2012). Attitude influencers in C2C E-commerce: Buying and selling. *Journal of Computer Information Systems, 52*(3), 11-17. http://dx.doi.org/10.1080/08874417.2012.11645554

Leong, M. K., & Chaichi, K. (2021). The adoption of technology acceptance model (TAM) and trust in influencing online purchase intention during the Covid-19 pandemic: empirical evidence from Malaysia. *International Journal Of Academic Research In Business And Social Sciences, 11*(8), 468–478. 10.6007/IJARBSS/v11-i8/10422

Li, F., & Betts, S. C. (2011). Trust: What it is and what it is not. *International Business & Economics Research Journal (IBER)*, *2*(7). https://doi.org/10.19030/iber.v2i7.3825

Li, X., Zhao, X., Xu, W., & Pu, W. (2020). Measuring ease of use of mobile applications in E-commerce retailing from the perspective of consumer online shopping behaviour patterns. *Journal of Retailing and Consumer Service*, 55. https://doi.org/10.1016/j.jretconser.2020.102093

Liao, C., Palvia, P., & Lin, H. N. (2006). The roles of habit and web site quality in E-commerce. International journal of information management, 26(6), 469–483. https://doi.org/10.1016/j.ijinfomgt.2006.09.001

Liao, P. W., & Hsieh, J. Y. (2010). Using the technology acceptance model to explore online shopping behavior: Online experiences as a moderator. *2010 International Conference on Management and Service Science*. https://doi.org/10.1109/icmss.2010.5577039

Lin, C. J., & Lu, H. (2000). Towards an understanding of the behavioral intention to use a web site. *International Journal of Information Management, 20*(3). 197-208. https://doi.org/10.1016/S0268-4012(00)00005-0

Lissitsa, S., & Kol, O. (2016). Generation X vs. generation Y – A decade of online shopping. *Journal of Retailing and Consumer Services*, *31*, 304–312. https://doi.org/10.1016/j.jretconser.2016.04.015

Malaysia - eCommerce. (2021, November 6). International Trade Administration Trade.Gov. https://www.trade.gov/country-commercial-guides/malaysia-ecommerce

Malaysian Communications and Multimedia Commission. (2018). *e-commers consumer survey 2018*. MCMC. https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/ECS2018.pdf

Malhotra, N. K., & Birks, D. F. (2007). *Marketing research: An applied approach - European* (3rd ed.).

Manoj K., Sunita P., Nita S., Rajesh K., & Rakesh, 0. K. (2022). E-commerce and Online Shopping to Analyse Consumer Shopping Behaviour in Rural Rajasthan - An Empirical study. *International Journal of Mechanical Engineering*, *7*. https://www.researchgate.net/profile/Manoj-Kumar-534/publication/359508489_E-commerce_and_Online_Shopping_to_Analyse_Consumer_Shopping_Behaviour_in_Rural_Rajasthan_-_An_Empirical_study/links/624190f37931cc7ccfffcb00/E-commerce-and-Online-Shopping-to-Analyse-Consumer-Shopping-Behaviour-in-Rural-Rajasthan-An-Empirical-study.pdf

Marshall, G., & Jonker, L. (2010). An introduction to descriptive statistics: A review and practical guide. *Radiography, 16*(4), e1-e7. https://doi.org/10.1016/j.radi.2010.01.001

Masum, A., Ahmad, M. H., & Nafees, S. M. M. (2021). COVID-19 freedom of movement: A case study of the Malaysian federal constitution. *Legal Network Series.* https://www.researchgate.net/profile/Ahmad-Masum-2/publication/349367033_2021_1_LNSA_xxiii_Legal_Network_Series_1_COVID-19_AND_FREEDOM_OF_MOVEMENT_A_CASE_STUDY_OF_THE_MALAYSIAN_FEDERAL_CONSTITUTION_by_Ahmad_Masum_i/links/602cd1034585158939ad6ff5/2021-1-LNSA-xxiii-Legal-Network-Series-1-COVID-19-AND-FREEDOM-OF-MOVEMENT-A-CASE-STUDY-OF-THE-MALAYSIAN-FEDERAL-CONSTITUTION-by-Ahmad-Masum-i.pdf

McCloskey, D. W., & Leppel, K. (2010). The impact of age on electronic commerce participation. *Journal of Electronic Commerce in Organizations*, *8*(1), 41–60. https://doi.org/10.4018/jeco.2010103003

Md Johar, M. G., & Ahmad Awalluddin, J. A. (2011). The role of technology acceptance model in explaining effect on E-commerce application system. *International Journal of Managing Information Technology,* *3*(3), 1-14. https://doi.org/10.5121/ijmit.2011.3301

Menard, S. (2002). Applied logistic regression analysis. https://doi.org/10.4135/9781412983433

Miniard, P. W., & Cohen, J. B. (1981). An examination of the Fishbein-ajzen behavioral-intentions model's concepts and measures. *Journal of Experimental Social Psychology, 17*(3), 309-339. https://doi.org/10.1016/0022-1031(81)90031-7

Mittal, A. (2013). E-commerce: It's impact on consumer behavior. *Global Journal of Management and Business Studies, 3*(2). 131-138. https://sci-hubtw.hkvisa.net/https://www.ripublication.com/gjmbs_spl/gjmbsv3n2spl_09.pdf

Mohd.Yusoff, Y., Muhammad, Z., Mohd Zahari, M. S., Pasah, E. S., & Robert, E. (2009). Individual differences, perceived ease of use, and perceived usefulness in the E-library usage. *Computer and Information Science, 2*(1). https://doi.org/10.5539/cis.v2n1p76

Mondego, D. Y., & Gide, E. (2020). Exploring the factors that have impact on consumers' trust in mobile payment systems in Australia. *Journal of Information Systems and Technology Management*. https://doi.org/10.4301/s1807-1775202017009

Moon, J., & Kim, Y. (2001). Extending the TAM for a world-wide-Web context. *Information & Management, 38*(4), 217-230. https://doi.org/10.1016/s0378-7206(00)00061-6

Mou, J., Shin, D. H., & Cohen, J. (2016). Understanding trust and perceived usefulness in the consumer acceptance of an e-service: a longitudinal investigation. *Behaviour & Information Technology*, *36*(2), 125–139. https://doi.org/10.1080/0144929x.2016.1203024

Mou, J., Shin, D. H., & Cohen, J. (2016). Understanding trust and perceived usefulness in the consumer acceptance of an e-service: a longitudinal investigation. Behaviour & Information Technology, 36(2), 125–139. https://doi.org/10.1080/0144929x.2016.1203024

Mou, J., Shin, D. H., & Cohen, J. F. (2017). Trust and risk in consumer acceptance of e-services. *Electronic Commerce Research*, *17*(2), 255–288. https://doi.org/10.1007/s10660-015-9205-4

Muda, M., Mohd, R., & Hassan, S. (2016). Online purchase behavior of Generation Y in Malaysia. *Procedia Economics and Finance, 37*. 292-298. 10.1016/S2212-5671(16)30127-7

Naseri, R. N. N., Hussin, H., Esa, M. M., Aziz, N. E. M., & Nordin, M. N. (2021). What is a population in online shopping research? A perspective from Malaysia. *Turkish Journal of Computer and Mathematics Education, 12*(4). 654-658. https://doi.org/10.17762/turcomat.v12i4.549

Nathan, L. (2020, December 30). *The boom of E-commerce in COVID-19 era*. The Malaysian Reserve. https://themalaysianreserve.com/2021/01/01/the-boom-of-E-commerce-in-covid-19-era/

Nayak, N., Anusha, P., Narayan, P., & Manish, K. (2015). *Online Shopping Patterns Amidst Students with Respect to Food Products MAHE Digital Repository*. MANIPAL ACADEMY of HIGHER EDUCATION. http://eprints.manipal.edu/144212/

Nguyen, H. V., Tran, H. X., Van Huy, L., Nguyen, X. N., Do, M. T., & Nguyen, N. (2020). Online book shopping in Vietnam: The impact of the COVID-19 pandemic situation. *Publishing Research Quarterly, 36*(3), 437–445. 10.1007/s12109-020-09732-2

Nguyen, N., Leclerc, A., & LeBlanc, G. (2013). The mediating role of customer trust on customer loyalty. *Journal of Service Science and Management*, *06*(01), 96–109. https://doi.org/10.4236/jssm.2013.61010

Nguyen, T. T. H., Nguyen, N., Nguyen, T. B. L., Phan, T. T. H., Bui, L. P., & Moon, H. C. (2019). Investigating consumer attitude and intention towards online food purchasing in an emerging economy: An extended TAM approach. *Foods*, *8*(11), 576. https://doi.org/10.3390/foods8110576

Nikou, S. A., & Economides, A. A. (2017). Mobile-based assessment: Investigating the factors that influence behavioral intention to use. *Computers & Education*, *109*, 56–73. https://doi.org/10.1016/j.compedu.2017.02.005

Nistah, N. M., Sura, S., & Lee, O. (2019). The effects of system quality on social commerce. *Applied Mechanics and Materials*, *892*, 258–265. https://doi.org/10.4028/www.scientific.net/amm.892.258

Olivia M., & Marchyta, N. K. (2022). The Influence of Perceived Ease of Use and Perceived Usefulness on E-Wallet Continuance Intention: Intervening Role of Customer Satisfaction. *Jurnal Teknik Industr*, *24*. IN PRESS-DOI: 10.9744/jti.24.1

Omar, C. M. Z. C., & Anas, T. (2014, March). E-commerce in Malaysia: Development, implementation and challenges. *International Review of Management and Bushiness Research.* http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.678.5590&rep=rep1&type =pdf

Pai, F. Y., & Huang, K. I. (2010). Applying the Technology Acceptance Model to the introduction of healthcare information systems. *Technological Forecasting & Social Change, 78*. 650-660. 10.1016/j.techfore.2010.11.007

Parment, A. (2013). Generation Y vs. baby boomers: Shopping behavior, buyer involvement and implications for retailing. *Journal of Retailing and Consumer Services*, *20*(2), 189–199. https://doi.org/10.1016/j.jretconser.2012.12.001

Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the Technology Acceptance Model. *International Journal of Electronic Commerce*, *7*(3), 101–134. https://www.jstor.org/stable/27751067

Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. International Journal of Electronic Commerce, 7(3), 101–134. https://doi.org/10.1080/10864415.2003.11044275

Pelaez, A., Chen, C.-W., & Chen, Y. X. (2019). Effects of perceived risk on intention to purchase: A meta-analysis. *Journal of Computer Information Systems, 59*(1), 73–84. https://doi.org/10.1080/ 08874417.2017.1300514

Pennington, R., Wilcox, H.D., & Grover, V. (2004). The role of system trust in business-to-consumer transactions, *Journal of Management Information Systems* (20:3), 197-226. https://www.researchgate.net/publication/220591722_The_Role_of_System_Trust_in_Business-to-Consumer_Transactions

Peralta, E. (2015, September 17). *Generation X: The Small But Financially Powerful Generation*. Basis Technologies. https://basis.net/blog/generation-x-the-small-but-mighty-generation

Perdana, A. C., Rachman, R., & Palinggi, M. D. (2021). An analysis of population using multiple linear regression analysis. *IOP Conference Series: Materials Science and Engineering, 1088*(1), 012091. https://doi.org/10.1088/1757-899x/1088/1/012091

Perea Y Monsuwé, T., Dellaert, B. G., & de Ruyter, K. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management*, *15*(1), 102–121. https://doi.org/10.1108/09564230410523358

Perkowitz, M. & Etzioni, O. (1999). Towards adaptive web sites: conceptual framework and case study. *Computer Networks,* *31*(11-16). 1245-58. https://www.researchgate.net/publication/222491894_Towards_adaptive_Web_sites_Conceptual_framework_and_case_study

Phan, T. H., & Nguyen, D. B. L. (2021). Covid-19 impacts on online shopping decision of the students in Ho Chi Minh City. *Oxford Journal of Technology, Arts, Sciences and Knowledge.* https://www.researchgate.net/publication/350557654_COVID19_IMPACTS_ON_ONLINE_SHOPPING_DECISION_OF_THE_STUDENTS_IN_HO_CHI_MINH_CITY

PHUONG, N. N., LUAN, L. T., DONG, V. V., & KHANH, N. L. (2020). Examining customers' continuance intentions towards E-wallet usage: The emergence of mobile payment acceptance in Vietnam. *The Journal of Asian Finance, Economics and Business*, *7*(9), 505-516. https://doi.org/10.13106/jafeb.2020.vol7.no9.505

Polit, D. F., & Beck, C. T. (2004). *Nursing Research Principles and Methods byBeck* (7th ed.) [E-book]. Lippincott Williams Wilkins. https://www.scribd.com/document/261535702/Nursing-Research-Principles-and-Methods-7th-Edition-Polit

Porter, C. E., & Donthu, N. (2006). Using the technology acceptance model to explain how attitudes determine Internet usage: The role of perceived access barriers and

demographics. *Journal   of   Business   Research,   59*(9),   999-1007. https://www.researchgate.net/publication/303750301_Using_the_technology_accept ance_model_to_explain_how_attitudes_determine_Internet_usage_The_role_of_perc eived_access_barriers_and_demographics

Puspitasari, B., N., Nugroho W. P. S., Amyhorsea, D. N., & Susanty, A. (2018). Consumer's buying decision-making process in E-commerce. *E3S Web of Conferences, 31.* 11003. 10.1051/e3sconf/20183111003

Qalati, S. A., Vela E. G., Li, W. Y., Dakhan, S. A., Thuy, T. T. H., & Merani, S. H. (2021). Effects of perceived service quality, website quality, and reputation on purchase intention: The mediating and moderating roles of trust and perceived risk in online shopping,   *Cogent   Business   &   Management,   8*(1),   1869363. 10.1080/23311975.2020.1869363

Qazzafi, S. (2019). Consumer buying decision toward products. *International Journal of Scientific   Research   and   Engineering   Development,   2*(5). http://www.ijsred.com/volume2/issue5/IJSRED-V2I5P15.pdf

Rahman, A., & Muktadir, M. (2021). SPSS: An imperative quantitative data analysis tool for social science research. *International Journal of Research and Innovation in Social Science, 05*(10), 300-302. https://doi.org/10.47772/ijriss.2021.51012

Rahman, M. S., & Hussain, B. (2014). Perception differences of older customers' to purchase from online: Malaysian perspective. *International Journal of Business and Society, 15*(1). 171-190. http://www.ijbs.unimas.my/repository/pdf/Vol15No1paper10.pdf

Rasheed, F. A., & Abadi, M. F. (2014). Impact of Service Quality, Trust and Perceived Value on Customer Loyalty in Malaysia services industries. *Procedia - Social and Behavioral Sciences*, *164*, 298–304. https://doi.org/10.1016/j.sbspro.2014.11.080

Regner, T., & Riener, G. (2017). Privacy is precious: On the attempt to lift anonymity on the internet to increase revenue. *Journal of Economics & Management Strategy, 26*(2), 318–336. https://doi.org/10.1111/jems.12192

Rehman, A., Alqahtani, S., Altameem, A., & Saba, T. (2013). Virtual machine security challenges: Case studies. *International Journal of Machine Learning and Cybernatics*. 10.1007/s13042- 013-0166-4.

Rehman, U. U., Rizwan, M., & Ali, N. (2013, January). E-tam model: A comprehensive approach to understand the adoption of electronic shopping. ResearchGate | Find and share research. https://www.researchgate.net/profile/Ubaid-Rahman-7/publication/303328379_E-TAM_Model_A_Comprehensive_Approach_to_Understand_the_Adoption_of_Electronic_Shopping/links/573d0f9808ae298602e59b87/E-TAM-Model-A-Comprehensive-Approach-to-Understand-the-Adoption-of-Electronic-Shopping.pdf

Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, *5*(10), e02690. https://doi.org/10.1016/j.heliyon.2019.e02690

Rowley, J. (2000). Product search in e-shopping: a review and research propositions. *Journal of Consumer Marketing*, *17*(1), 20–35. https://doi.org/10.1108/07363760010309528

Roy Dholakia, R., & Uusitalo, O. (2002). Switching to electronic stores: consumer characteristics and the perception of shopping benefits. *International Journal of*

Retail & Distribution Management, 30(10), 459–469. https://doi.org/10.1108/09590550210445335

Roy, M., Dewit, O., & Aubert, B. (2001). The impact of interface usability on trust in web retailers. *Internet Research: Electronic Networking Applications and Policy, 11*(5). 388-98. https://www.researchgate.net/publication/220146876_The_impact_of_interface_usability_on_trust_in_Web_retailers

Rybaczewska, M., & Sparks, L. (2021). Ageing consumers and E-commerce activities. *Ageing and Society*, 1-20. 10.1017/S0144686X20001932

Saha, P., Nath, A. K., & Esmail, S. S. (2012). Evaluation of government e-tax websites: an information quality and system quality approach. *Transforming Government: People, Process and Policy, 6*(3), 300–321. 10.1108/17506161211251281

Sahoo, N., Dellarocas, C., & Srinivasan, S. (2018). The impact of online product reviews on product returns. *Information Systems Research, 29*(3), 723–738. https://doi.org/10.1287/isre.2017.0736

Salkind, N. J. (2010). Interval Scale. *Encyclopedia of Research Design*. Published. https://methods.sagepub.com/reference/encyc-of-research-design/n195.xml

Sawitri, N. L. P. W., & Giantari, I. G. A. K. (2020). The role of trust mediates the effect of perceived ease of use and perceived usefulness on online repurchase intention. American *Journal of Humanities and Social Sciences Research, 4*(1), 374-381. https://www.ajhssr.com/wp-content/uploads/2020/01/ZY2041374381.pdf

Shafiyah, N., Alsaqour, R., Shaker, H., Alsaqour, O., & Uddin, M. (2013). Review on electronic commerce. *Middle-East Journal of Scientific Research. 18*(9): 1357-1365. https://www.researchgate.net/publication/259742588_Review_on_Electronic_Comm erce

Shah, A. U. M., Safri, S. N. A., Thevadas, R., Noordin, N. K., Rahman, A. A., Sekawi, Z., Ideris, A., & Sultan, M. T. H. (2020). COVID-19 outbreak in Malaysia: Actions taken by the Malaysian government. *International Journal of Infectious Diseases, 97*, 108–116. https://doi.org/10.1016/j.ijid.2020.05.093

Shahzad, A., Hassan, R., Abdullah, N. I., Hussain, A., & Fareed, M. (2020). COVID-19 impact on E-commerce usage: An empirical evidence from Malaysian healthcare industry. *Humanities & Social Sciences Reviews, 8*(3), 599–609. https://doi.org/10.18510/hssr.2020.8364

Shang, D., & Wu, W. (2017). Understanding mobile shopping consumers' continuance intention. *Industrial Management & Data Systems, 117*(1), 213-227. https://doi.org/10.1108/imds-02-2016-0052

Sharma, G., & Wang, L. J. (2015). The effects of online service quality of E-commerce Websites on user satisfaction. *The Electronic Library, 33*(3), 468–485. doi:10.1108/EL-10-2013-0193

Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The Theory of Reasoned Action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research, 15*(3), 325. https://doi.org/10.1086/209170

Shia, B. C., Chen, M., Ramdansyah, A. D., & Wang, S. (2015). Comparison of decision making in adopting E-commerce between Indonesia and Chinese Taipei (Case study

in Jakarta and Taipei City). *American Journal of Industrial and Business Management*, *05*(12), 748–768. https://doi.org/10.4236/ajibm.2015.512073

Shih, H. P. (2004). An empirical study on predicting user acceptance of e-shopping on the Web. *Information & Management*, *41*(3), 351–368. https://doi.org/10.1016/s0378-7206(03)00079-x

Singh, A. S., & Masuku, M. B. (2014). Sampling techniques & determination of sample size in applied statistics research: An overview. *International Journal of economics, commerce and management*, *2*(11), 1-22. https://www.researchgate.net/publication/341552596_Sampling_Techniques_and_D etermination_of_Sample_Size_in_Applied_Statistics_Research_An_Overview

Singh, P., & Keswani, S. (2016, January). A study of adoption behavior for online shopping: An extension of Tam Model. *International Journal Advances in Social Science and Humanities*, *4*(7), 11-22. http://www.ijassh.com/index.php/IJASSH/article/view/242/256

Slabá, M. (2019). The impact of age on the customers buying behaviour and attitude to price. *Littera Scripta*, *12*(2). https://doi.org/10.36708/littera_scripta2019/2/11

Slatin, M. J. (2001). The art of ALT: toward a more accessible web. *Computers and composition, 18*(1). 73-81. https://doi.org/10.1016/S8755-4615(00)00049-9

Smith, B. A., & Merchant, E.J. (2001). Designing an attractive web site: Variables of importance. *Proceedings of the 32nd Annual Conference of the Decision Sciences Institute, San Francisco, CA.* https://www.researchgate.net/publication/220672460_B2C_E-commerce_web_site_quality_an_empirical_examination

Šneiderienė A., & Beniušis A. (2022). FACTORS INFLUENCINGTHE DECISION-MAKING OF USERS OFLITHUANIAN E-commerce PLATFORMS. *Management Theory and Studies for Rural Business*

Song, G. (2016). The research on consumer decision process and problem recognition. *2ⁿᵈ International Conference on Humanities and Social Science Research.* https://www.atlantis-press.com/article/25861637.pdf

Sorce, P., Perotti, V., & Widrick, S. (2005). Attitude and age differences in online buying. *International Journal of Retail &Distribution Management, 33*(2). 122-132. 10.1108/09590550510581458

Stafford T. F., Turan, A., & Raisinghani, M. S. (2004). International and cross cultural influences on online shopping behavior, *Journal of Global Information Technology Management, 7.* 70-87. https://www.researchgate.net/publication/280169142_International_and_CrossCultural_Influences_on_Online_Shopping_Behavior

Stankevich, A. (2017). Explaining the consumer decision-making process: Critical literature review. *JOURNAL OF INTERNATIONAL BUSINESS RESEARCH AND MARKETING, 2*(6), 7–14. https://doi.org/10.18775/jibrm.1849-8558.2015.26.3001

Starkweather, J., & Moske, A. K. (2011). *Multinomial logistic regression*. https://it.unt.edu/sites/default/files/mlr_jds_aug2011.pdf

Stehlik-Barry, K., & Babinec, A. J. (2017). *Data analysis with IBM SPSS statistics*. Packt Publishing. https://www.packtpub.com/product/data-analysis-with-ibm-spss-statistics/9781787283817

Stewart, K. J. (2003). Trust Transfer on the World Wide Web. *Organization Science*, *14*(1), 5–17. https://www.jstor.org/stable/3086029

Stouthuysen, K., Teunis, I., Reusen, E., & Slabbinck, H. (2018). Initial trust and intentions to buy: The effect of vendor-specific guarantees, customer reviews and the role of online shopping experience. *Electronic Commerce Research and Applications, 27*, 23–38. https://doi.org/10.1016/j.elerap.2017.11.002

Sukamolson, S. (2007). Fundamentals of quantitative research. https://carinadizonmaellt.com/LANGRES/pdf/30.pdf

Suleman, D. (2018). Faktor penentu keputusan konsumen Indonesia memilih tempat belanja disebuah E-commerce (Theory of Planned Behavior). J*urnal Doktor Manajemen, 1,* 1-9. https://www.neliti.com/publications/279586/faktor-penentu-keputusan-konsumen-indonesia-memilih-tempat-belanja-disebuah-e-co#cite

Sumarliah, E., Khan, S. U., & Khan, I. U. (2021). Online hijab purchase intention: The influence of the coronavirus outbreak. *Journal of Islamic Marketing, 12*(3), 598–621. 10.1108/JIMA-09-2020-0302

Sumarliah, E., Usmanova, K., Mousa, K., & Indriya, I. (2021). E-commerce in the fashion business: the roles of the COVID-19 situational factors, hedonic and utilitarian motives on consumers' intention to purchase online. *International Journal of Fashion Design, Technology and Education.* https://doi.org/10.1080/17543266.2021.1958926

Sun, H. (2010). Sellers' trust and continued use of online marketplaces. *Journal of the Association for Information Systems*, *11*(4), 182–211. https://doi.org/10.17705/1jais.00226

Sun, H. (2010). Transferring attributes of E-commerce systems into business benefit: A relationship quality perspective. *Journal of the Electronic Commerce Research*, *11*(2), 92-109. https://www.proquest.com/openview/85344773912808b077e24dd8c5d60c00/1?pq-origsite=gscholar&cbl=44515

TAHAR, A., RIYADH, H. A., SOFYANI, H., & PURNOMO, W. E. (2020). Perceived ease of use, perceived usefulness, perceived security and intention to use E-filing: The role of technology readiness. *The Journal of Asian Finance, Economics and Business, 7*(9), 537-547. https://doi.org/10.13106/jafeb.2020.vol7.no9.537

Taherdoost, H. (2016). Validity and reliability of the research instrument; How to test the validation of a questionnaire/survey in a research. *International Journal of Academic Research in Management (IJARM), 5*(3). 28-36. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3205040

Tandon, A., Aakash, A., & Aggarwal, A. G. (2020). Impact of EWOM, website quality, and product satisfaction on customer satisfaction and repurchase intention: Moderating role of shipping and handling. *International Journal of System Assurance Engineering and Management*, *11*(S2), 349-356. https://doi.org/10.1007/s13198-020-00954-3

Tarhini, A., Liu, X. H., & Hone, K. (2014). Measuring the moderating effect of gender and age on E-learning acceptance in England: A structural equation modeling approach for an extended Technology Acceptance Model. *Journal of Educational Computing Research, 51*(2). 163-184. http://dx.doi.org/10.2190/EC.51.2.b

Thelwall, M. (2000). Commercial web sites: lost in cyberspace?. *Internet Research: Electronic Networking Applications and Policy, 10*(2). 150-9. https://www.researchgate.net/publication/32116162_Commercial_Web_sites_Lost_in_Cyberspace

Tong, X. (2010). A cross-national investigation of an extended technology acceptance model in the online shopping context. International journal of retail & distribution management, 38(10), 742-759. https://doi.org/10.1108/09590551011076524

UKEssays. (2018, November). *E commerce also called electronic commerce information Technology Essay*. https://www.ukessays.com/essays/information-technology/E-commerce-also-called-electronic-commerce-information-technology-essay.php?vref=1

Underhill, P. (2001). Why we buy: the science of shopping. *The Cornell Hotel and Restaurant Administration Quarterly*, *42*(3), 8–9. https://doi.org/10.1016/s0010-8804(01)81018-1

Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How reliable are measurement scales? External factors with indirect influence on reliability estimators. Procedia economics and finance 20. 679-686. 10.1016/S2212-5671(15)00123-9

Vahdat, A., Alizadeh, A., Quach, S., & Hamelin, N. (2020). Would you like to shop via mobile app technology? The technology acceptance model, social factors and purchase intention. *Australasian Marketing Journal*, *29*(2), 187–197. https://doi.org/10.1016/j.ausmj.2020.01.002

Vallejos, R., & Acosta, J. (2021). The effective sample size for multivariate spatial processes with an application to soil contamination. *Natural Resource Modeling, 34*(4). https://doi.org/10.1111/nrm.12322

van der Heijden, H., Verhagen, T., & Creemers, M. (2003). Understanding online purchase intentions: Contributions from technology and trust perspectives. *European Journal of Information Systems, 12*(1), 41-48. https://doi.org/10.1057/palgrave.ejis.3000445

Vărzaru, A. A., Bocean, C. G., Rotea, C. C., & Budică-Iacob, A. F. (2021). Assessing antecedents of behavioral intention to use mobile technologies in e-commerce. *Electronics*, *10*(18), 2231. https://doi.org/10.3390/electronics10182231

Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. Information systems research, 11(4), 342-365. https://doi.org/10.1287/isre.11.4.342.11872

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science, 46*(2), 186-204. https://doi.org/10.1287/mnsc.46.2.186.11926

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425-478. https://www.researchgate.net/publication/220259897_User_Acceptance_of_Information_Technology_Toward_a_Unified_View

Verma, J. P. (2012). One-way ANOVA: Comparing means of more than two samples. *Data Analysis in Management with SPSS Software*, 221–254. https://doi.org/10.1007/978-81-322-0786-3_7

Villa, R., & Monzon, A. (2021). Mobility restrictions and E-commerce: Holistic balance in Madrid Centre during COVID-19 lockdown. *Economies, 9*(2). 57. https://doi.org/10.3390/economies9020057

Wan, Y., Nakayama, M., & Sutcliffe, D. (2012). The impact of age and shopping experiences on the classification of search, experience, and credence goods in online shopping. *Information Systems and e-Business Management, 10*(1). 135-148. 10.1007/s10257-010-0156-y

Wang, Y. S., Wu, M. C., & Wang, H. Y. (2009). Investigating the determinants and age and gender differences in the acceptance of mobile learning. *British Journal of Educational Technology, 40*(1), 92-118. https://doi.org/10.1111/j.1467-8535.2007.00809.x

Watson, R. (2015). Quantitative research. *Nursing Standard*, *29*(31), 44–48. https://doi.org/10.7748/ns.29.31.44.e8681

Weinberg, D.B. (2000). Don't keep your internet customers waiting too long at the (virtual) front door. *Journal of Interactive Marketing, 14*(1). 30-9. https://doi.org/10.1002/(SICI)1520-6653(200024)14:1<30::AID-DIR3>3.0.CO;2-M

Weisberg, J., Te'eni, D., & Arman, L. (2011). Past purchase and intention to purchase in E-commerce: the mediation of social presence and trust. *Internet Research, 21*(1). 82-96. https://www.emerald.com/insight/content/doi/10.1108/10662241111104893/full/html?skipTracking=true

Weiss, D., & Zhang, X. (2020). Multiple sources of aging attitudes: Perceptions of age groups and generations from adolescence to old age across China, Germany, and the

United States. *Journal of Cross-Cultural Psychology*, *51*(6), 407–423. https://doi.org/10.1177/0022022120925904

Wen, H. J., Chen, H., & Hwang, H. (2001). E-commerce web site design: strategies and models. *Information Management & Computer Security, 9*(1). 5-12. https://www.researchgate.net/publication/220207963_E-commerce_Web_site_design_Strategies_and_models

Wensing, M., Mainz, J., Kramme, O., Jung, H. P., & Ribacke, M. (1999). Effect of mailed reminders on the response rate in surveys among patients in general practice. *Journal of clinical epidemiology*, *52*(6), 585-587. https://doi.org/10.1016/s0895-4356(99)00024-4

Whittlesea, B. W., Jacoby, L. L., & Girard, K. (1990). Illusions of immediate memory: Evidence of an attributional basis for feelings of familiarity and perceptual quality. *Journal of Memory and Language*, *29*(6), 716-732.https://doi.org/10.1016/0749-596x(90)90045-2

Williams, C. (2011). Research methods. *Journal of Business & Economics Research (JBER)*, *5*(3). https://doi.org/10.19030/jber.v5i3.2532

WOLOR, C. W., SOLIKHAH, S., FIDHYALLAH, N. F., & LESTARI, D. P. (2020). Effectiveness of E-Training, E-Leadership, and work life balance on employee performance during COVID-19. *The Journal of Asian Finance, Economics and Business*, *7*(10), 443–450. https://doi.org/10.13106/jafeb.2020.vol7.no10.443

Wong, C. K. (2013, May 20). *E-commerce history & milestones in Malaysia*. EcInsider. https://www.ecinsider.my/2013/05/E-commerce-history-milestones-malaysia.html

Woodrow, L. (2014). ANOVA, ANCOVA and MANOVA. *Writing about Quantitative Research in Applied Linguistics*, 73–84. https://doi.org/10.1057/9780230369955_7

Wu, J. H., & Wang, S. C. (2005). What drives mobile commerce?: An empirical evaluation of the revised technology acceptance model. Information & Management, 42(5), 719–729. https://doi.org/10.1016/j.im.2004.07.001

Wu, M. Y., & Liao, S. C. (2011). Consumers' behavioral intention to use internet shopping: an integrated model of TAM and TRA. *Journal of Statistics and Management Systems, 14*(2). 375-392. 10.1080/09720510.2011.10701561

Yeo, V. C. S., Goh, S. K., & Rezaei, S. (2017). Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. Journal of Retailing and Consumer Services, 35, 150–162. https://doi.org/10.1016/j.jretconser.2016.12.013

Yılmaz, V., & Çelik, H. E. (2011). Extending the technology acceptance model for adoption of eshopping by consumers in Turkey. *Journal of Electronic Commerce Research*, *12*(2). http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.473.2603&rep=rep1&type=pdf

Young Kim, E., & Kim, Y. (2004). Predicting online purchase intentions for clothing products. *European Journal of Marketing, 38*(7). 883-897. https://doi.org/10.1108/03090560410539302

Zhang, Y., Zeng, J. Q., Akram, U., & Rasool, H. (2021). TAM model evidence for online social commerce purchase intention. *Information Resources Management Journal, 34*(1). 86-108. 10.4018/IRMJ.2021010105

Zhu, D. S., Lee, Z. C., Chen, Y. H., & O'Neal, G. S. (2011). Mr. risk! please trust me: Trust antecedents that increase online consumer purchase intention. *Journal of Internet Banking and Commerce, 16*(3). https://www.icommercecentral.com/open-access/mr-risk-please-trust-me-trust-antecedents-that-increase-online-consumer-purchase-intention.pdf