



University of Wales
Trinity Saint David



**A study of the key factors influences on online customer satisfaction
and purchase intention in the COVID-19 pandemic**

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Abstract

This paper present valuable insight into consumer's purchase intention regarding online purchasing in the Covid-19 pandemic in Hong Kong. The pandemic triggered the consumer online purchase intention in 2020. Nevertheless, the online retail sales only given a mere contribution toward the total retail value in Hong Kong. In 2021, the online retail sales only indicated 8.1 % accounted of the total retail sales in Hong Kong. But the China indicated 24.5% in same year. Therefore, to find out what is the key factors can influences consume online purchase intention is the main purpose of this study.

A quantitative method is used for this study. The analysis is included the primary data and secondary data, where the primary date come from the questionnaire result conducted via online survey. And the secondary date involved with past research paper from scholars and researchers.

The finding identified that there three factors given impact toward to customer satisfaction; Time saving, Pries saving and Word-of-mouth. And the customer satisfaction indicated a significant influence to purchase intention toward online shopping. This study contributes to the current online business retailer and potential online business investor to further understand the defined factors which can increase consumer purchase intention. This is a crucial to increase online retail sales value and ensure online retail business growth as well as maintain competitiveness during and after the pandemic.

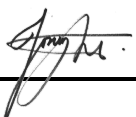
Keywords:

Online Purchase Intention, Customer Satisfaction, Online Retail Sales, Covid-19, Online shopping, Hong Kong.

Declaration

DECLARATION

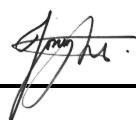
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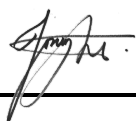
This thesis is the result of my own investigations, except where otherwise stated.
Other sources are acknowledged by footnotes giving explicit references.
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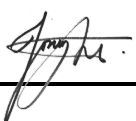
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Chapter One: Introduction

The primary research of this dissertation is to study what key factors caused the online customer to do online shopping during the COVID-19 pandemic in Hong Kong. Therefore, as the initial chapter that leads the whole research paper, in this chapter, the researcher conducts the comprehensive illustration for the propose of research in this paper by following the principle of research flow and infrastructure, aiming to provide clear understanding picture to demonstrate the sequence of this research toward this study objective. The introduction is based on a detailed description of the background of macroeconomics and the research issues. Hence, the researcher introduces the research purpose and research hypothesis of this chapter for the research direction, and the implementation steps of this study are demonstrated

1.1 Research Background

Online retail makes it easier for consumers to complete a purchase because it is convenient to buy things without time and location restrictions. Given the city's high-population density, its large number of easily accessible outlets and malls, and it is fast, therefore going to the actual store in person is quite a convenient choice. However, although consumers love to shop in physical stores, over the year, consumers have also felt the interest to use the online platform to make online purchasing while the internet penetration rate has been growing in the last two decades in Hong Kong. E-commerce started in the late 1990s and has begun to blossom since the 2000s (Research.hktdc, 2017), providing solid infrastructure for the city to develop an e-commerce platform.

1.1.1 Current and Past Value of Online Sales

Even though the online consumption model has become more mature and widespread in Hong Kong society in recent years, the online retail sales value contributes to the overall total retail sales is relatively low in the Hong Kong market in 2021.

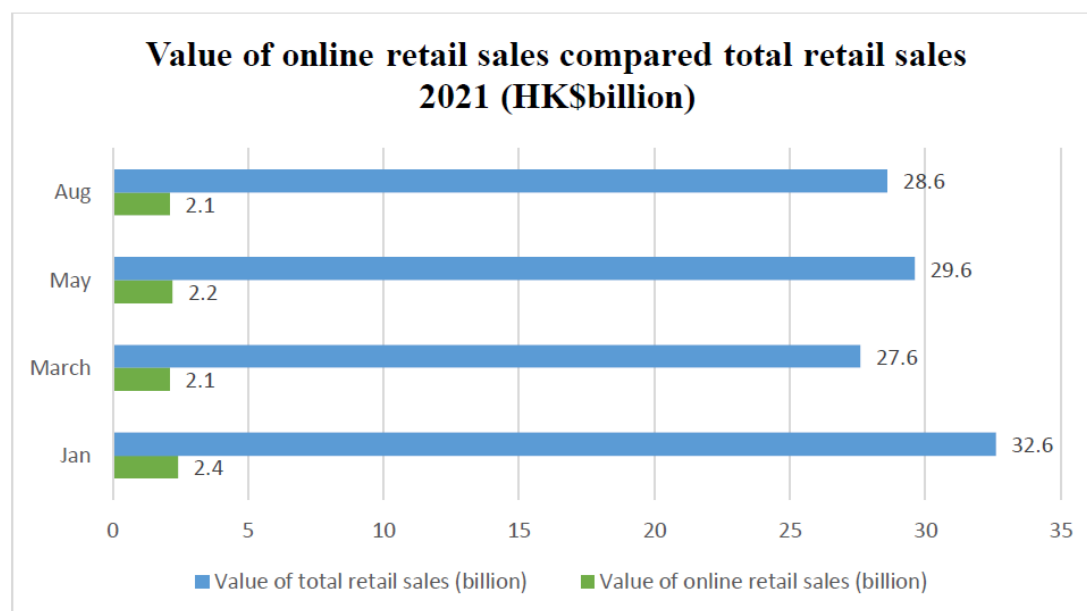


Figure 1.1: Value of online retail sales compared total retail sales 2021

Source: (Census and Statistics, 2021c, 2021d, 2021e, 2021f)

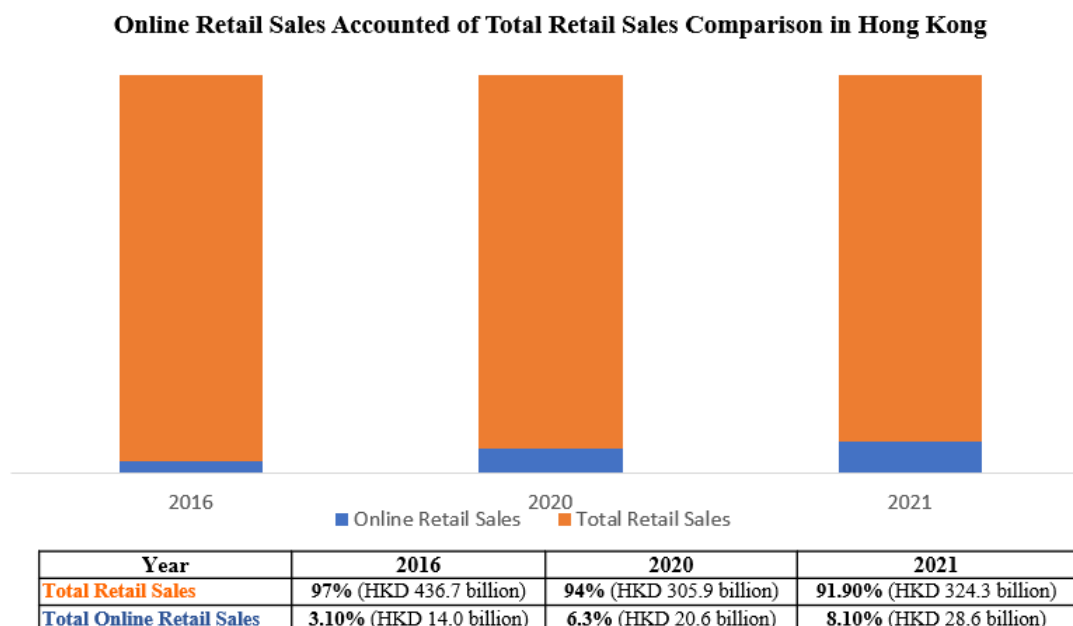


Figure 1.2: Online retail sales accounted of total retail sales comparison in Hong Kong

Source: (HKTDC, 2017; Census and Statistics, 2022 - Monthly Report 2016 - 2021)

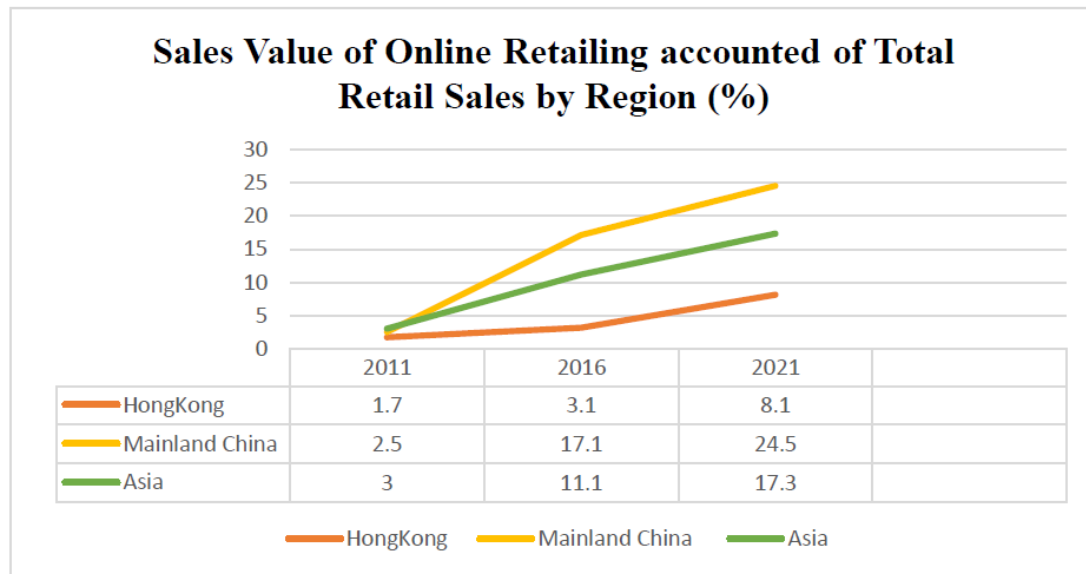


Figure 1.3: Sales Value of Online Retailing accounted of Total Retail Sales by Region

Source: (HKTDC, 2017; Statista, 2022)

The above data from Figures 1.1 and 1.2 demonstrated that current and past online sales accounted for the total retail sales situation in Hong Kong. It was evident that the total online retail industry had given only a mere contribution toward the total retail sales before and during the pandemic between 2020 - 2021. However, the pandemic boosted up consumer online purchase intention in 2020. But the increased rate only indicated about 3 % compared to 2016. Moreover, figure 1.3 demonstrated the research conducted in 2017, explaining that the online retailing sales account of the total retail sales in other nearby regions has been increasing over the past years. And will continue to grow. Hong Kong is relatively far lower than Mainland China and Asia. It implied that Hong Kong consumers had less online purchasing intention than nearby regions in the past ten years. In other words, there is significant room for improvement to increase the total value of the online retail sale by identifying what key factor might enhance consumer purchasing intention toward online shopping. To narrow down the gap between the value of online sales and the value of retail sales in Hong Kong.

1.1.2 Review of Customer Purchase Pattern Development in Hong Kong

People use online platforms to shop based on their interest and demand for various products. And the need for these products has changed over time.

Showing below illustrated the major products/services have purchased via the online channel between 2009 and 2020 in Hong Kong

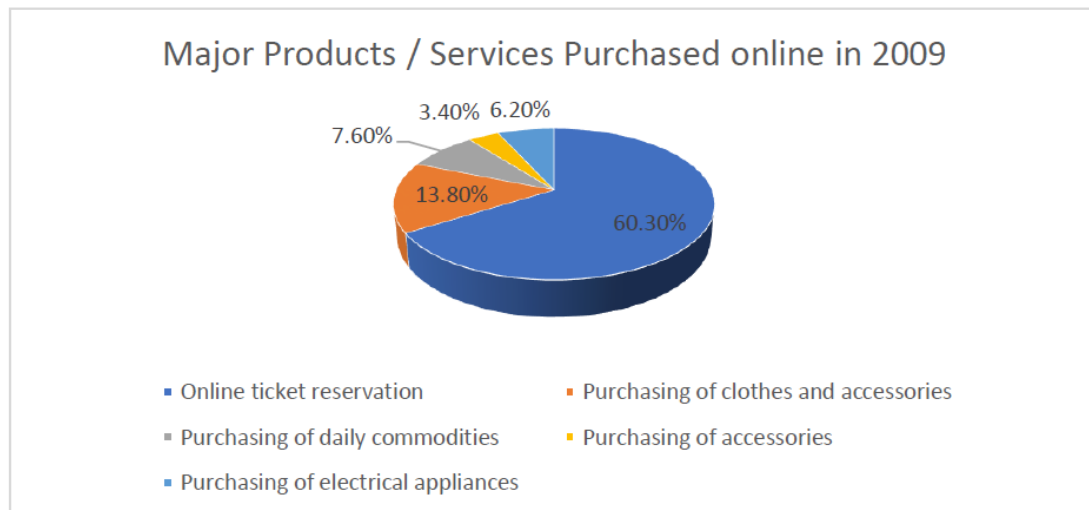


Figure 1.4: Major products /services purchased online in 2009 (Constructed by writer)

Source: (Census and Statistics, 2009)

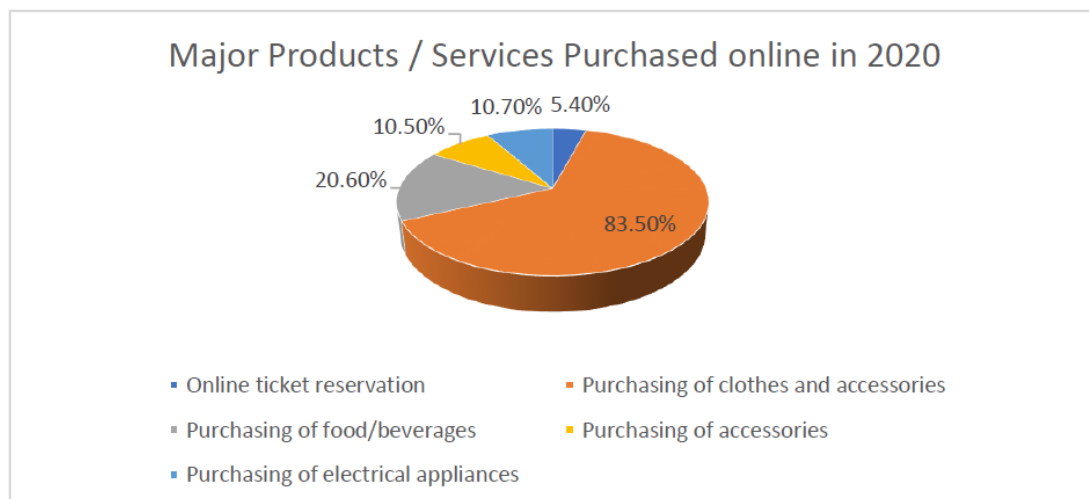


Figure 1.5: Major products /services purchased online in 2020 (Constructed by writer)

Source: (Census and Statistics, 2021b)

In a review of Figures 1.4 and 1.5, the result shows that people's purchase intention for clothes and accessories indicated a significant improvement from 13.8% in 2009 to 83.50% in 2020. Simultaneously, the purchase intention for online ticket reservations in 2020 displayed low demand compared to 2009. Moreover, the percentage of purchasing of accessories and electrical appliances also indicated increases. All these data imply people's consumption patterns for online products and services over the years. People seem to purchase more personal matters products nowadays than ten years ago.

1.1.3 Relation Between Smartphone Penetration and Online Shopping

According to survey results by the census and statistics department of Hong Kong government, during the period from 2012 to 2020, the increase rate for people aged 10 or above is very significant, from 54.0% to 92.1%. Of those 5 991 800 persons aged 10 or above who had smartphones during that period, 95.4% had 1; 4.1% had 2; and 0.5% had 3 or more (Census and Statistics, 2021a).

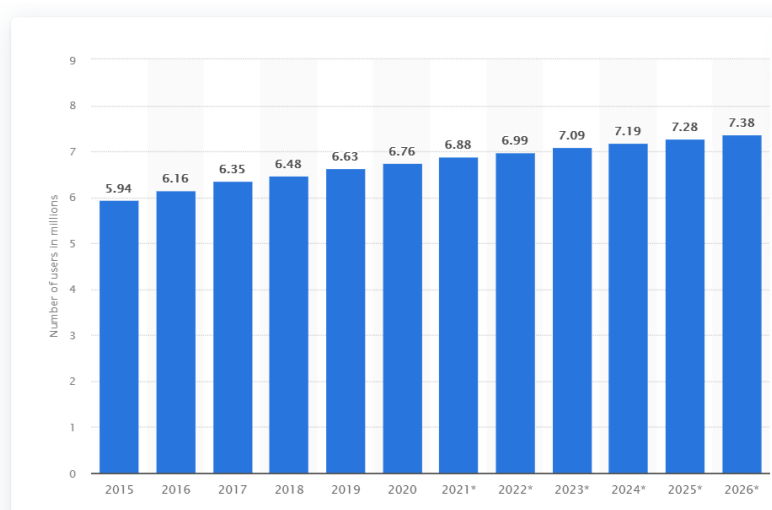


Figure 1.6: Number of mobile internet user forecasts from 2015 – 2026 in Hong Kong

Source: (Statista, 2021a)

In figure 1.6 illustrates the number of mobile internet users in Hong Kong from 2015 - 2026. In 2020, around 6.6 million people accessed the internet through their mobile phones. In 2026, the figure was projected to amount to 7.4 million mobile phone internet users. It implied that the penetration rate of using smartphones and using a smartphone to access the internet will increase incrementally in the future. There has also been a subsequent growth in mobile commerce, with consumers making purchases through apps or via browsers from their smartphones

Furthermore, internet access by smartphone became more popular. In 2020, 99.3% had used smartphones to access to the Internet. The corresponding percentage was 98.8% in 2018 (Census and Statistics, 2021a).

The smartphone penetration rate has continuously grown over the years. It has a positive impact on online shopping intention via smartphones also increased over the years. The figure shows below illustrates the correlation between these two figures.

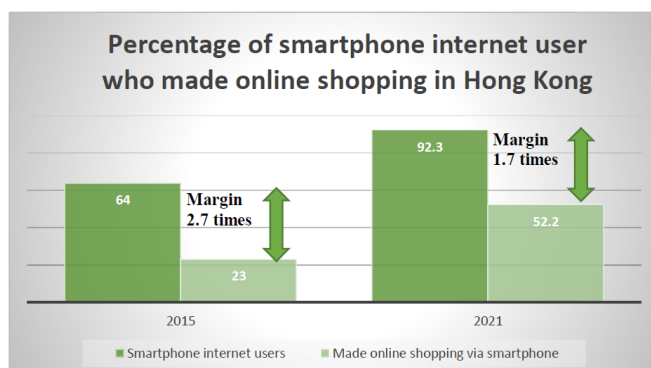


Figure 1.7: Percentage of the smartphone internet user who made online shopping in Hong Kong

Source: (DataReportal, 2015, 2021)

Figure 1.7 explained that the percentage of smartphone internet users and online shopping via smartphone is indicated increase rate over the years and narrowing the margin between this relationship from 2.7 times in 2015 reduced to 1.7 times in 2021. In other words, the higher percentage of smartphone internet users will leverage up the portion of online shopping intention.

1.2 Research Problems

The penetration rate of using the internet via PC or devices increased at the beginning of the 20th century in Hong Kong. Provided solid technology infrastructure to develop online purchasing in Hong Kong. Since then, consumer online shopping intention has increased incrementally over the years. However, COVID-19 triggers the opportunity to boost consumer intention further to use the online platform to make purchases more often from 2020. But the overall online retail sales still only indicate a mere contribution to total retail sales of less than 9% (see figure 1.2). Especially compared to the nearby region such as; China 24.7% and Asia 17.3% in 2021 (HKTDC, 2017).

1.2.1 Review of PC /Device Penetration Rate in Hong Kong

Figure 1.8 shows the demand for internet access increased and maintained a high level over the years. Therefore, while the demand increases for internet service, enable Hong Kong to have robust Information and Communications Technology ICT infrastructure over the years (see table 1.1)

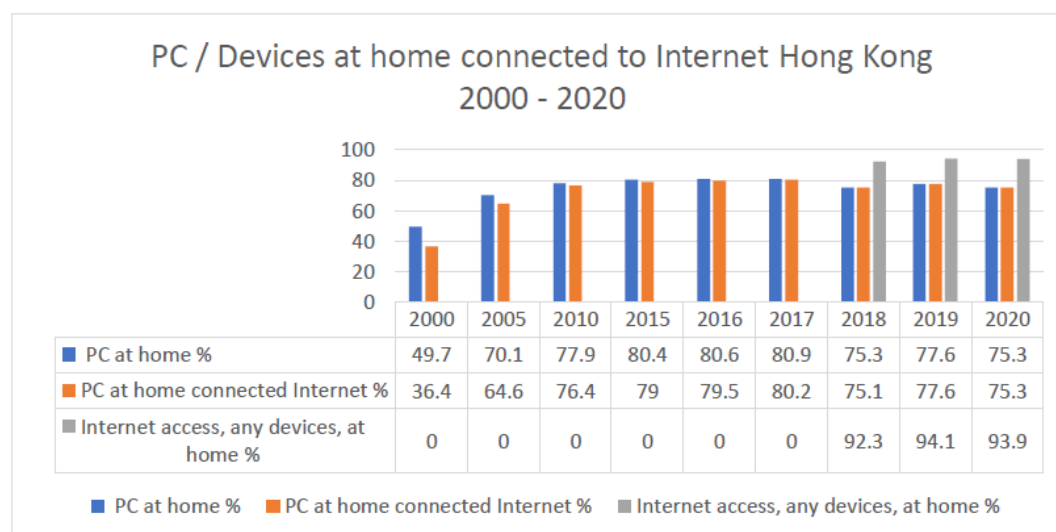


Figure 1.8: PC / Devices at home connected to internet in Hong Kong 2000 – 2020

Source: (Census and Statistics, 2020a)

Year	2009	2013	2015	2017	2019
Household broadband penetration rate (%) (a)	80%	83%	84%	93%	94%
Customer access via broadband networks (exabytes) (b)	1.4	2.6	3.5	6.0	7.8

Notes: (a) Broadband means the capacity to transmit data at the rate of 1 Mbps or above

(b) 1 exabyte = 1 million terabytes

Table 1.1: Development of ICT Infrastructure in Hong Kong 2009 -2019

Source: (Legco.gov.hk, 2020a)

Table 1.1 demonstrated that ICT facilities are getting ready for the e-commerce world over the years. People with access to internet platforms have been rising in the last twenty years in Hong Kong, which provides a solid infrastructure for both retailers and consumers to get prepared for the e-commerce environment.

1.2.2 Customer online Shopping Intention Initiated from 2016

The ICT infrastructure is the driver for economic growth. In 2015, the Innovation and Technology Bureau (ITB) was established to formulate holistic I&T policies, aiming to enhance Hong Kong's competitiveness and improve the quality of life for the citizens (Innovation and Technology Bureau, 2020), despite being so digitally well – connected. But the customer attitude toward e-commerce was considered less enthusiastic in 2016. However, the consumer intends to use online purchase via online e-commerce platforms and mobile apps expected to increase for 2017 – 2018 in Hong Kong

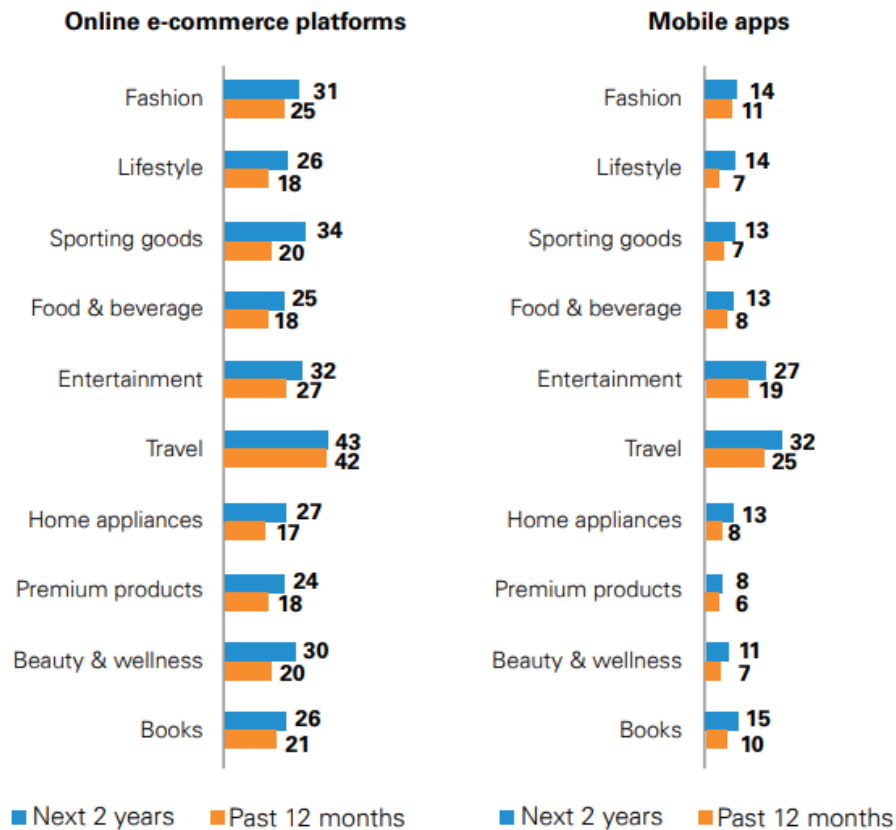


Figure 1.9: Consumer shop intention forecasting based on categories in 2016
Source: (KPMG, 2016)

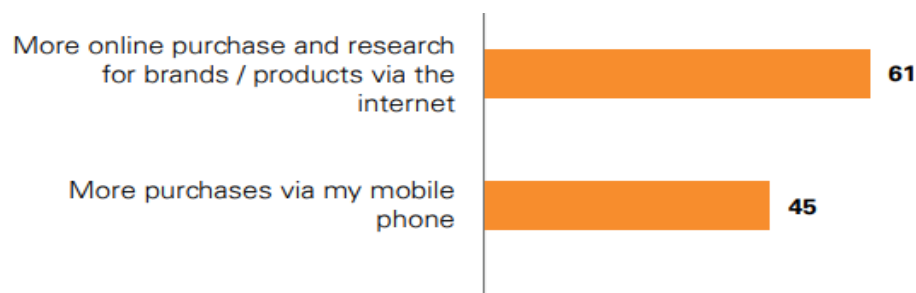
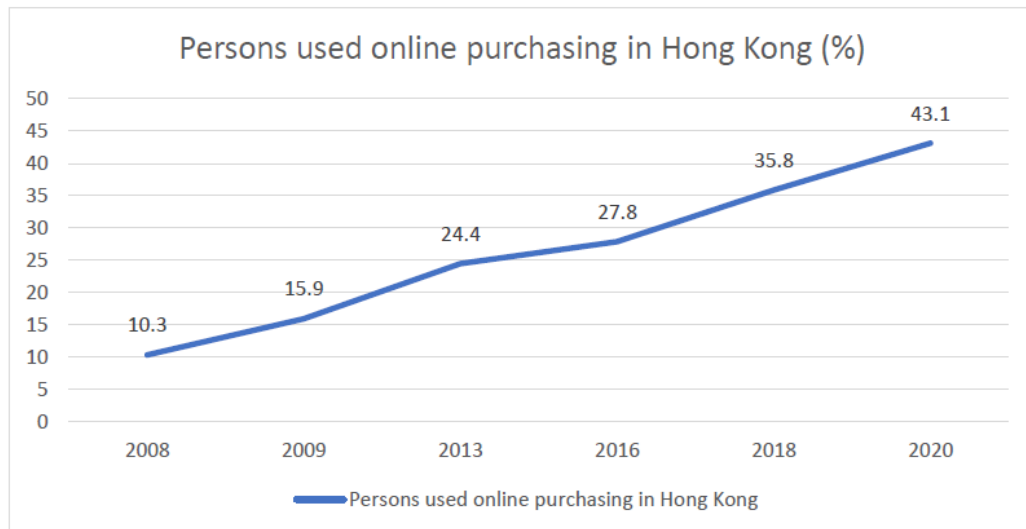


Figure 1.10: Consumer prefer device to make purchase in 2016 onward
Source: (KPMG, 2016)

Figures 1.9 and 1.10 explained that peoples generally tend to choose online platforms to make purchases for most categories since 2016. The studies also indicated 61% of the respondent would use more online purchases and searching functions for products and revealed 45% of the respondent will make more purchases using mobile phones. The result is implied that people are generally full of positive expectations for the lifestyle of using online platforms over the years, especially from 2016 onward



Notes: Aged 15 and over had used one or more types of online purchasing service

Figure 1.11: Persons used online purchasing in Hong Kong from 2008 – 2020

Source: (Census and Statistics, 2009, 2013, 2015, 2017, 2019, 2021b)

Figure 1.11 shows that people's intention to use online platforms to make purchasing is increasing over the years. According to this result, comparing 2008 to 2020, the increase is more than 4 times. It implied that people willing to make online purchase intention indicate significantly improved nowadays than ten years ago.

1.2.3 COVID-19 Boost Up Online Shopping Intention

During the outbreak of COVID-19, In response to the danger and spread of the new coronavirus. The Department of Health in Hong Kong implemented intense surveillance measures, including tight border restrictions, social distancing, and mask-wearing in the community. Social distancing measurements include suspension of classes, avoiding going to crowded places, and work-from-home arrangements and those implementations applied to the local society since February 2020 (Legco.gov.hk, 2020). These arrangements trigger the consumer intention to do online shopping.

Research conducted during May – September 2020 demonstrated that consumer intention toward online shopping has increased compared to before the pandemic.

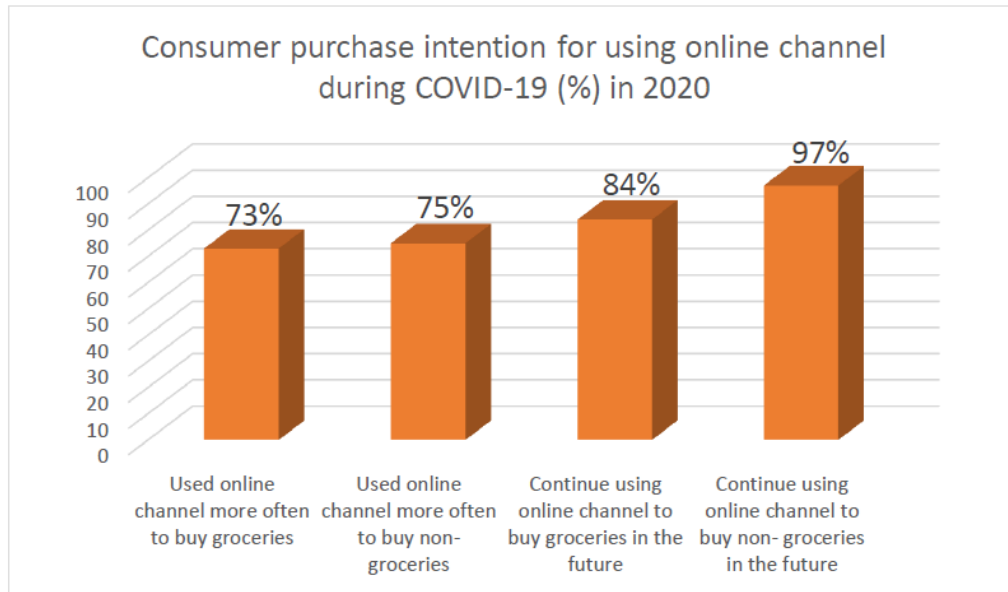


Figure 1.12: Consumer purchase intention for using online channel during COVID-19

Source: (KPMG, 2020)

Figure 1.12 explained that consumers make an online purchase more often than before the COVID-19, implying that they willingly use the online platform more often afterward. Hence, the online retail value expecting to increase in the future

1.3 Research Objectives

Although the penetration rate of internet access is high over the years in Hong Kong, online shopping seems to be one of the primary functions for most online users. However, the online retail sales did not significantly impact the whole retail sales in Hong Kong. Only when the city hit the COVID-19 outbreak in 2020 caused more online users became online shoppers due to social distancing measurement.

Therefore, this research aim to investigates what key factors caused consumers to make an online purchase during COVID-19. The following objectives will be examined throughout the research

Objective 1: To investigate if the convenient motivation affects customer satisfaction to make online purchase.

Objective 2: To evaluate the perceived value influence customer satisfaction level to make online purchase.

Objective 3: To assess what customer perception can make customer satisfy to conduct online shopping

Objective 4: Exploration of relationship between the prior purchase experience level and customer willingness to make online purchase.

1.4 Research Questions

In response to the research objective, several research questions have been designed to examine different variables in this research study. The research questions (Q) to respond to the objectives (O) of this study are:

Q1 to O1: To determine the correlation between time saving orientation and customer satisfaction to make online purchase during COVID -19

Q2 to O2: To determine the correlation between price saving orientation and customer satisfaction to make online purchase during COVID -19

Q3 to O3: To verify if the word-of-mouth effect can cause customer to satisfy to make online purchase during COVID - 19

Q4 to O4: To examine the correlation between customer satisfaction level and purchase intention for online shopping during COVID -19

1.5 Research Value

For current online business retailers, the research finding will provide in-depth information that helps identify what major factor will enhance consumer online shopping intention. Hence, a growing appetite among consumers for e-commerce is increased. Retailers can develop a competitive strategy or refine the current implementation based on the finding of this research to attract more potential customers during or post Covid-19 pandemic situations in the market.

From an investor's perspective, the conclusions of this report will provide a comprehensive evaluation of understanding potential factors that caused consumer online shopping intention from an online user perspective. Thus, based on the consumer shopping attitude for e-commerce environment toward the online market in Hong Kong, “The trend is your friend.” Therefore, an investor can be well-equipped to capture any business opportunity in the online purchase sector in the post- pandemic environment in Hong Kong.

1.6 Chapter Key Summary

Consolidated all the results shown above, given the depth review and understanding of online shopping development background in Hong Kong. However, the penetration of both PC and mobile internet usage has been rising over the years. People who used online purchasing via both devices increased incrementally since 2008. But the evidence showing the correlation between the penetration rate increased of both PC and smartphone internet users has not brought significant economic growth in terms of the total value of online sales accounted of total retail sales in Hong Kong market.

Nevertheless, when the COVID-19 pandemic started in early 2020, consumers generally became more interested in online shopping due to social distancing measurement implementation that caused people less intention to go out to purchase

daily groceries. Therefore, consumer willingness to purchase via online platforms increases during the pandemic. Consequentially, it helps boost the consumer's online intention toward online shopping.

This points out the value for this study that what factors can cause consumers to make an online purchase, and maintain the intention willingly remain at a high level to make a valuable contribution toward the online sales value of Hong Kong. Moreover, this study can also provide commercial value for the business retailer and potential investors in the e-commerce sector. The growing importance to retailers of adopting an omnichannel approach. An increasing appetite among consumers for e-commerce also implies that retailers who reply only to physical stores risk missing out on opportunities. It also explained why the online sales value indicated only a mere contribution toward the total retail value in Hong Kong. And explain the significant element of this study.

Chapter Two: Literature Review

This chapter will summarize theories on customer purchase intention of online platform develops the literature review. First, this chapter systematically set the background and characteristics of customer online shopping intention and identifies and discusses the dimensional features of online shopping intention. Secondly, the chapter studies the relevant concept of different factors that cause attractiveness of shopping online focuses on discussing its impact to influence potential customers to make online purchases. Finally, the chapter will select the most appropriate theories as it researches fundamental elements by combing the problem studied in this research and systematically putting forth the research hypothesis before building a research model. Especially for this research proposal to explore the effect of customer shopping intention toward the online platform.

2.1 Purchasing Intention Definition

In general terms, intention is defined as indications of how hard people are willing to try, how much effort they are planning to exert, performing the behavior (Ajzen, 1991). Purchase intention, defined as a customer behavior of higher purchase intention to buy a specific brand that they chose, also applies to the customer's desire willing to patronage or re-patronage (Wen, 2009). Some researchers also refer to purchase intention as the process of making a purchase decision, during which the consumer considers various conditions and rationales (Shah et al., 2012). Another recent scholar claimed that purchase intention is a process used to assess consumer decision-making taken by an individual (Lee, 2016). Consumer positive perceptions can string the desire to purchase goods based on lifestyle, satisfaction, and a positive attitude on purchasing intentions articulated (Ha and Janda, 2014). Scholars simplified that the decision decided by the consumer to make a purchase based on the attitude toward the product offered. To stimulate consumer purchase intention, require a different variable that can be given a significant impact on consumer purchasing willingness (Xiao, Yang and Iqbal, 2018)

2.1.1 Factors Influencing of Purchasing Intention in Online Platform

Purchasing intention can be affected by different factors. Ajzen (1991) explained that intention is presumed to be an indicator of the extent to which people are willing to approach certain behavior and how many attempts they are trying to perform a certain intention. According to the research result, lack of intention to purchase online is the main obstacle in developing electronic commerce (He et al., 2008). However, in the review of the past 20 years, internet shopping is a phenomenon proliferating nowadays. In the past decade, there has been a dramatic change in how consumers have altered their way of shopping. Although consumers continue to purchase from a physical store,

they feel very convenient to shop online since it frees the customer from visiting the store personally. Moreover, online shopping has its advantage, and it reduces the effort of traveling to a physical store. A decision can be made from home at ease looking at various choices and making prices comparison can be easy with competitor's product before making the final decision to purchase (Shanthi and Kannaiah, 2015). Customers are better able to efficiently use their time benefit from the advances in Internet technology development. Consumers can now use the internet for a variety of purposes such as research, communication, online banking, and even shopping (Rakesh and Madhushree., 2015). E-commerce platform as a shopping medium mainly because consumers can make purchases comfortably at their own homes of their own time (Jiang et al., 2013, Rezaei, et al.,2016a). Some scholars identified some factors that caused the key reasons why consumers prefer to use online service: convenience, usage usefulness, prior online experience, and other motives (Littler and Melanthiou, 2006; Saarijärvi et al., 2014; Rezaei et al., 2016b).

2.1.2 Application of Purchasing Intention in this Study

Based on the previous chapter, this study aims to investigate what key factors caused the online consumer to be willing to make online purchases. Customer online purchase intention was one of the intensive research areas in the extant literature. Customer online purchase intention in the web-shopping environment will determine the strength of a consumer's intention to transform purchasing behavior via the Internet (Salisbury et al., 2001). In other words, understanding the reason behind that makes consumers conduct online purchases will be able to translate purchase intention into purchase action. The study's primary purpose is to examine the structural relationship with different factors based on previous scholarly recommendations. And further converting these factors into different variables for this study included time saving, price saving,

word-of-mouth toward customer satisfaction. Thus, customer satisfaction will influence customer online purchase intention. Especially during the period of COVID-19 in Hong Kong in 2020.

2.2 Time Saving Definition

From a time-saving perspective, consumers always intend to "buying time" when switching to online shopping (Jensen, 2012; Alreck & Settle, 2002). Another researcher also explained that lack of time would inconvenience consumers to purchase in physical stores, and consumers will tend to keep using online services when the time saving occurs (Wu, 2003). When people find themselves chasing for a time due to daily life activities, consequentially cause people intention to see or look for instances that can allow them to save more time (Bashir et al 2019, Alreck et al., 2011))

2.2.1 Importance of Time Saving in Online Shopping

Time is defined as a critical resource that consumers can shop online or in a physical store (Bhatnagar et al., 2000). Shopping on the internet usually takes less time than shopping in traditional retail outlets because of the many time-consuming activities that occur during the purchase process, such as finding a car park and waiting in the queue for check-out (Bellman et al., 2006). Thus, time saving becomes one of the primary concern factors that customers usually think of before attempting to use an online platform to do their shopping. A customer sees online shopping as useful, because it's able to save time, reduce efforts, and offer expanded store hours and efficient checkouts (Chiu et al., 2012). Furthermore, the time saving factor also increases the value of services because it reduces the amount of time and energy consumers expend (convenience) to purchase specific items (Jeng, 2016). This literature can imply that the time saving factor plays a significant role during the entire purchase process applied in

both online platforms or physical situations. However, according to some researchers, after reviewing 45 articles relating to the adoption of online shopping, it concluded that the time saving function and consumer time consciousness indicated a relationship for online shopping adoption (Chang et al., 2005) directly. These studies have shown that this time saving factor is considered one of the important influences on purchase intentions, especially related to the online shopping situation for consumer consideration.

2.2.2 Linkage between Online Convenience and Time Saving

Nowadays, an online user can easily access convenient services and products through the internet, a consumer can do online shopping that meets their needs quickly and easily. The most significant convenience for consumers is enabling them to order from home and have ordered items delivered. This helps save time due to fewer visits to traditional retail stores (Ramus and Asger Nielsen, 2005).

According to some research studies, almost everyone (90%) considered Internet shopping to be convenient. Implied that online shop is always open (24/7), and it is easy, less stress and time saving to shop from home (Al Karim, 2013). Another scholar explained that experienced online buyers view online shopping to buy products anytime and anywhere. However, for experienced buyers, convenience might be the inherent rather than dominant benefit of online shopping (Chiu et al., 2012).

There are different online shopping conveniences received by consumers, such as access, search, evaluation, transaction, and possession convenience (Hanus, 2016). Search convenience is related to the opportunity for researching and comparing products without physically visiting stores. Consumers can save time to purchase from home without being occupied other times. Another scholar proposed that online shoppers' convenience and time saving features encourage online shoppers to shop

online with a strong motivation (Jiang, 2002). Furthermore, some previous research indicates that perceived convenience of online shopping on the internet also positively impacts online purchase behavior (Wolfenbarger and Gilly, 2001, Bhatnagar et al., 2000). It is implied that consumers who are oriented to convenience are more likely to use the Internet to make a purchase. These research result has explained that consumer online shopping intention level has a close relationship with the level of convenience and time saving received by the online user

2.2.3 Application of Time Saving in this Study

In review the above studies given that a consumer assessment of time saving depend on the consumer personally conception toward online purchase, although the previous research demonstrated the linkage between time saving and online shopping intention (Jensen, 2012, Alreck & Settle, 2002) and the relationship between convenience factors given direct impact toward customer satisfaction which lead to customer to make online purchase intention (Hanus, 2016). But those studies were conducted under regular social situations. Conversely, the value of this study is assessing consumer online purchase intention by using the scale of access and search convenience of time saving perceived level to determine the correlation between time saving and customer satisfaction.

2.3 Price Saving Definition

The price value refers to the monetary value for product exchange or service in a purchase agreement (Nagle, 2020). Consumers always seek price saving through discounts to save money through a special offer or price discounts (Darke et al, 1995). Another study also claimed that the deal would add perceived value to a ready-to-sell item that consumers want to purchase because the special offer from the retailer caused

the prices to be an even better deal (Thaler, 2008). Lower prices stimulate sales while increasing the product's value for consumers (Madan and Suri, 2001). The price saving is defined as the factor of monetary savings and can also be viewed from the other perspective of not leading to extra cost to purchase a product or use a service (Escobar-Rodríguez and Carvajal-Trujillo, 2014).

2.3.1 Importance of Price Saving in Online Shopping

The most significant difference between traditional retail and online shopping is that online shopping can offer lower costs and save time together when making a purchase. This gives a relative advantage for purchasing on online platforms (Akroush & Al-Debei, 2015). Consumers are willing to try to shop online to make price saving, and that price is assumed to be lower. Therefore the price plays a important role in motivating consumers to shop online (Karleson et al, 2005). Moreover, a scholar also noted that quick price search allows consumers to navigate the best-offered product or service more efficiently via online platform. A strong motivation boosts the consumer intention to shop online more often (Joines et al, 2003; Watchravesringkan et al, 2003). Therefore, online consumers can compare prices by visiting different websites that offer lower prices. Because using the internet makes it easier to conduct prices comparison. It consequentially provides the opportunity for consumers to buy the same product on different websites and search for lower prices (Chiu et al., 2012, Gentry & Calantone, 2002). Price has been considered an essential factor that affects consumers' online shopping satisfaction, motivating consumers to proactively search online for the best value for money or discount for their benefit as one purpose (Wright and Jayawardhena, 2001).

2.3.2 Application of Price Saving in this Study

Given that a customer assessment of price saving depends on their own perception of the price value for the target product or service, their attempt to make a purchase during browsing and search price discount on Internet. After comparing prices, consumer purchase decisions will be made by visiting different websites that identify the best offer in terms of price value for a specific product or service (Chiu et al., 2012, Gentry & Calantone, 2002). Although price saving may not be the only requirement that affect the customer purchase intention via online platform (Watchravesringkan et al, 2003). But when the consumer receives satisfaction towards online shopping will lead to a positive impact on purchase intention to search online products and find related price information (Blackwell et al, 2001, Helander and Khalid, 2000). Moreover, Shim et al (2001) proposed that consumers' satisfaction level toward online shopping significantly affects customer online purchase intention. In this study, the social distance implementation during COVID-19 in Hong Kong, caused people perform positive attitude toward online shopping. Therefore, there is a linkage between attitude positive attitude and price saving. Thus, this study will examine their relationship to determine the correlation between price saving and customer intention to make online purchase under the COVID-19 pandemic in Hong Kong. which aligned with one of the research objectives for this study.

2.4 Word-of-Mouth (WOM) Definition

WOM can be defined as a powerful primary communication tool that affects others' emotions and actions to build a powerful image within the human mind (Ahmad et al, 2014). Traditionally, WOM is required and involves face-to-face two-way communication based on a social relationship (Money et al, 1998). And WOM can convert lower-order cognition and affect to higher-order cognition and affect, which in

turn can lead to committed behaviors (Bristor, 1990). WOM has been studied both as an input into consumer decision-making (Bloch et al, 1986) and as the outcome of the purchase process (Richins, 1983). In review, all the previous studies and research implicated that the WOM also influences the plurality of all buying decisions for more than half a century (Ahmad et al, 2014). Therefore, WOM can defined as a risk-reducing strategy in the pre-purchasing stage, helps consumers seek product or service information by participating in the WOM process.

2.4.1 Importance of Word – of – Mouth in Browsing Online Shop

More than 60% of online shoppers consider the word of mouth is the most important reason given impact to purchase decisions (Charlton, 2012; Floyd et al. 2014). Another research studied what factors might affect customer purchase behavior, such as the volume (how many reviews) and the review content (Cheung and Thadani, 2012). Other scholars also highlight the importance of other consumers' reviews. These scholars claimed that other consumer's reviews can influence consumer purchase decisions for online products. This review message is related to different perceived opinions, such as the quality, performance, and after-sales service. Which can give impact to other factors such as the provider brand reputation, and potential customer purchase intention toward their products (Jalilvand and Samiei, 2012, Almana and Mirza, 2013, Tham et al, 2013, Charo et al, 2015). This shows the directly associated with the customer's perception, behaviors, and attitudes toward the product or service itself or even online retailer (Huete-Alcocer, 2017).

Online shopping intentions (emphasize purchase intention) are considered the key factor of online behavior. Thus, it will be affected by the changing characteristics of the word-of-mouth communication process (Erkan and Evans, 2016). Another researcher claimed that positive WOM positively moderated customers' trust and belief toward

online retailers and built customers' trust in making online purchase decisions (Cheung et al, 2009). Therefore, consumers have their own right to decide to use online platform to make purchase activity, which is based on WOM effect by another consumer. The research identified that electronic word-of-mouth communication can influence consumers' purchase behavior, especially for online shopping behaviors (Chevalier and Mayzlin, 2006). This concluded from above research finding that relevant linkage between WOM and online purchase intention.

2.4.2 Application of WOM in this Study

In review the function of WOM toward the consumer shopping is indicated directly correlation affected customer satisfaction, perception of the whole purchase expectation and eventually convince moderated customer's trust and belief toward online intention into online shopping action (Cheung et al, 2009, Jalilvand and Samiei, 2012, Almana and Mirza, 2013, Tham et al, 2013, Charo et al, 2015).

People seem to have developed a high level of belief in anonymous people who post their after-use reviews of the product online. In contrast, they have low levels of trust of reviews on TV, radio, newspaper, or magazines (Lee et al., 2009, Zhang et al., 210). Although the previous literature demonstrated the positive linkage between WOM and online shopping intention in terms of select product or service. This study also assesses the effect of WOM on stimulating consumer intention by enhancing customer satisfaction level to use online platform to purchase product or items during the COVID-19 pandemic in Hong Kong.

2.5 Customer Satisfaction Definition

In some previous years research has defined the customer satisfaction (CS) as the consumer's fulfillment response. It is a judgment that a product or service feature, or

the product or the service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under or over fulfillment (Oliver, 1997). Seven years later, Schiffman and Kanuk (2004) claimed that CS is typically defined as the individual's perception of performance of the product or service in relation to his or her expectations. In other words, satisfaction is a feeling that results from evaluating what was received against that expected, the purchase decision itself and/or the fulfillment of needs/wants (Parker and Mathews, 2001). In review these scholars finding, it is implied that customer satisfaction level depends on their perspective of the total purchase experience throughout the entire activities. These activities are "problem recognition, information search, evaluation of alternatives, purchase decision, and purchase behavior" proposed by Kotler and Keller (2009) explained that a buyer goes through these five stages while planning to make purchase. Thus, the level of customer satisfaction for shopping online seems based on the consumer individual's perception of performance toward online retailers during these stage models of the buying process.

2.5.1 Importance of Customer Satisfaction in Online Shopping

Online shopping can arouse positive emotions among customers (Bagdare and Jain, 2013). Still, some scholars have pointed out that some customers who have not experienced online shopping will think that online shopping is risky because it may leak any sensitive personal data during making online purchases (Sanny & Gerardo, 2020; De Kerviler et al., 2016). However, other scholars believe that higher education level positively influences online shopping behavior (Hasanov and Khalid, 2015). Thus, customers are concerned about online shopping satisfaction. Although the customer has had an online shopping experience before, the customer shopping behavioral intentions will be affected based on this prior experience (Wu, 2013).

2.5.2 Customer Satisfaction Affect Repeat Purchase Intention

In traditional markets, consumers' service experience is regarded as an important indicator for estimating their satisfaction and repeat-purchase intention (Anderson and Sullivan, 1993; Bardhan et al., 2010; Bolton, Kannan and Bramlett, 2000). Early research identified that a shopper having successfully obtained the desired product from a particular online store, will remember this positive experience and are likely to purchase from the same store again (Jarvenpaa and Todd, 1996). Like consumers in off-line markets, consumers in on-line markets constantly experience services provided by retailers throughout the purchasing product/service processes. Customer satisfaction is one of the most important variables to influence consumer repeat purchase intention in online shopping. As in the case of off-line consumers, consumers' experiences of provided services are a key factor in forming their satisfaction and repeat-purchase intention in on-line marketplaces (Rust and Lemon, 2001; Shankar et al., 2003). However, unlike off-line consumers, on-line consumers need to consider an additional trust or privacy issues when evaluating their satisfaction/repeat-purchase intention (Parasuraman et al., 2005). Scholars also point out that utilitarian value and the hedonic value indicated a significant relationship to impact consumer personal perceptive, impacting their repeat purchase intention (Chiu et al., 2012). Furthermore, recent research also emphasizes that online repeat purchase intention is strongly driven by customers' satisfaction with an online retailer. Customer satisfaction with an online retailer was positively influenced by several factors, including personalization, ease of communication, and customer privacy (Mpinganjira, 2014). Study results simplified that customers must shop four times at an online store before the store can profit from that customer (Mainspring and Bain & Company, 2000). Therefore, online retailers need to understand what caused consumers to make repeat purchases through their

stores. It is also implied that when customer satisfaction is constantly maintained high level received by online store, the customer will more frequently to shop and make purchase in that online store. Consequently, the customer willingness to make repeat purchase intentions will also increase based on their prior shopping experience and the perceived value that online store receives. Parasuraman and Grewal (2000) also claimed that perceived value is the essential predictor of repeat purchase intention. The most recent research also further emphasized that experience quality on both customer satisfaction and perceived value impact. Suppose there is an increase in the experience quality. In that case, customer loyalty will also be increased, encouraging a customer to make a repeat purchase of the product and service offered (Kusumawati and Sri Rahayu, 2020).

2.5.3 Application of Customer Satisfaction in this Study

A person's online purchase experience and satisfaction would be considered an important factor that affects both attitude and intention to purchase (Wesiberg et al., 2011). Given that the customer finds online shopping risky, the prior shopping experience seems not given any negative impact on their satisfaction level during the online shopping process can be disclosed any personal data (Sanny & Gerardo, 2020; De Kerviler et al., 2016; Wu, 2013). Moreover, by reviewing different research results over the last two decades, almost all the scholars identified that customer satisfaction significantly correlates with repeat purchase intention (Anderson and Sullivan, 1993; Bardhan et al., 2010; Bolton, Kannan and Bramlett, 2000). And the perceived value offered by retailers and delivery to constantly shop customers has influenced them to encourage them constant patronage at the same online store (Kusumawati and Sri Rahayu, 2020; Mpinganjira, 2014; Parasuraman and Grewal, 2000). To gain further insight into customer satisfaction and repeat purchase intention under uncertain social

economies such as global epidemic situations. Therefore, this study will examine the correlation between customer satisfaction level and purchase intention for online shopping under COVID-19 pandemic in Hong Kong. Which aligned with one of the research objectives for this study.

2.6 Chapter Key Summary

In review of this chapter, the researcher conducts the critical review and up to the date material. Academic support is available for the definition of proposed factors on the achievement of theoretical research on the purchase factors causing online customer purchasing intention for online shopping are clearly identified. However, although many scholars have been studying sufficient research on customer shopping intention for online shopping. The coverage of existing studies on customer intention to use online shopping in COVID-19 pandemic situation, mainly focus on the Hong Kong market, is very limited. Because of that, this study will seek to address this gap. Thus, this study's theoretical model and hypothesis are suggested, which further explore the relationship of individual factors in detail. Therefore, following chapter will then select the most appropriate research method according to the developed research hypothesis mentioned in this chapter and conduct the critical evaluation.

Chapter Three: Research Methodology

This chapter will explain what research process will be conducted to achieve the objectives have mentioned in this research study and provide further discussion in this research paper. The nature of this research is descriptive. This research aims to explore the online customer purchase intention toward online shopping in COVID-19 and to measure how the different factors are given impact to determine the outcome. In the early days, scholars claimed that “the business research is a systematic, organized, critical, data-based, objective scientific investigation into given problem conducted with purpose, to obtain a solution or answer” while some recent years scholars proposed that research method requires a starting point, direction, specific methods and an appropriate technique for collecting and analyzing the data (Jonker and Pennink, 2010). Therefore, in order to achieve the study objective systemically, it is proposing the research paper will be based on the research onion concept defined by Saunders et al (2016). Thus, a survey was conducted to gather primary data using relevant questions regarding online shopping intention in the designed questionnaire. A simple random process is used to collect data for this research. And the quantitative analysis approach has been chosen to apply for this research data. This method can help reduce respondent bias and accommodate coding and tabulation (Collis and Hussey, 2009). Hence, the Likert scale has been used for some key research questions in the survey.

3.1 Research Framework

Establishing an understanding mindset is essential to provide a clear direction for the research design in the initial phase. These five common assumptions that most of the researchers will apply to represent their beliefs for examining the reality of their research project: ontology, epistemology, axiology, rhetorical, and methodological. (Creswell, 2007). But another author stated the nature of reality based on each paradigm,

postmodern, and positivist is critical in framing the whole process of the research project. Ontology refers to the meaning of studying the existing reality; in other words, “What is reality?”. For the researcher, what they see to study about the research project. The business management terms can be referred to as the firms, business organization, management that the reality is continuously negotiated, debated, or interpreted. (Saunders et al., 2016)

Epistemology is another different assumption that is driven by ontological beliefs. Epistemology investigates the correlative between knowledge and the researcher throughout the investigation. But the correlation between the researcher's beliefs and what can be discovered is according to the researcher's ontological beliefs (Killam, 2013). Furthermore, the underlying research philosophy included a bundle of assumptions and brief, that will use in knowledge accumulation, inclusive of generalization historical revisionism that guides a researcher to conduct their research. (Phillips, 2014). Therefore, the indisputable fact is that the value contribution of online retail sales only accounted for a mere contribution compared to total retail sales value. And the situation was continuously happening for some time. Thus, it is more logical to conduct the research objective by ontological assumption for further study direction. The philosophies of this research are based on positivist philosophies

This study uses four variables: time saving orientation, price saving orientation, and word-of-mouth effect toward customer satisfaction to point out the significance of the relationship with purchase intention, which attempts to explore the roots factors that can stimulate consumer purchase intention to make purchase willingly through Internal technology to conduct online shopping. Thus, the researcher of this study hopes to find out the relationship between these variables and online customer purchase intention. Examining there is a relationship between dependent and independent variables. After that, the result of the hypothesis will be drawn into conclusion.

3.1.1 Relationship between Time Saving and Customer Satisfaction

Time saving is one of the major elements for customers who can be motivate by this factor, to make purchase from traditional offline to online shopping, because of the many time-consuming occurred during the whole shopping process can be reduce time via make purchase in online platform (Bhatnagar et al., 2000; Bellman et al., 2006)

However, the exact nature of the relationship between time saving, and online purchase intention, especially their influences on customer satisfaction and consumer purchase intention in COVID-19 pandemic in Hong Kong market, has not been clearly discovered up to date. In order to extending the understanding of the relationship between these constructs, the following hypothesis is developed for observation in this study.

H1: Time saving has an obviously positive effect customer satisfaction to make online purchase during COVID-19

3.1.2 Relationship between Price Saving and Customer Satisfaction

Many conceptual studies conducted in the past (Chiu et al., 2012; Gentry and Calantone, 2002; Wright and Jayawardhena, 2001) explained that consumers can feel comfortable conducting prices comparison, by browsing different websites to searching the lower price of the target want-buy product or service. Before making purchase decision. Because the lower price of the product consumer can get, increase the product's value for the consumer (Madan and Suri, 2001). Some scholars proposed that price is considered an important factor that impacts customer satisfaction. Customers are more empowered as they find the ideal prices, value for money all as one goal (Wright and Jayawardhena, 2001).

A recent study has also proven that price benefit is a relationship with perceived value. Jin et al, 2013 and Hapsari et al, 2017) claimed that customer experience quality and customer perceived value affected customer happiness and overall satisfaction.

The above finding explained the relationship between price saving, satisfaction, and purchase behavior. However, a recent study has not clearly discovered this relationship in the COVID-19 pandemic in Hong Kong market situation. Therefore, the hypothesis is proposed as follows.

H2: Price saving has an obviously positive effect customer satisfaction to make online purchase during COVID-19

3.1.3 Relationship between Word-of-Mouth and Customer Satisfaction

Based on the discussion in the previous chapter. Many researchers have proven that word-of-mouth positively influences consumer judgment for online product (Charlton, 2012; Floyd et al., 2014). This effect appears to be stronger when the consumer faces an uncertain experience and when the word-of-mouth sources is perceived from other consumer reviews message (Cheung and Thadani, 2012), others scholar also claimed that consumers seems more reliably informed the message by other consumers rather than the message presented by the retailer or the product owner, it implied that trust likely results in online reviews having a greater impact on consumers' purchase intention and buying decision as all in one purpose (Lee and Youn, 2009; Tham et al., 2013). Given this evidence, it plays an important role in enhancing the degree of online customer satisfaction because of improved product judgment by positive word-of-mouth. However, this study will investigate how word-of-mouth affects customer satisfaction, which might also affect online customer purchase intention in the COVID-19 pandemic situation in Hong Kong that may not have a disconfirming experience.

Based on the above discussion, the hypothesis about the relationship between word-of-mouth and customer satisfaction is formulated.

H3: Word-of-Mouth has an obviously positive effect customer satisfaction to make online purchase during COVID-19

3.1.4 Relationship between Customer Satisfaction and Online Purchase Intention

Business academics have demonstrated a high interest in the relationship between customer satisfaction and online purchase intention (Sanny & Gerardo, 2020; De Kerviler; Demoulin and Zidda, 2016; Wu, 2013). Moreover, consider the fact that the level of customer satisfaction shows a significant correlation with repeat purchase intention (Anderson and Sullivan, 1993; Bardhan et al., 2010; Bolton, Kannan and Bramlett, 2000). And the reviewed literature above suggested that customer satisfaction factors such as privacy concerns, prior online shopping experience, and perceived values influence online customer motivation to make online purchase decisions. Therefore, this research tended to support Wesiberge et al. (2011) that personal perspective in terms of prior purchase experience regarding time saving, price saving, word-of-mouth will impact customer satisfaction, and consumer purchase intention to make purchase online platform. Based on this academics support, the hypothesis is developed to investigate the relationship between customer satisfaction and online purchase intention, especially during the COVID-19 pandemic situation in Hong Kong.

H4: Customer satisfaction level has an obviously positive effect online customer intention to make online purchase during COVID-19

3.1.5 Interrelationship between Time Saving, Price Saving, Word-of-Mouth, and Customer Satisfaction toward Online Purchase Intention

In conclusion, it is demonstrated that there are interrelationships between five variables based on the mentioned literature review and support conducted and consisted of time saving, price saving, word-of-mouth, customer satisfaction, and online purchase intention. However, the inadequacy and limitation on local research is no updated information in response to the situation under the COVID-19 pandemic. Hence, allow a potential area to this study for further investigation. Thus, four hypotheses relating to the corresponding relationship are to be tested

3.2 Research Hypotheses

This model is proposed as a contribution to online consumer purchase intention literature. It draws together elements of different factors into a cohesive framework that academics can empirically test.

According to the result in this chapter, this study proposes the hypothesis which depends on the defined factors. Based on the research concept, all the proposed hypotheses are shown below.

H1: Time saving has an obviously positive effect customer satisfaction to make online purchase during COVID-19

H2: Price saving has an obviously positive effect customer satisfaction to make online purchase during COVID-19

H3: Word-of-Mouth has an obviously positive effect customer satisfaction to make online purchase during COVID-19

H4: Customer satisfaction level has an obviously positive effect online customer intention to make online purchase during COVID-19

After reviewing the existing literatures relevant to customer intention toward online purchase, the research model has been developed based on the above defined hypotheses characteristics:

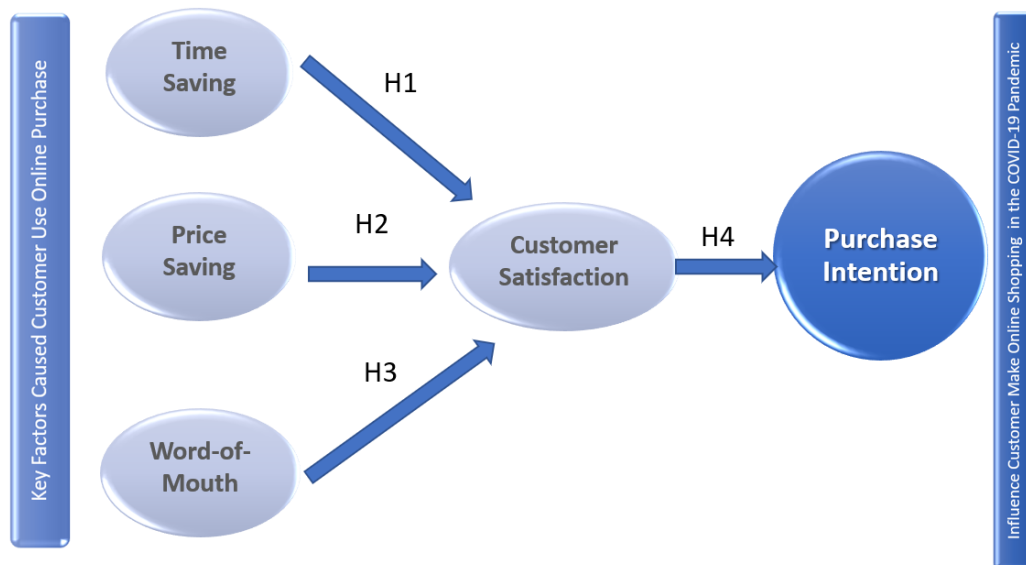


Figure 3.1: Theoretical model for this research

Source: Constructed by Writer

Figure 3.1 demonstrates that the research concept for this study, from the definition of different factors, explains that customer shopping intention has changed from an off-line switch to online purchase because these given factors significantly impact customer purchase options beyond the traditional method in general situation. While during the COVID-19 pandemic situation in Hong Kong, offline shopping methods are alleviated. The designed hypothesis shows above aiming to evaluate the correlation which may cause customer willingness to make online purchase during COVID-19 will be examine based on the literature review discussed in this chapter.

3.3 Research Design

Introducing the research onion concept is very influential in research methodology as a half-cut onion appearance. Each layer relates to philosophy and ontological perspective to describe each research study step from general to a specific stage. (Saunders et al, 2016). The illustrations shown below is the overall design for the research onion.

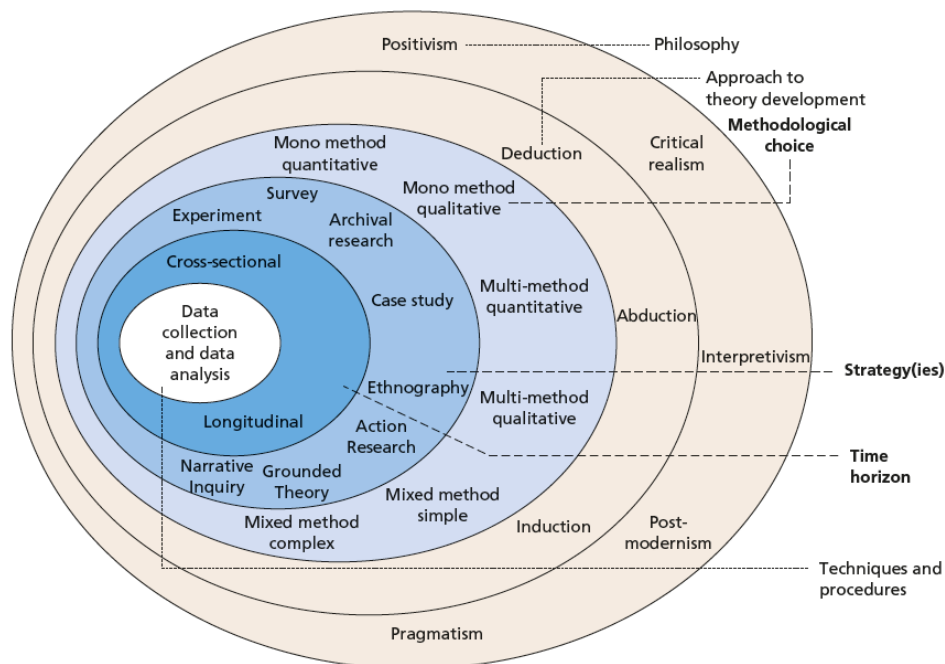


Figure 3.2 The research onion

Source: (Saunders et al, 2016)

In figure 3.2 illustrates, the research onion suggests that the researcher form different elements involved in the research could be examined to develop the final research design. The research design can be referred to as a plan that helps a researcher to collect and receive data from a big group of people and test study hypotheses. (Aparasu and Bentley, 2014))

3.3.1 Coding of Variables

To clearly define the corresponding relationships, each variable is coded and grouped by natures.

Independent Variables (IV) :

V1 – Time Saving

V2 – Price Saving

V3 – Word-of-Mouth

Mediating Variable (MV) :

V4 – Customer Satisfaction

Dependent Variables (DV)

V5 – Purchase Intention

For V4 – Customer Satisfaction, is consider as mediating variable. Allen (2017) explained that a mediating variable links the independent and the dependent variables, and whose existence explains the relationship between the other two variables. Another scholar simplified the mediating variable is intermediate in the causal chain relating X and Y such that X causes Z and Z cause Y. This type of relationship is called mediation. And the Z variable is called a mediator or mediating variable (MacKinnon, 2017).

3.3.2 Quantitative and Qualitative Approaches

The two main approaches commonly used in research purposes are quantitative, and the other one is qualitative approaches. Quantitative is more statistical and defined. This data measured is using values and numbers for analysis. And the qualitative data is not statistical and unstructured in nature. The function of this approach is based on attributes, properties, and other identifiers. (Taylor, 2010). Table 3.1 demonstrated that research designs can be applied for different research purposes; the table below provides an overview of some designs.

Quantitative	Qualitative	Mixed Methods
• Experimental designs • Nonexperimental designs, such as surveys	• Narrative research • Phenomenology • Grounded theory • Ethnographies • Case study	• Convergent • Explanatory sequential • Exploratory sequential • Transformative, embedded, or multiphase

Table 3.1: Different research design

Source: (Creswell, 2014)

3.3.3 Data Collection

The data can be collected in two ways, primary and secondary data. Primary data means the data gathered for the research study belongs to the original source from the first hand. On the other hand, secondary data are data obtained from a source other than primary data (Burt, Barber & Rigby, 2009). Regarding this research, this study's main data collection tool is the questionnaire survey under a quantitative approach. All questions used in the study were adapted from pretested questions used by other researchers. Therefore, a quantitative approach is selected for this research paper. To obtain a large number of local consumer data to conduct further study to achieve the research objectives. The questionnaire will be distributed in e-format via an internet-based platform using google form to collect primary data for the research proposal due to the pandemic issues and time limitation for the research schedule. According to Saunder et al (2016), a different research method has its flexibility to allow a researcher to obtain the data effectively. A survey is the most common research strategy. It is designed to be used for descriptive and exploratory research. It is an easy comparison and allows identifying how a population thinks and relates to specific issues or problems.

3.3.4 Variables and Sources of Questionnaire

Variable	Research Construct	Derived Scale Questions	Nature	Source
V1	Time Saving (TS)	TS 1 - 4	IV	(Escobar-Rodríguez and Carvajal-Trujillo, 2013) (Alreck and Settle, 2002) (Yeo et al., 2017) (Jarvenpaa and Todd, 1996)
V2	Price Saving (PS)	PS 5- 9	IV	(Escobar-Rodríguez and Carvajal-Trujillo, 2013) (Yeo et al., 2017) (Joines et al., 2003; Bakos, 1991) (Rintamäki et al., 2006)
V3	Word of Mouth (WOM)	WOM 10 - 13	IV	(Rowley, 2000) (Le-Hoang, 2020)
V4	Customer Satisfaction (CS)	CS 14 - 20	MV	(Khajehzadeh et al., 2014) (Thamizhvanan and Xavier, 2013) (Joines et al., 2003) (Yeo et al., 2017) (Kim and Park, 2005) (Le-Hoang, 2020)
V5	Purchase Intention (PS)	PS 21 -24	DV	(Escobar-Rodríguez and Carvajal-Trujillo, 2013) (Shim et al., 2001) (Kim and Park, 2005) (Le-Hoang, 2020)

Notes: (IV) – Independent Variable, (MV) – Mediating Variable, (DV) – Dependent Variable

Table 3.2: Variables Questions Allocation

Source: Construct by writer

In table 3.2 illustrates the outline of this research design questionnaire for data collection in purpose, this is based on the defined variables which is linked to related questions going to present in the questionnaire to conduct survey. The questions are designed based on past researchers and scholars from related research topics, which provided academic and literature to support this article.

3.3.5 Population

The definition of population for this research targets all potential customers toward online purchase. The unit of analysis will be individual of local citizen (included Male and Female) with age above 18 years ago and have used or have not used online platforms have purchased in 2020 in Hong Kong online market. According to Census and Statistics Department, the total population is indicated 7 394 7 00 in 2021. And the target respondent under mentioned criteria for this population (above 18 years ago in both gender) is 6 305 3 00 in same year (Census and Statistics, 2021g). Hence, the target population for this study accounted for 85% of the total population.

3.3.6 Sampling Method

A population sample technique will be used for this study. The sample survey means the data will be collected from a subset of individuals selected from a mass population (Kumar, 2008). Variables or characteristics of interest will be observed and measured on each sample individual. The main advantage of doing a sample survey allows the researcher to receive data from an entire population in the most effective and lower-cost way (Levy & Lemeshow, 2013). Therefore, using this method to collect data from sample group will be more practical in implementation and time-consuming to conduct this research process.

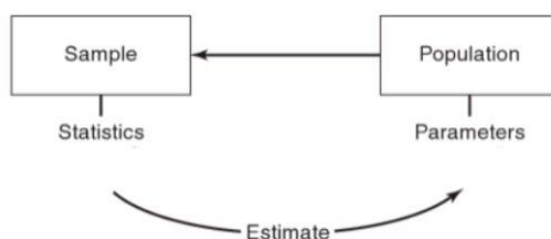


Figure 3.3: The relationship between sample and population

Source: (Bougie and Sekaran, 2010)

In figure 3.3 explained that taking sample from population will provide an estimate result from the population. Thus, the sampling data will collect from a questionnaire. And the questionnaire will ask the major concern topic that related to the objective for the research purposes.

3.3.7 Sampling Size

The sample size defined as the power of the study to detect a statistically significant difference between groups, the size of the sample should be calculated at the design stage (Bougie and Sekaran, 2010; Burn and Burs 2003).

Refer to Singh et la (2020), the calculation and explanation for the sample size can be determine by applying the following formula

$$n = \frac{Z^2 \cdot p \cdot q \cdot N}{e^2 (N - 1) + Z^2 \cdot p \cdot q}$$

Code	Figure	Explanation
n	196	Sample size for target population
z	1.96	Z score for 95% confidence level
p	85% (0.85)	Target study population % of total population
q	0.15	$q = (1 - p) = (1 - 0.85) = 0.15$
e	5% (0.05)	Tolerable error level
N	7 394 700	Total population

Table 3.3: The detail of sample size formula

Source: Construct by writer

$$n = (1.96)^2 (0.85) (0.15) (7\,394\,700) / (0.05)^2 \times 7\,394\,699 + (1.96)^2 \times 0.85 \times 0.15$$

$$n = 3\,621\,953.64 / 18\,487.2373$$

$$n = 195.9164$$

Hence a sample size of 196 is suggested number to conduct the survey for this study.

3.4 Explanation for Data Analysis

After collecting the sampling result, data will be processed analysis, such as reliability and validity test, descriptive and inferential statistics.

Measurement is the process by which rules and guidelines are used to assign numbers to represent characteristics of respondents or other objects (Clow & James, 2014). In any set of data collected, there will be some amount of error, and need to minimize this error so that the data provide a more accurate reflection of the truth (Litwin, 1999). Furthermore, the second preliminary step to examine the validity of research is based on pre-set variables that involve categorizing variables depending on their level of measurement, and validity refers to the ability of a measurement scale to measure what it proposes to measure. Measurement to be valid, it must be reliable (Clow & James, 2014).

To make the result more comprehensive, descriptive statistics will be used to make presentation the description of the data. Hence, the data can be more easily understood (Burns & Burns, 2008). The second use of statistical methods for this research is inferential statistics. Inferential statistical techniques is to determine whether there is a relationship between two or more variables such that changes in one of the variables will be systematically associated with changes in the other variables (Duignan, 2016). Therefore, to ensure the data analysis can be more accurate and systematic. The research will be using Statistical Product and Service Solutions (SPSS) (George and Mallery, 2020) as the analysis tool to study further the correlation and regression based on the finding. Thus, it allows more support elements to make further interpretations toward the designed objectives of the research project.

3.5 Ethical Consideration

All the research involving human participants nowadays and is subject to ethical consideration. A scholar claimed that “Research ethics comprise principles and standard that, along with underlying value, guide appropriate conduct relevant to research decision (Kimmel, 2009). Another scholars also states ethics is defined as “the norms of behaviors leading our conduction related with the most suitable person who turn your subject or are influenced by your work” researchers need to anticipate issues such as how anonymity may be compromised by a participant’s own behavior (Cassell et al., 2018). Therefore, this study will be following the university’s code of ethics restriction to prevent any ethical issues. Moreover, the assessed and authorized only by the assigned dissertation supervisor. These approaches are important to ensure that these ethical principles are applied throughout all stages of this research process, balancing the potential risks of research against the likely benefits.

3.6 Pre-test

The importance of pre-test is to ensure whether the pre-set draft questionnaire has good reliability and optimization design. Any opportunity for change makes the questionnaire easy to understand to potential participants. Whether the options are convenient for the respondent and will not feel annoying in the whole process. It can also measure whether the respondent will truthfully answer the question and predict the collection time for the entire survey timeline. The test was carried out in early December in 2021. Mainly to check the reliability of the questionnaire before the full-scale study. A sample size of 30 respondent were fully explained before sending out, so that they understood and were able to answer the questions as required

The questionnaire was distributed using the google form and is received anonymously to allow respondents more willingly to be investigated and reduce any potential bias.

The return ratio of the questionnaire is 100%, and no further modification is suggested to be made by the respondent. Thus, the data has been tested by using SPSS to analyze the reliability of the survey. Tavakol and Dennick (2011) explained that the research instrument's reliability depends on evaluating the questionnaire's internal consistency. Thus, when Cronbach's alpha scores above 0.70 are deemed acceptable, when the scores below 0.7 are defined as questionable survey. The pre-test result shown below illustrates the Cronbach's Alpha is above 0.7. Indicated 0.948

Scale: All

Case Processing Summary			
		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.948	27

Table 3.4: Pre-test Reliability Result

3.7 Research Schedule

In order to provide clear guidance for a researcher to obtain data, conduct analysis and make the conclusion. A research flow has been designed to show the step-by-step route to create the outline of each step to understand the questionnaire's setup better. Moreover, the researcher of this study is developing a research schedule to ensure the research study maintains a reasonable time frame and is more systematic to organized. The research flow for the questionnaire and the research timeline for this research study are below. See figure 3.4 and table 3.5

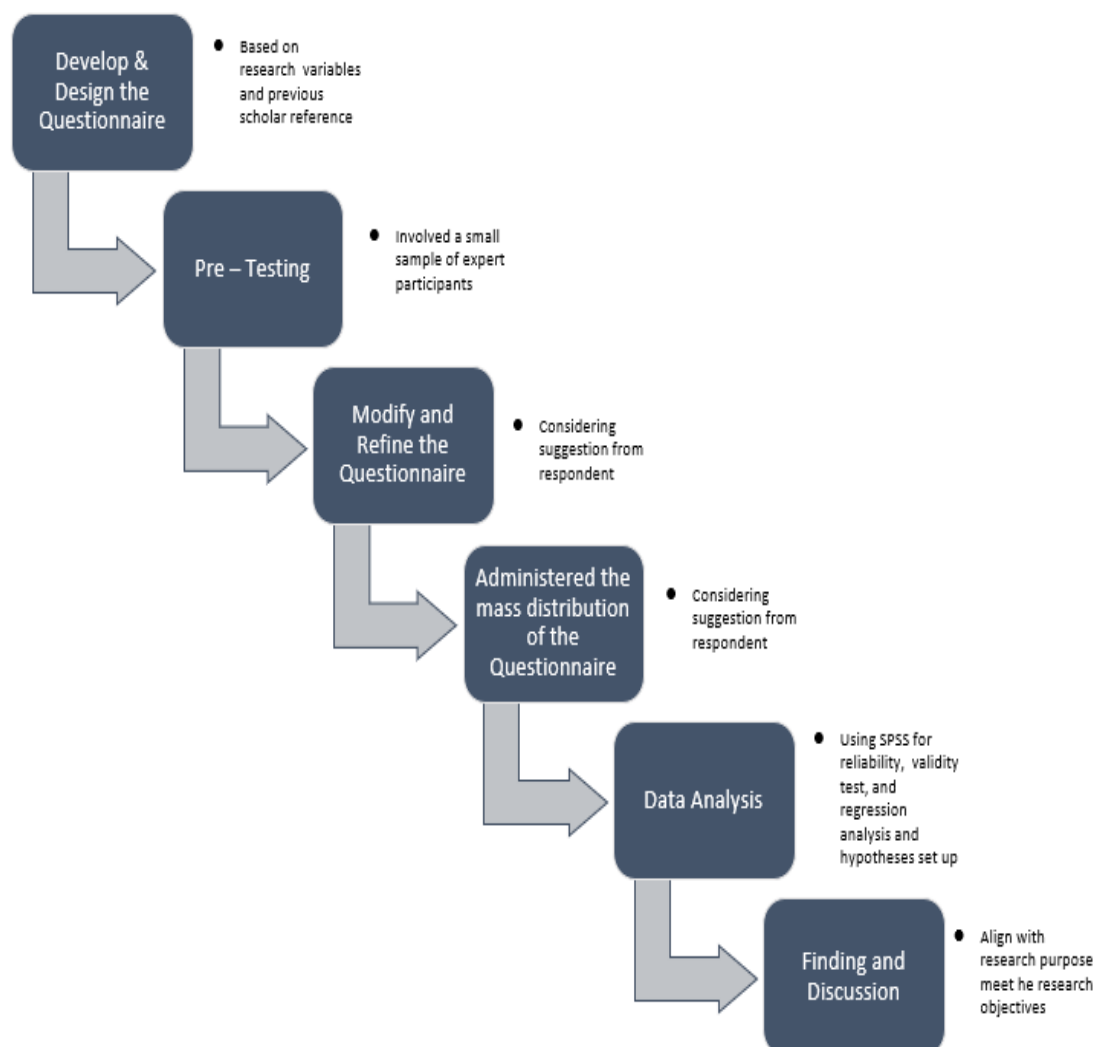


Figure 3.4: The Questionnaire Flow

Source: Constructed by writer

Research Time Line								
Stage	Activity	By Month	Nov-21	Dec-21	Jan-21	Feb-21	Mar-21	Apr-21
Research Design and Planning	Initial research intention		Yellow					
	Finding research supervisor							
	Identify research drivers / objectives							
	Develop research design / question							
	Prepare research proposal							
Literature Review	Build the research framework			Green				
	Search, capture and synthesise relevant literature							
	In-depth discussion and build relation of each variables							
Data Collection	Finalise research method / sampling size			Green				
	Develop research design / questionnaire							
	Prep-test and pilot data collection							
	Refine the questionnaire							
	Distribute and carry out questionnaire collection			Blue				
	Process reliability and validity test							
	Receive questionnaire and input data into SPSS ready for next stage							
Data Analysis	Generate data from SPSS				Blue			
	Analyse and interpret the data					Purple		
	Draw the relation and finding align with the research objectives							
Writing Up	Make recommendations based on finding					Purple		
	Make conclusion							
	Review overall draft with supervisor						Yellow	Orange
	Final editing							
	Printing, binding and final submission							

Table 3.5: Research Timeline

Source: Constructed by writer

3.8 Chapter Key Summary

In review of this chapter, the research method is clearly developed by using survey to obtain primary data from target population. Furthermore, the suggested variables have been discussed to demonstrate the relationship toward the research purpose, which provided the linkage to support the proposed hypotheses regarding time saving, price saving, and word-of-mouth will influence customer satisfaction, and customer satisfaction will impact the purchase intention. Thus, the theoretical model has been built based on this assumption. And the pre-test result is demonstrated positive feedback and support by 30 respondents and Cronbach's Alpha figures. Therefore, the research process will carry out according to the research schedule and strictly follow ethical considerations.

Chapter Four: Analysis and Results Discussion

The questionnaire has been designed based on defined factors to understand the consumer online purchase intention in the COVID-19 pandemic in Hong Kong. To obtain in-depth data to investigate further the key factors that caused online consumers to trigger their purchase intention to shop on the internet platform during the pandemic in Hong Kong in 2020. The received data from respondents will further elaborate the finding correspondingly to this research objective. The following sub-section in this chapter is demonstrated the data result generated by SPSS.

4.1 Summary of Respondent Description

According to the sample size for questionnaire mentioned in chapter three. The suggested number of questionnaires is required 196 respondents. Eventually, a total of 198 questionnaires are collected. Through the input process of data, no invalid or missing questionnaire is found. All relevant information is shown as following below

Case Processing Summary			
		N	%
Cases	Valid	198	100.0
	Excluded ^a	0	.0
	Total	198	100.0

a. Listwise deletion based on all variables in the procedure.

Table 4.1: Reliability Test Result

Table 4.1 illustrates the total of 198 questionnaires that have been returned, with no missed or fail to submit, the return rate is indicated a 100%. Moreover, the numbers of collected questionnaires can meet the sample size requirement for this research study.

4.2 Descriptive Statistics on Demography

This section will aim at qualitative descriptive statistics, collected from Part B of the questionnaire, which mainly describes the respondent's broad background in detail to outline and then use relevant content as analysis statistics. The demographic data of all respondents is to be described in this section which consists of respondent profiles, shopping frequency, shopping pattern, and willingness for expense in the online platform.

4.2.1 Description on Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	129	65.2	65.2	65.2
	Male	69	34.8	34.8	100.0
	Total	198	100.0	100.0	

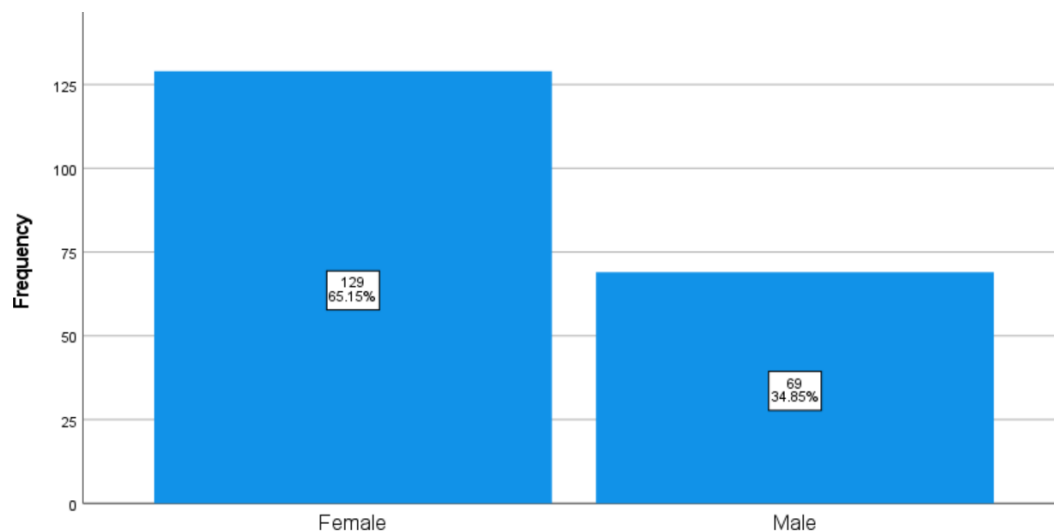


Figure 4.1: Statistics on Gender

In figure 4.1 demonstrated that the majority of respondent is Female. There were 129 women and 69 men involved. Accounting of 65.2% and 34.9 % respectively.

4.2.2 Statistic of Respondents Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19 - 25	16	8.1	8.1	8.1
	26 - 35	78	39.4	39.4	47.5
	36 - 45	80	40.4	40.4	87.9
	46 or above	24	12.1	12.1	100.0
	Total	198	100.0	100.0	

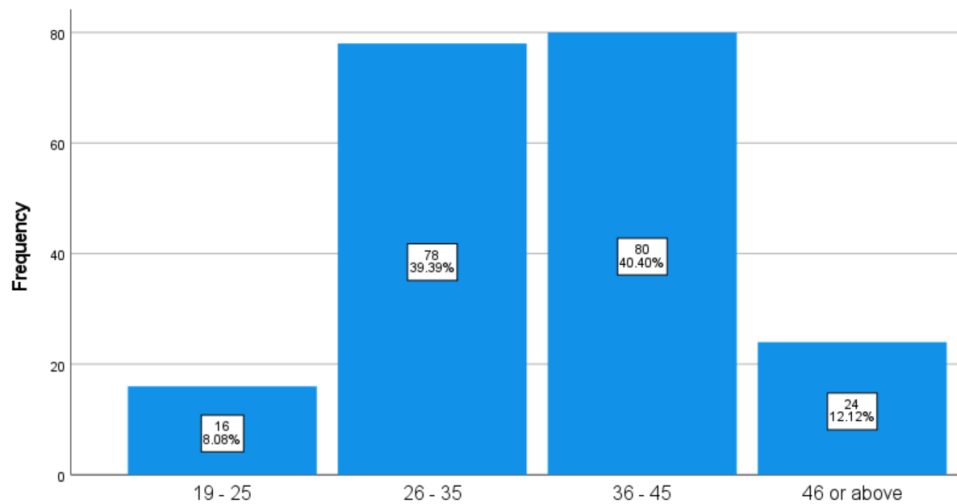


Figure 4.2: Statistics on Respondent Age

In figure 4.2, the age range is shown from 19 – 46 or above. But most of the respondents age range were between 26- 45 years old, where the biggest group go for 36 – 45 years old, accounting 40 % of the total population, and the second biggest group is 26- 35 years old, accounting for 39.3% of the total population. It implied that from the observation, the majority class of respondents for this research study could be categorized as middle-aged people. These two groups of people occupy 79.8% of the total population. The age group for 19-25 years old and 46 or above accounting 8 % and 12 % respectively. It also implied that these two groups of respondents had less influence on this research study.

4.2.3 Statistic of Respondents Education Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor Degree	133	67.2	67.2	67.2
	Certificate / Diploma / Professional Diploma	29	14.6	14.6	81.8
	Postgraduate or above	27	13.6	13.6	95.5
	Primary School	2	1.0	1.0	96.5
	Secondary School	7	3.5	3.5	100.0
	Total	198	100.0	100.0	

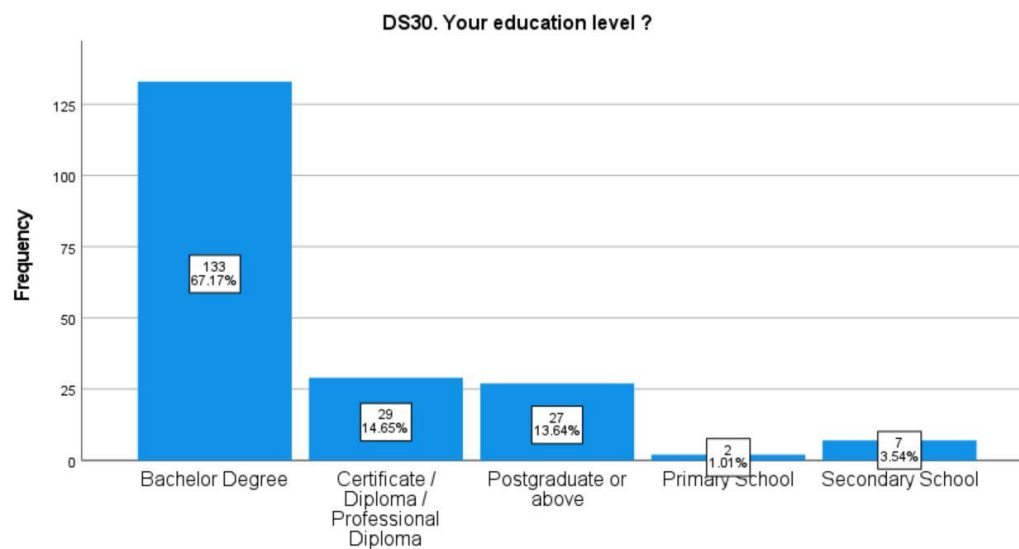


Figure 4.3: Statistics on Respondent Education Level

There are 198 respondents shown in figure 4.3 for the survey conducted, and all respondents answered this question. The result shows very obviously that majority of the respondent has bachelor's degree accounts 67.2% of the total, while the Certificate/Diploma/Professional Diploma and Postgraduate or above level accounts for 14.6 % and 13.6%, respectively. It is observed that most of the respondents' education level is highly qualified. The statistic result has direct implication to the higher education leading to purchase intention mentioned in literature positively, scholars believes that higher education level positively influences online shopping behavior (Hasanov and Khalid, 2015).

4.2.4 Statistic of Respondents Purchase Frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	One time a day	7	3.5	3.5	3.5
	One time a month	90	45.5	45.5	49.0
	One time a week	58	29.3	29.3	78.3
	Two times a week	43	21.7	21.7	100.0
	Total	198	100.0	100.0	

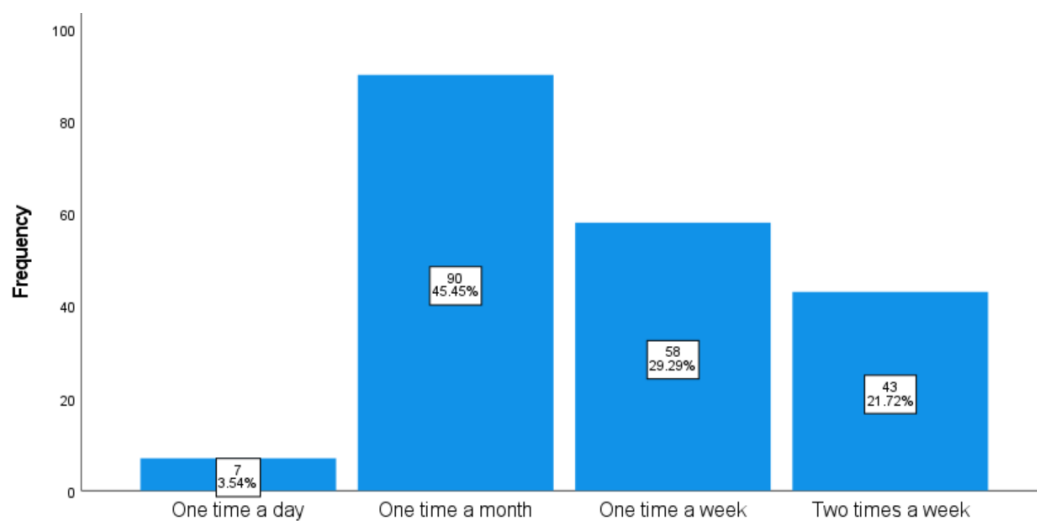


Figure 4.4: Statistics on Respondent Purchase Frequency

In figure 4.4, respondents' purchase frequency are not evenly distributed from the above result. Most respondents tend to make online purchases once a month, indicating 90 respondents, accounting 45.5% of total respondents. And the second biggest purchase frequency is one time a week, accounting for 29.3% of total respondents. Nevertheless, the result also displays that respondent purchase frequency between one to two times combined with 51%. Which bigger than one time a month frequency with 45%. It implied from the observation that the respondent intends to make online purchases more frequently in a week over a month. The result directly impacts the repeat purchase intention strongly driven by customers' satisfaction (Mpinganjira, 2014).

4.2.5 Statistic of Respondents Prefer Device use for Online Purchase

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PC / Laptop	42	21.2	21.2	21.2
	Smart Phone	145	73.2	73.2	94.4
	Tablet	11	5.6	5.6	100.0
	Total	198	100.0	100.0	

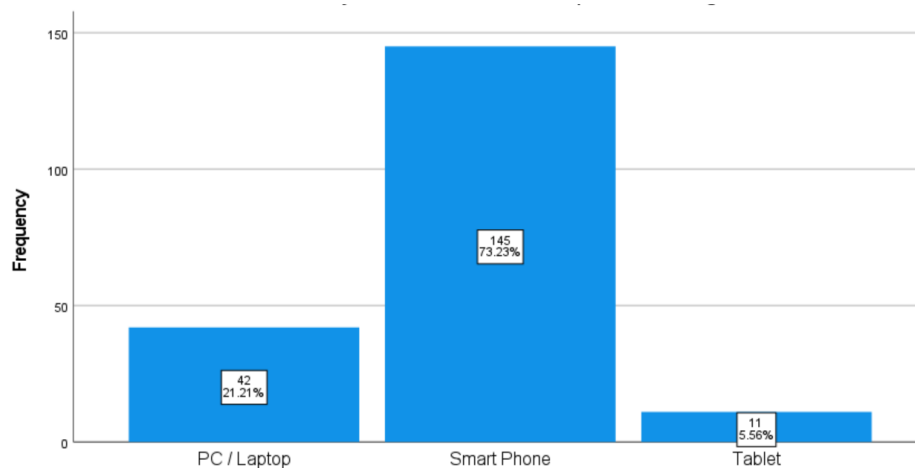


Figure 4.5: Statistics on Respondent Prefer Device

Figure 4.5 shows that over half of respondents use Smart Phone devices to make online purchases indicating 73.2% of the total. While using PC/Laptop and Tablet for 21% and 5.6% of the total. The result implied that the respondent prefers to use the Smart Phone because it is more convenient and easier to access the internet for online shopping. This finding result gave updated data to further explain the correlation with Internet device penetration rate in Hong Kong and customer online shopping intention, which correspond to Chapter 1.2.1 and 1.2.2 in this study. It explained that although the Internet access by any devices at home in Hong Kong indicated 93.9% in 2020. But the consumer is intended to use Smartphone to purchase the PC or other device detected from this result above, which this result shows the significant difference compared to 2016 in figure 1.10

4.2.6 Statistic of Respondent Most Purchase Product / Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	All of the above	83	41.9	41.9	41.9
	Groceries Product and Food Delivery Service	61	30.8	30.8	72.7
	Non - Groceries Product	54	27.3	27.3	100.0
	Total	198	100.0	100.0	

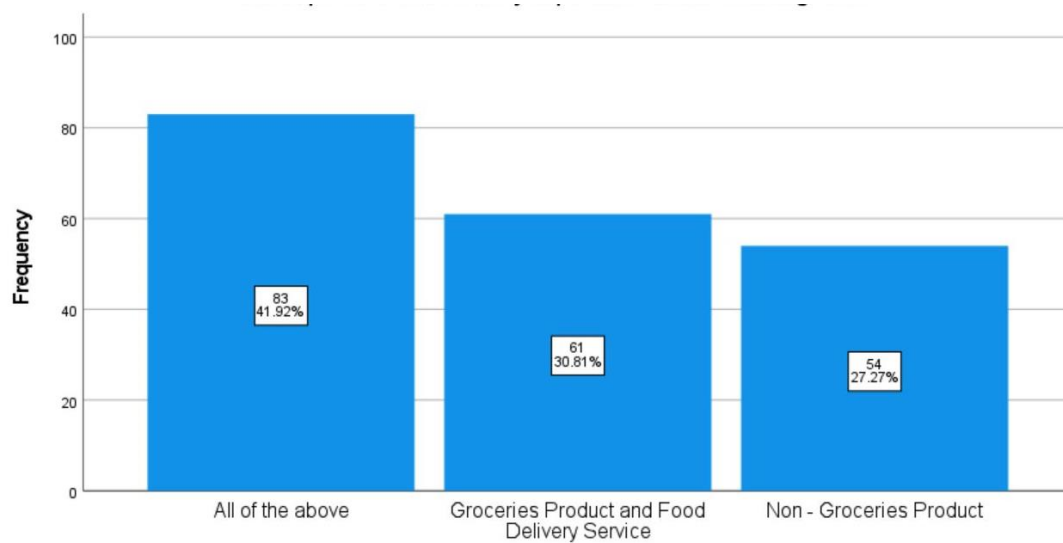


Figure 4.6: Statistics on Respondent Most Purchase Product

In figure 4.6 demonstrates the outcome are quite evenly distributed from the above result. Except the choice option of “All of the above” indicates the score high of 83 frequencies respond, accounts 83% of total. The respondents ‘general intention to shop online is interest in groceries / non-groceries products and food delivery services. More specifically, respondents tend to purchase Groceries Product and Food Delivery service over the non-Groceries product, accounting for 61% and 54% of total respectively. It also reflects that consumers have higher demand for these products and services than non-groceries during 2020.

4.2.7 Statistic of Respondents Expenditure on Each Online Purchase

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	HKD 200 or below	21	10.6	10.6	10.6
	HKD 201 - 300	27	13.6	13.6	24.2
	HKD 301 - 400	26	13.1	13.1	37.4
	HKD 401 - above	124	62.6	62.6	100.0
	Total	198	100.0	100.0	

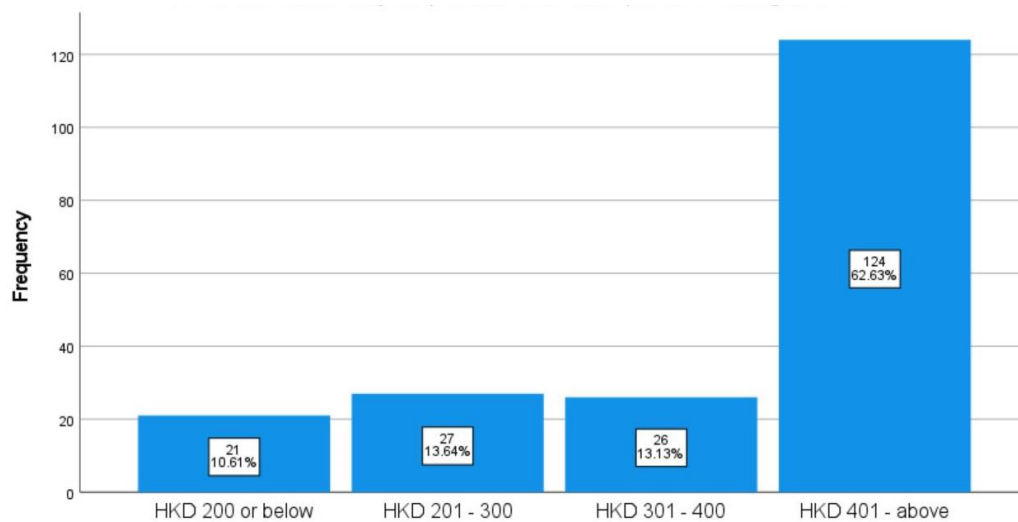


Figure 4.7: Statistics on Respondent Expenditure

The bar chart above showed over 60% of the respondents have spent over HKD 400 or above in 2020. Less than 30% of respondents have spent between HKD 200 to HK 400. It implies that most consumers' power of expenditures tends to be over HKD 400 via an online platform for online shopping.

4.3 Inferential Statistics

This section will continue to analyze all the data collected from Parts A of the questionnaire. The questions are divided into five parts based on proposed variables: Time Saving, Price Saving, Word-of-Mouth, Customer Satisfaction, and Purchasing Intention.

To ensure the reliability of the data provided for valid analytical purpose use in this research. A reliability and validity test and other analysis methods such as Correlation and Regression analysis will be conducted and further explained to provide statistical support to correspond with proposed hypotheses.

4.3.1 Code of Variables

To provide easy-to-follow system for the reader, simplified code is used below to facilitate the reader to reference related finding accordingly. Each of the variables is coded by it own group.

Variables	Code	Questions in data base
Time Saving	TS	Q 1 – 5
Price Saving	PS	Q 6 – 10
Word of Mouth	WOM	Q 11 – 15
Customer Satisfaction	CS	Q 16 – 20
Purchase Intention	PI	Q 21 – 27

Table 4.2: Coding of Variables

Source: Constructed by writer

4.3.2 Reliability Test

‘Likert Scaling Method’ is used for the above questions. Likert-type scales present a list of statements on an issue to which the respondent indicates degree of agreement that represents clearly favorable, neutral, or clearly unfavorable and thus analyze the data (Schalock, 2001).

Furthermore, the reliability test was measured using Cronbach's alpha. It is an indicator of internal consistency and is the extent to which the items (questions) relate to a particular dimension in a scale (Cronbach, 1951). The Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer the Cronbach's alpha coefficient is to 1.0 the greater the item's internal consistency in the scale or questionnaire. George and Mallery (2020) provide the following rules of thumb for the Cronbach's alpha: $> .9$ excellent, $> .8$ good, $> .7$ acceptable, $> .6$ questionable, $> .5$ poor and $< .5$ unacceptable. In this study, the reliability test result show as follows:

Reliability Statistics	
Cronbach's Alpha	N of Items
.827	4

Table 4.3: Reliability Result of Time Saving (TS)

According to table 4.3, there are 4 items regarding the comments of TS and comparing with the Cronbach's Alpha of acceptable level is 0.7, the result generated by SPSS is now .827. Thus, these items (questions) consider is highly consistent and reliable.

Reliability Statistics	
Cronbach's Alpha	N of Items
.814	5

Table 4.4: Reliability Result of Price Saving (PS)

According to table 4.4, there are 5 items regarding the comments of PS and comparing with the Cronbach's Alpha of acceptable level is 0.7, the result generated by SPSS is now .814. Thus, these items (questions) consider is highly consistent and reliable.

Reliability Statistics	
Cronbach's Alpha	N of Items
.702	5

Table 4.5: Reliability Result of Word of Mouth (WOM)

According to table 4.5, there are 5 items regarding WOM comments, and compared with the Cronbach's Alpha of acceptable level is 0.7, the result generated by SPSS is now .702. Thus, these items (questions) consider is highly consistent and reliable.

Reliability Statistics	
Cronbach's Alpha	N of Items
.880	7

Table 4.6: Reliability Result of Customer Satisfaction (CS)

According to table 4.6, there are 7 items regarding the comments of CS, and comparing with the Cronbach's Alpha of acceptable level is 0.7, the result generated by SPSS is now .880. Thus, these items (questions) consider are highly consistent and reliable.

Reliability Statistics	
Cronbach's Alpha	N of Items
.758	5

Table 4.7: Reliability Result of Purchase Intention (PI)

According to table 4.7, there are 5 items regarding the comments of PI, and comparing with the Cronbach's Alpha of acceptable level is 0.7, the result generated by SPSS is now .758. Thus, these items (questions) consider is highly consistent and reliable.

Variables	Number of Items (Questions)	Cronbach's Alpha	Code
Time Saving	4	.827	TS
Price Saving	5	.814	PS
Word-of-Mouth	5	.702	WOM
Customer Satisfaction	7	.880	CS
Purchase Intention	5	.758	PI

Table 4.8: The breakdown for all five variables

Table 4.8 demonstrated the test result running by the software “SPSS Statistics.” It has been shown that all the variables are tested via the software with the correct process. Consequentially the Cronbach’s Alphas for all the individual variables indicated greater than 0.7, which is reached the acceptable level. Therefore, all the items (questions) designed are preciseness and provided statistical support for the reliability of the survey.

4.3.3 Validity Measurement

The purpose of conduct validity measurement is to investigate whether a designed instrument accurately measures what it is intended to measure (Saunders et al, 2016). Therefore, this section uses two indicators to conduct the validity measurement for this study. Which are Kaiser-Meyer-Olkin (KMO) and Bartlett’s Test. As explained by Ngulube (2021) that KMO vary between 0 and 1, if the value is closer to 0 consider is large relative the sum of correlations. And the Bartlett’s test is mainly to check for homoscedasticity or homogeneity of variances. The test's null hypothesis is that the variables are orthogonal, which are not correlated, therefore the test should be significant (0.000). Both indicator measurement result is shown as follow.

< 0.50	< 0.60	< 0.70	< 0.80	< 0.90
Unacceptable	Terrible	Mediocre	Average	Meritorious

Table 4.9: KMO value indication reference

Source: (Adams et la, 2014)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.915
Bartlett's Test of Sphericity	Approx. Chi-Square	2933.181
	df	351
	Sig.	.000

Table 4.10: KMO and Bartlett's result for all five variables

In table 4.10 illustrated the KMO for this survey is .915, which < 0.90 is represent a good value, meaning this approach is acceptable to analyze further. Moreover, the Sig value indicated .0000, which explained that the Bartlett's sphericity test shows that the research results are accurate and the validity level is high (Ngulube, 2021). It is implied the reliability coefficients of each questionnaire are reliable and stable, which can be used for further research analysis.

Communalities

	Initial	Extraction
TS01. I believe that using online platform are very useful in the purchasing process.	1.000	.669
TS02. I believe that using online platform helps me accomplish things more quickly in the purchasing process.	1.000	.655
TS03. I believe that I can save time by using online platform in the purchase process.	1.000	.717
TS04. Convenience is one of the main reasons for me to use online platform for shopping.	1.000	.627
TS05. Time saving is my first consideration whether to use online platform or not for shopping purpose.	1.000	.518
PS06. I can save money by using prices comparison via different online platform in the purchase process.	1.000	.488
PS07. I enjoy searching for cheap product deals in different online retailer website.	1.000	.612
PS08. Online retailers offer better value for money product or service.	1.000	.616
PS09. Prices is an important for me when I am shopping online.	1.000	.540
PS10. I always experienced my purchase cheaper at one particular website than if I had made them elsewhere.	1.000	.642
WOW11. Searching for information about products and services is one of most important things I would consider before make purchase decision for online shopping	1.000	.458
WOW12. I always share my knowledge and information on online sales websites.	1.000	.610
WOW13. I always read online consumer reviews when I do online shopping.	1.000	.543
WOW14. I recommend people to buy products online from the website where I usually buy them	1.000	.550
WOW15. Good or bad consumer reviews will determine my online purchase decision for product or service display from internet	1.000	.588
CS16. I find that using online platform to make purchase are enjoyable	1.000	.657
CS17. I feel comfortable of using online purchase service.	1.000	.681
CS18. I think online shopping is easy to use.	1.000	.594
CS19. I feel competent of using the online purchase service.	1.000	.659
CS20. My attitude toward online shopping is positive.	1.000	.624
CS21. I feel safe to provide my personal and private data throughout online purchase process.	1.000	.586
CS22. I am satisfied with my previous online shopping experience	1.000	.575
PI23. I plan to use online platform to make purchase in the future.	1.000	.683
PI24. I have strong intention to purchase online in the future	1.000	.729
PI25. I often consider to buy thing via online channel.	1.000	.675
PI26. I will continue shopping online at the same website.	1.000	.519
PI27. I will not be shopping online at the same website if I receive a bad shopping experience last time.	1.000	.728

Extraction Method: Principal Component Analysis.

Table 4.11: Communalities of data set from all questions

4.3.4 Correlation Analysis

This study's research analysis uses Pearson's correlation coefficient R to evaluate sample data as evidence that a linear association exists between quantitative variables. A summary statistic represents the strength and nature (positive or negative) of linear association between two variables. The coefficient is usually between -1 and 1 to represent the relationship's strength (LeBlanc, 2004).

For the Sig value (p-value), a standard criterion for defining statistical significance is p-value less than 0.05 (known as significance level), which represent that the correlation is statistically significant (Igual and Segui, 2017).

For this analysis, each of variable average corresponds to the answers to the individual items. Meyers et la (2013) explained that Mean scores can have certain advantages for statistical analysis if the means scores are based on a summative response scale-like 5-point scale, which allows straightforward interpretation of the mean quickly and intuitively concerning the original rating scale. And if there are sufficient numbers of scores that are to be combined. Therefore, the date for this study is suitable for the above condition that allows the average score application to be used in the following analysis.

		Correlations			
		Time Saving average	Prices Saving average	WOM average	CS average
Time Saving average	Pearson Correlation	1	.552**	.523**	.685**
	Sig. (1-tailed)		<.001	<.001	<.001
	N	198	198	198	198
Prices Saving average	Pearson Correlation	.552**	1	.700**	.606**
	Sig. (1-tailed)	<.001		<.001	<.001
	N	198	198	198	198
WOM average	Pearson Correlation	.523**	.700**	1	.621**
	Sig. (1-tailed)	<.001	<.001		<.001
	N	198	198	198	198
CS average	Pearson Correlation	.685**	.606**	.621**	1
	Sig. (1-tailed)	<.001	<.001	<.001	
	N	198	198	198	198

** . Correlation is significant at the 0.01 level (1-tailed).

Table 4.12: Correlations on means of TS, PS, WOM and CS

In table 4.12 indicate the Pearson coefficients for the four variables. The coefficient between TS and CS is .0.685 ($r=0.685$, $p<0.05$), representing a positive and the strongest correlation amongst others. Secondly, the coefficient between PS and CS is 0.606 ($r=0.606$, $p<0.05$), representing a positive and moderately strong correlation compared to others. Lastly, the coefficient between WOM and CS is 0.621 ($r=0.621$, $p<0.05$), defining a second strongest correlation. Therefore, after examining the statistic of collected data. The result has been proven that TS, PS, WOM represented positive significance toward CS.

To provide a more reference statistic chart to interpret the correlation between independent variables and dependent variables. The Scatter Plot will provide as follow to demonstrate the positive correlation of TS, PS, WOM toward CS.

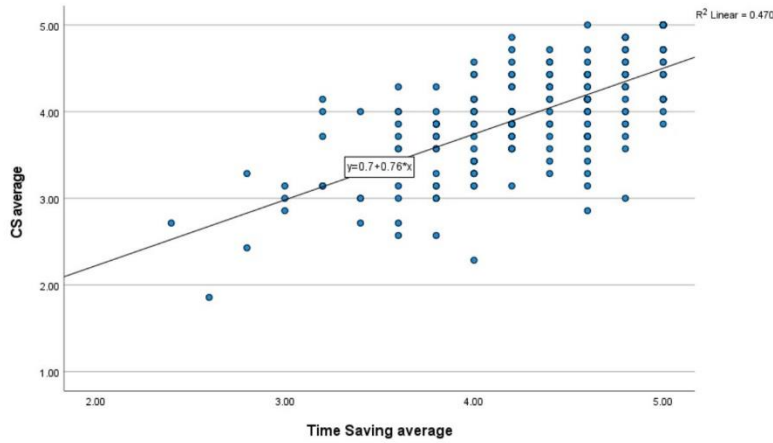


Figure 4.8: Scatter Plot Chart for correlation of TS to CS

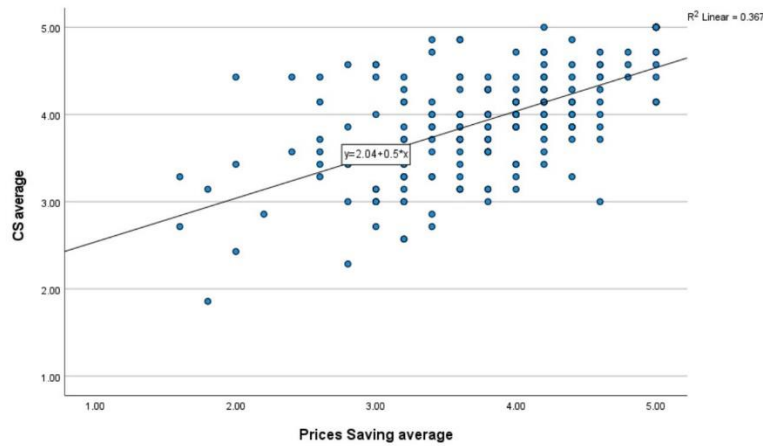


Figure 4.9: Scatter Plot Chart for correlation of PS to CS

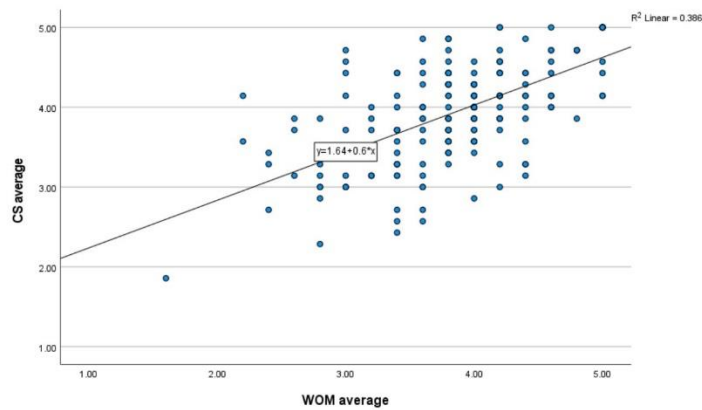


Figure 4.10: Scatter Plot Chart for correlation of WOM to CS

In figure 4.8, 4.9, and 4.10 illustrate that each of the independent variables indicated a positive relationship toward the dependent variables of customer satisfaction (CS). The R-square has a positive value, meaning these variables show positive significant.

Correlations

		CS average	PI average
CS average	Pearson Correlation	1	.774**
	Sig. (2-tailed)		<.001
	N	198	198
PI average	Pearson Correlation	.774**	1
	Sig. (2-tailed)	<.001	
	N	198	198

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

Table 4.13: Correlations on means of CS and PI

In table 4.13 indicate the Pearson coefficients for CS and PI. The coefficient between CS and PI is .0.774 ($r=0.774$, $p<0.05$), representing a positive and powerful correlation. As Igual and Segui (2017) explained, if the P-value is low, the effect is said to be statistically significant, which means that it is unlikely to have occurred by chance. And can infer that the effect is more likely to appear in the larger population. Therefore, after examining the statistic of collected data. The result has proven that TS, PS, and WOM represented positive significance toward CS, while CS was strongly significant toward Purchase Intention (PI).

To provide a more reference statistic chart to interpret the correlation between independent variables and dependent variables. The Scatter Plot will provide as follow to demonstrate the positive correlation of CS toward Purchase Intention (PI)

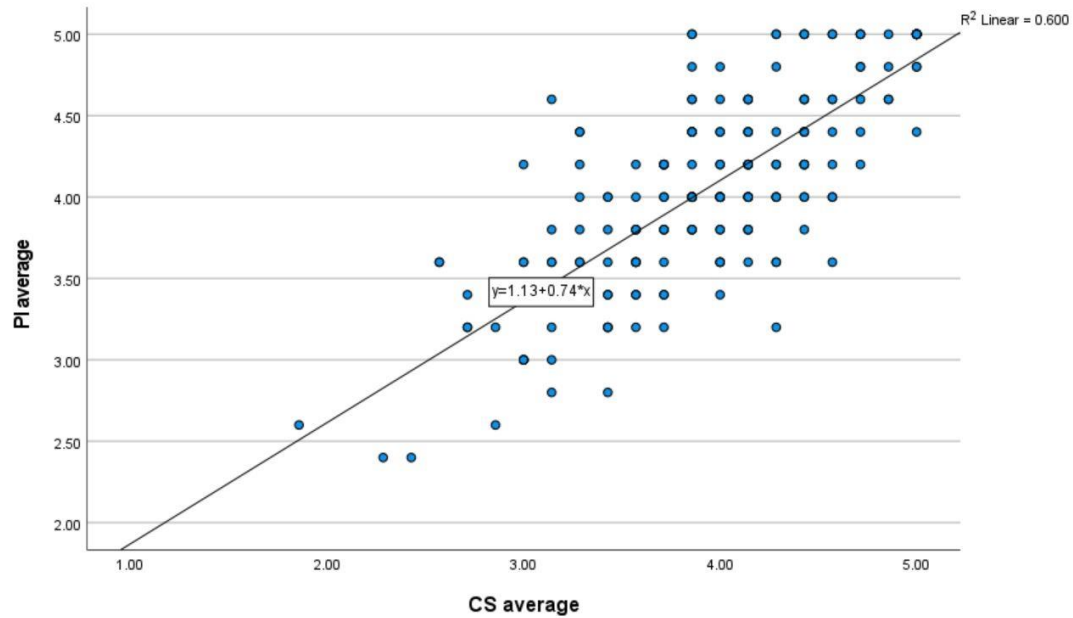


Figure 4.11: Scatter Plot Chart for correlation of CS to PI

In figure 4.11 illustrates the independent variable of Customer Satisfaction (CS), which shows a positive relationship toward the dependent variables of Purchase Intention (PI), indicating that the R-square has a positive value, which means this variable shows positive significant.

4.3.5 Regression Analysis

Further analysis will be conducted in this section by using Multiple Linear Regression, to examine the relationship between the proposed dependent variable and the independent. The linear regression aims to prove that designed variables establish a statistically significant relationship that can be linear to demonstrate the reliability for the purposed theoretical model can be supported by the correlation coefficient R, meaning a positive and linear relationship (Ngulube, 2021). Therefore, the following regression analysis run by SPSS explained the linear relationship for this study.

4.3.5.1 Regression of TS, PS, WOM to CS

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Prices Saving average, Time Saving average, WOM average ^b	.	Enter

a. Dependent Variable: CS average

b. All requested variables entered.

Table 4.14: Variables entered (TS, PS and WOM)

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.761 ^a	.578	.572	.41335

a. Predictors: (Constant), WOM average, Time Saving average, Prices Saving average

b. Dependent Variable: CS average

Table 4.15: Regression model summary on three predictors

As shown in table 4.15 of the model summary for this study. It indicated that the correlation coefficient R is read as 0.761, representing a positive and linear relationship for this model. However, the R Square is 0.578, and adjusted as 0.572 meaning that 57.2% of the variation on CS can be explained by the perceived value of the independent variables.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.481	3	15.160	88.728	<.001 ^b
	Residual	33.147	194	.171		
	Total	78.628	197			

a. Dependent Variable: CS average

b. Predictors: (Constant), WOM average, Time Saving average, Prices Saving average

Table 4.16: ANOVA table for TS, PS, WOM to CS

As shown in table 4.16 of ANOVA table, the value of Sig. is <.001, which is less than 0.05, and the F score indicated 88.728. This value points to the probability level, which the higher the F score gets, the lower will be the significance score. Thus, the Sig < 0.05 refers to the results as statistically significant (Goos and Meintrup, 2016). It explained that there is significance between an independent variable and a dependent variable on this regression model for TS, PS, WOM to CS, which is overall significant.

Coefficients ^a								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.287	.232		1.237	.218		
	Time Saving average	.502	.064	.453	7.884	<.001	.659	1.517
	Prices Saving average	.141	.056	.171	2.499	.013	.463	2.161
	WOM average	.254	.064	.265	3.946	<.001	.483	2.069

a. Dependent Variable: CS average

Table 4.17: Coefficients Table for TS, PS and WOM to CS

Table 4.17 shows the value of the variable for TS, PS, and WOM is significant toward CS. These variables values are (<0.001, 0.013 and <0.001). Which are all less than 0.05, so is statistically significant. It implied that these are the significant predictor of Customer Satisfaction. And the VIF for the above regression indicated (1.517, 2.161, 2.069), which are > 1 but less than 10. When VIF = 5 or less, the independent variables are unlikely correlated with one another in a regression model (Hoerl and Snee, 2020). Therefore, the reliability of this model is acceptable.

Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Time Saving average	Prices Saving average	WOM average
1	1	3.961	1.000	.00	.00	.00	.00
	2	.022	13.538	.31	.04	.36	.05
	3	.010	20.147	.00	.15	.41	.91
	4	.008	22.582	.69	.81	.23	.04

a. Dependent Variable: CS average

Table 4.18: Collinearity Table for TS, PS and WOM to CS

Table 4.18 shows the overview of the collinearity of this analysis. Condition indices are used to excessively flag collinearity in the data. The purpose of collinearity and the analysis is to extract any unrelated dimension away from variable data. Rovai et la (2014) claimed that if the condition index appears over 30 indicates a serious multicollinearity problem. Therefore, the condition index of this group of regression not considered a severe multicollinearity problem.

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.2518	4.7708	3.9372	.48049	198
Residual	-1.23333	1.09243	.00000	.41019	198
Std. Predicted Value	-3.508	1.735	.000	1.000	198
Std. Residual	-2.984	2.643	.000	.992	198

a. Dependent Variable: CS average

Table 4.19: Residuals Table for TS, PS and WOM to CS

According to the table above, the residual measures the vertical distance from the observation to the fitted line. Positive, negative, and zero residual correspond to observations above, below, and exactly on the regression line (Ekstrøm and Sørensen, 2015). In this regression model, the minimum residual value is -1.23333, the maximum is 1.09243, and the standard deviation is 0.41019.

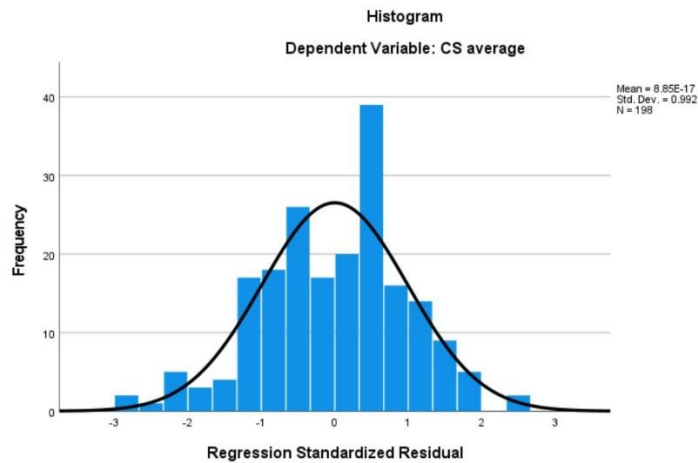


Figure 4.12: Histogram Dependent Variable of CS Average

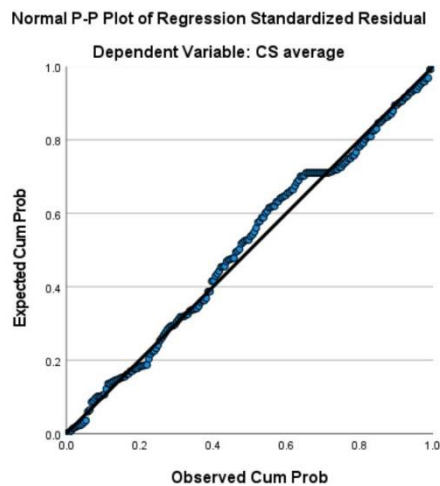


Figure 4.13: Normal P-Plot of Regression Standardized Residual (CS)

Figure 4.12 shows the histogram of the regression model that the standardized residuals are normally distributed for the dependent variable – Customer Statistician (CS). In Normal P-P plots. Figure 4.13 illustrated that the standardized residual is compared with the normal distribution represented by a straight diagonal line. At the same time, the bell-shaped symmetrical curve in histograms is observed by having maximum scores in the middle and lesser at edges (Field, 2020). Hence, this can be explained there is no normality or linearity-related issues for this statistical outcome. Illustrated this is a positive and strong linear relationship.

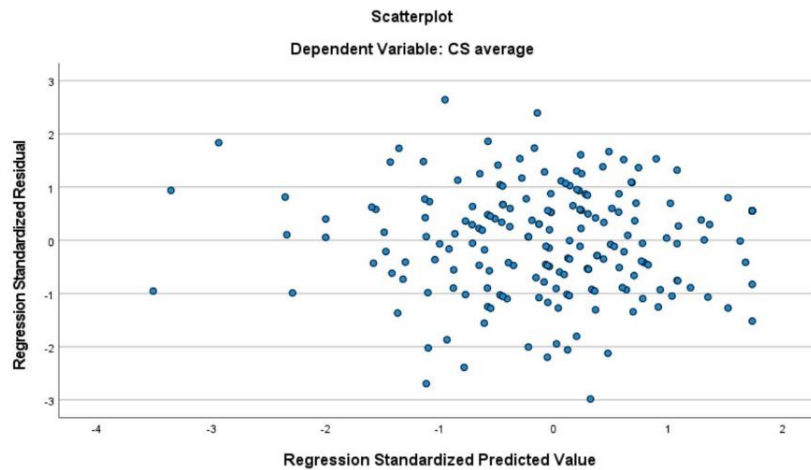


Figure 4.14: Scatterplot of Regression Standardized Residual (CS)

The scatterplot in figure 4.14, shows the points are randomly and evenly dispersed throughout the plot. The partial plot displays the pattern of association underlying the partial correlation and partial regression coefficient between the dependent variable and the independent variable, the Customer Satisfaction above, where the points are randomly and evenly dispersed throughout the plot. This pattern indicates that the errors are independent and not correlated with others, which the assumptions of linearity and homoscedasticity have been met (Field, 2020).

4.3.5.2 Summary of Regression (TS, PS, WOM to CS)

After examining by above statistical analysis, an equation of multiple linear regression for the predictors of Time Saving (TS), Price Saving (PS), Word of Mouth WOM and Customer Satisfaction (CS) as follow:

$$CS = 0.287 + 0.502(TS) + 0.141(PS) + 0.254(WOM)$$

The predict variables value for TS, PS and WOM toward CS is (<0.01, 0.013, <0.01). Which are less than 0.05, indicated that H1, H2 and H3 is acceptable and showing a positive correlation

4.3.5.3 Regression of CS to PI

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	CS average ^b	.	Enter

a. Dependent Variable: PI average

b. All requested variables entered.

Table 4.20: Variables entered (CS)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.774 ^a	.600	.598	.38491

a. Predictors: (Constant), CS average

b. Dependent Variable: PI average

Table 4.21: Regression model summary on one predictor

As shown in table 4.21 of model summary for this study. It indicated that the correlation coefficient R is read as 0.774, representing a positive and linear relationship for this model. However, the R Square is 0.600, and adjusted as 0.598, meaning that 59.8% of the variation on CS can be explained by the perceived value of the independent variables.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.510	1	43.510	293.680	<.001 ^b
	Residual	29.038	196	.148		
	Total	72.549	197			

a. Dependent Variable: PI average

b. Predictors: (Constant), CS average

Table 4.22: ANOVA Table for CS to PI

As shown in table 4.22 of ANOVA table, the value of Sig. is <.001, which is less than 0.05, and the F score indicated 293.680. This value points to the probability level, which the higher the F score gets, the lower will be the significance score. Thus, the Sig < 0.05 refers to the results as statistically significant (Goos and Meintrup, 2016). It explained that there is significance between an independent variable and a dependent variable on this regression model for CS to PI, is overall strongly significant.

Coefficients ^a								
Model	Unstandardized Coefficients			Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error		Beta			Tolerance	VIF
1	(Constant)	1.127	.173		6.510	<.001		
	CS average	.744	.043	.774	17.137	<.001	1.000	1.000

a. Dependent Variable: PI average

Table 4.23: Coefficients Table for CS to PI

In table 4.23 shows the value of the variable for CS is significant toward PI. These variables values are (<0.001, 0.013 and <0.001). which are all less than 0.05, so it is statistically significant. It implied that these are the significant predicator of Customer Satisfaction. And the VIF for the above regression indicates (1.000), which are > 1 but less than 10. When VIF = 5 or less, the independent variables are unlikely to correlate in a regression model (Hoerl and Snee, 2020). Therefore, the reliability of this model is acceptable.

Collinearity Diagnostics ^a					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant) CS average	
1	1	1.987	1.000	.01	.01
	2	.013	12.575	.99	.99

a. Dependent Variable: PI average

Table 4.24: Collinearity Table for CS to PI

Table 4.24 shows the overview of the collinearity of this analysis. Condition indices are used to flag excessive collinearity in the data. The purpose of collinearity and the analysis is to extract any unrelated dimension away from variable data. According to Rovai et la (2014), if the condition index appears over 30 indicates a serious multicollinearity problem. Therefore, this group of regression's condition index is not considered a serious multicollinearity problem.

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.5082	4.8461	4.0556	.46996	198
Residual	-1.11479	1.13537	.00000	.38393	198
Std. Predicted Value	-3.293	1.682	.000	1.000	198
Std. Residual	-2.896	2.950	.000	.997	198

a. Dependent Variable: PI average

Table 4.25: Residuals Table for CS to PI

According to the table above 4.25, the residual measures the vertical distance from the observation to the fitted line. Positive, negative, and zero residual correspond to observations above, below, and exactly on the regression line (Ekstrøm and Sørensen, 2015). In this regression model, the minimum residual value is -1.11479, the maximum is 1.13537, and the standard deviation is 0.38393.

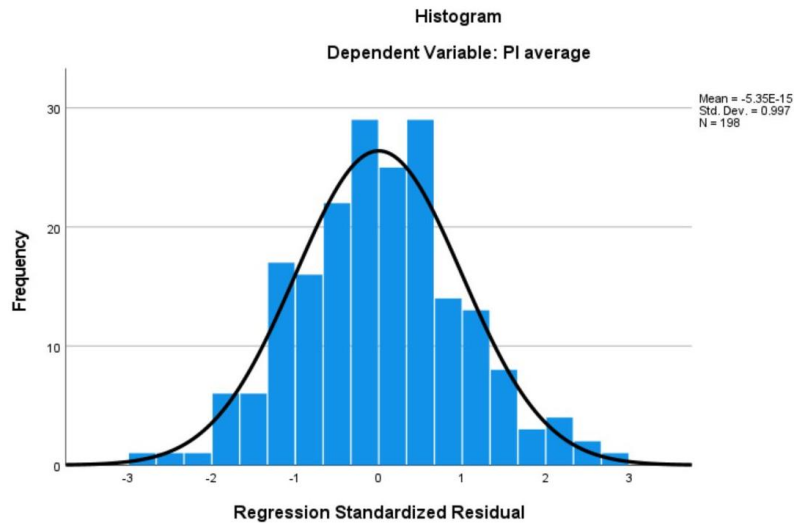


Figure 4.15: Histogram Dependent Variable of PI

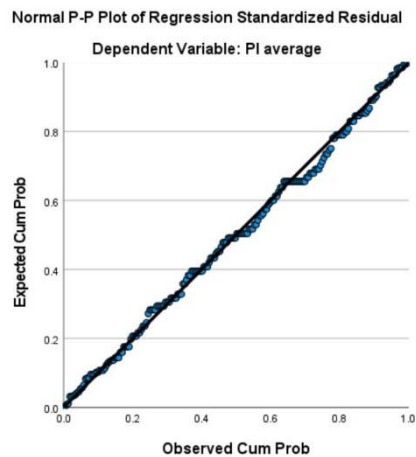


Figure 4.16: Normal P-Plot of Regression Standardized Residual (PI)

Figure 4.15 explained the histogram of the regression model that the standardized residuals are normally distributed for dependent variable – Purchase Intention (PI). In Normal P-P plots, refer to figure 4.16, the standardized residual is compared with the normal distribution represented by a straight diagonal line. At the same time, the bell-shaped symmetrical curve in histograms is observed by having maximum scores in the middle and lesser at edges (Field, 2020). Hence, this can be explained there is no normality or linearity-related issues for this statistical outcome. Illustrated this is a positive and linear solid relationship.

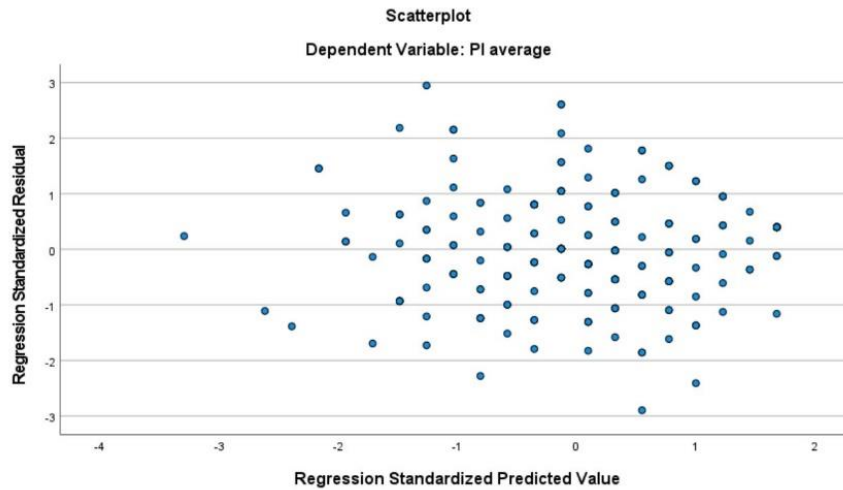


Figure 4.17: Scatterplot of Regression Standardized Residual (PI)

As regards to the scatterplot in figure 4.17, shows the points are randomly and evenly dispersed throughout the plot. The partial plot displays the pattern of association underlying the partial correlation and partial regression coefficient between the dependent variable and the independent variable, which is the Purchase Intention above, where the points are randomly and evenly dispersed throughout the plot. This pattern indicates that the errors are independent and not correlated with others, which the assumptions of linearity and homoscedasticity have been met (Field, 2020).

4.3.5.4 Summary of Regression (CS to PI)

After examining by above statistical analysis, an equation of multiple linear regression for the predictors of Customer Satisfaction (CS) and Purchase Intention (PI) as

$$PI = 1.127 + 0.744 (CS)$$

The predict variables value for CS toward PI is (<0.001). Which are less than 0.05, indicated H4 is acceptable and showing a positive correlation.

4.4 Chapter Key Summary

After examining the above analysis, the R square value indicates 0.578 (TS, PS, and WOM to CS) and 0.600 (CS to PI). Moreover, because all the predictor variables' sig values (P-values) are less than 0.05, therefore, each hypothesis is supported.

The overall results of hypothesis testing are provided as below:

Hypotheses (Code)	Regression Coefficient	Sig Values (p-values)	Analysis Result
H1: TS → CS	0.502	< 0.001	Support
H2: PS → CS	0.141	0.013	Support
H3: WOM → CS	0.254	< 0.001	Support
H4: CS → PI	0.744	< 0.001	Support

Table 4.26: Overall Result on Hypothesis Testing

Hypotheses	Decision
H1: Time saving has an obviously positive effect for customer satisfaction to make online purchase during COVID-19	Accepted
H2: Price saving has an obviously positive effect for customer satisfaction to make online purchase during COVID-19	Accepted
H3: Word-of-Mouth has an obviously positive effect for customer satisfaction to make online purchase during COVID-19	Accepted
H4: Customer satisfaction level has an obviously positive effect for online customer intention to make online purchase during COVID-19	Accepted

Table 4.27: Decision Making based on Hypothesis Outcome

Chapter Five: Conclusion and Recommendations

According to the overall research analysis result from previously chapters in this study. The conclusion of this research study will be discussed in this section to provide a relevant recommendation to correspond to consumers' online purchase intention in Covid-19 pandemic in Hong Kong, which aligns with this study's research objectives.

5.1 Research Finding

This research is aimed to investigate the defined factors based on time saving, prices saving and word of mouth to conducted a survey and data analysis, to understand these factors can affect customer satisfaction and thus has an obviously positive influence online customer intention to make online purchase during COVID-19 in Hong Kong. The analysis results show as follows for further interpretation.

5.1.1 Hypothesis H1 Finding

To respond the analysis result for the correlation between time saving and customer satisfaction indicated 0.502 coefficient. Implied that each time saving variable varies increase, there is a 50% increase in effect customer satisfaction. Which simplified this affection considered as strongest compared to another independent variable. And the survey demonstrated a majority of respondent agreed the time saving factor play as important role during the whole online purchase process. Thus, customer satisfaction level can be greater determined by the level of time saving received from the customer. In other words, customers consider time saving as the first propriety to determine their satisfaction via online shopping during the pandemic. Ensuring that customers feel convenience is vital to maintaining customer satisfaction by online shopping.

5.1.2 Hypothesis H2 Finding

The hypothesis result for H2, explained that price saving had less influence on customer satisfaction than the other two factors, indicating 0.141 coefficient. Implied that each price saving variable varies, there is only a 14% increase in effect customer satisfaction. Although the survey result on prices saving showed that most of the respondents agreed that the consideration of prices saving is important for online shopping. However, according to the coefficient result mentioned, there is not much significant impact to increase customer satisfaction level. In other words, online customers consider prices saving when they are intended to make online purchase, but only account less prominent than other factors during the whole shopping process from customer perspective under the pandemic periods. Therefore, increasing the perceived value of price saving during the whole shopping process will also influence customer satisfaction.

5.1.3 Hypothesis H3 Finding

Regarding the data result reflected on the correlation between word-of-mouth and customer satisfaction, indicated 0.254 coefficient, meaning each word-of-mouth variable varies increase, there is 25.4% increase in effect customer satisfaction. Although this effect is not as significant as time saving, it can also imply that online customers would more often read online reviews when they do online shopping. During the pandemic, the good or bad consumer reviews will determine the customer's purchase decision toward items or product selling from online platforms. However, respondents have inconsistent responses to sharing their after-sales experience. Thus, encouraging product users to read reviews more often can effectively increase word-of-mouth and positively impact customer satisfaction.

5.1.4 Hypothesis H4 Finding

From the perspective of discussing time saving, price saving and word of mouth, these factors have significantly made a correlation toward customer satisfaction. Thus, customer satisfaction has the most substantial effect on purchase intention. According to the hypothesis result for H4, the coefficient is 0.744, meaning each customer satisfaction varies increase, there is a 74% increase in effect purchase intention. This result shows the strongest significance amongst others. It is proven that purchase intention can be formed through customer satisfaction. Also implied when customer satisfaction increases, their purchase intention and repeat intention will also increase (Anderson and Sullivan, 1993; Bardhan et al., 2010; Bolton, Kannan and Bramlett, 2000). Nevertheless, the survey result shows that consumers tend to concern their personal and private data throughout the online purchase process. Therefore, retailers should make improvements to minimize any potential problem that can cause demotivate online customer purchase intention toward online shopping.

5.1.5 Demographics Finding

This study reflects consumer gender, age, education level, and preferred online-access device to outline their purchase ability and intention toward online purchase characteristics. Females likely drive the survey result, there 65.2% of respondent is female, and 34.8% are male. People with the highest education level and aged between 26 – 45 are more willing to shop online than other age groups. And They prefer to use smartphones than other devices to conduct online purchases at least once a month. Furthermore, they are willing to spend HKD 401 or more to purchase mainly groceries or non-groceries product and food delivery service in overall online purchase experience during the pandemic in 2020.

5.2 Recommendation

According to the overall finding from the above analysis. This study incorporated other factors; time saving, price saving, word of mouth, and customer satisfaction to draw the true picture of online consumer purchase intention in the COVID-19 pandemic. The mentioned factors have been proven to correlate with the purchase intention directly. Following suggestion based on each factor provides further insight into how to improve consumer online purchase intention, which aligns with this study's research value for both shareholders - current online business retailers and investors, respectively.

5.2.2 Beneficial to Current Online Business Retailer

Regarding the finding based on regression coefficient analysis result for each hypothesis, the higher to low rankings level shows as following by H4, H1, H3 and H2. Recommendations based on these findings will be further interpreted, focusing on the benefit for one of the value stakeholders in this study – Online Business Retailer.

5.2.2.1 Increase Consumer Convenience (H1, H4)

H1 indicated the result is 50% in effect customer satisfaction. It implicated that about half of the customer satisfaction depends on the experience of customer convenience. Obviously, consumers are motivated by convenience to shop online; therefore, their satisfaction level will increase. Consequentially, consumer purchase intention will also increase. Scholars are simplified that if the websites that represent quality information will provide positively significantly increase customer satisfaction (Ma Sabote et la., 2012; Tzeng et la., 2021). Otherwise, consumers who are dissatisfied with a website's information content will tend to leave the website without any purchases (Cyr, 2008; Luo et la., 2012; Chen et la., 2013).

According to this study mentioned in Chapters 1.2.3, 4.2.4, and 4.2.6, consumers will

be most likely to purchase groceries and non-groceries products and food delivery services more often. Therefore, the online retailer should develop a friendly to use with quality information service function website, that can immediately give customer service by providing human touch care service and answering customer questions by on-site person. Answering customer problems such as searching for items or making payment issues more accurate and precise will help to minimize any misunderstanding of using their website during online shopping. Moreover, it can enhance the purchase process more efficiently to maintain customer satisfaction and attract potential consumers who might not be familiar with purchasing online. Furthermore, H4 result in this study indicated 0.744 regression coefficient between CS and PI. It implied that the most significant correlation in this study between these factors. Therefore, it helps a consumer navigate and find the relevant quality information faster, easily, and can help reduce their time consuming, time saving, and eventually increase customer satisfaction and purchase intention. Consequentially, it will enable the business to retain competitiveness and continuous growth.

5.2.2.2 Improve Customer Perception (H3)

The result shows that the WOM factor has some impact on determining customer satisfaction level, indicating the 0.254 coefficient between WOM and CS. And the survey result shows two significant phenomena. Firstly, users' reviews will determine consumers' online purchase decisions for products or service displayed from the internet. Secondly, consumers seem to lack motivation to constantly share their review of the produce/service via an online platform.

In fact, there is some research from the past and recent years has claimed that customers need to see the product review or demonstration from other users in the form of image or video help to reduce uncertainly, and then in turn improves customer satisfaction and

purchase intention (Ramirez, Jr and Burgoon, 2004; Yoo et al., 2015).

It is suggested to retailers to improve content richness, such as adding image and video-based review comments of the product or service from previous users or expertise and offer review promotion. This can enhance customer engagement, reduce uncertainty about their product quality, and motivate users to write product reviews and share.

5.2.2.3 Enhance Customer Perceived Value (H2)

According to the result, the price saving factor has less correlation with customer satisfaction, indicating 0.141 coefficient between PS and CS. It simplified the price saving factor as the most negligible factor influencing customer satisfaction compared to TS and WOM. However, recent research has claimed that consumer is search for fun, enjoyment, recreation, and amusement when their browse on the internet for online shopping, especially when comparing prices from different retailers and choosing the lowest acceptable competing price (Alavi et al., 2016; Pandey et al., 2019).

Therefore, the suggestion for online business retailers is to provide a large range of price comparison functions in their business websites. Aiming to showcase the product prices from different online platforms to the consumer allows them to make price comparisons based on their own decision quickly, especially for groceries products and food delivery services with prices above HKD 401 based on the finding from Chapter 4.2.6, and 4.2.7. Also, the retailer can upsell their product by offering bundle sales promotion. To enhance their perceived value in their website. Hence. It will help attract more potential consumers to visit their website for prices comparison purposes and potentially increase the consumer purchase possibility in their website in the future.

Thus, increasing the customer's sense of value from their shopping experience. Consequentially the customer satisfaction increase, the purchase intention also increases.

5.2.3 Beneficial to Invertors

Regarding the finding based on regression coefficient analysis result for each hypothesis, the higher to low rankings level is followed by H4, H1, H3 and H2. Recommendation based on these findings will further interpret, which mainly focus the benefit for one of the value stakeholders in this study – Investors

5.2.3.1 Develop Convenience Application (H1, H4)

H1 indicated the result is 50% in effect customer satisfaction. It implicated that about half of the customer satisfaction depends on the experience of customer convenience. Also according to H4 result. It is obvious evidence that consumers are motivated by convenience to shop online. Thus, increase customer satisfaction and impact purchase intention.

A suggestion given to investors is to develop a mobile application that can allow consumers to make purchases faster and more efficiently than traditional purchase solutions, according to the Chapter 1.1.2, clothes and accessories product indicated as the major product purchased in 2020. Also, based on the questionnaire result (see chapter 4.2.5), respondents prefer to use smartphones to conduct online purchases. Therefore, developing clothing online service allows consumers to experience the benefits of new technology in choosing clothes and making personalized matching choices to improve customer satisfaction during online shopping. Thus, consumer can save time and more convenience to make online purchase. In figure 5.1 demonstrated that the application can recognize the critical area of clothing such as neckline, cuffs, and waistline, as well as clothing attribute tags such as sleeve length, collar type, and skirt style, so that the clothing company can quickly and accurately understand clothing images.



Figure 5.1: FashionAI Dataset technology applied in clothing online service

Source: (PolyUHK, 2018)

5.2.3.2 Develop Attractive Review System (H3)

The result shows that the WOM factor has some impact on determining customer satisfaction level, indicating the 0.254 coefficient between WOM and CS. And the survey result shows two significant phenomena. Firstly, users' reviews will determine consumers' online purchase decisions for products or services displayed on the internet. Secondly, consumers seem to lack motivation to constantly share their reviews of the produce/service via an online platform.

Therefore, suggestions go for the investor to provide a visual presentation of product in image and VR viewer function on the online shopping company website. Anable users to review the user review more fun and enjoyable during visiting online shops. This new feature function is largely beyond the scope of simple text based WOM content. This type of rich review can reduce text error or human bias and allow potential consumers to review their product more transparently, joyfully, and efficiently share to others. Consequentially increase customer satisfaction and purchase intention, which benefit for both seller and consumer.

5.2.3.3 Develop Searching Price Application (H2)

The price saving factor has less correlation with customer satisfaction, indicating 0.141 coefficient between PS and CS. It simplified the price saving factor as the least relevant

factor influencing customer satisfaction compared to TS and WOM. However, recent research has claimed that consumer is search for fun, enjoyment, recreation, and amusement when their browse on the internet for online shopping, especially when comparing prices from different retailers and choosing the lowest acceptable competing price (Alavi et al., 2016; Pandey et al.,2019). Therefore, consumers are willing to spend time on pricing, although they know the actual price might not be the lowest. But the overall searching price comparison experience can enhance their perceived value.

Therefore, the suggestion to the investor can develop a price search engine application for smartphones user. Because based on the questionnaire result (see 4.2.5), the majority of respondents prefer to use smartphones to conduct online purchases.

The searching engine application provides a real-time pricing comparison function that allows users to scan the product image to conduct pricing searching for the same or similar product immediately via their device. This experience can stimulate consumer interest in terms of price saving and comparison at the same time. Thus, they can use an online platform to find the ideal product or service more quickly and fulfill their needs more accurately without time delay due to searching for the precise items that consumers are looking for in urgent or hurry situations. Eventually, it will enhance their purchase intention in every impulse purchase condition. And will increase consumer online shopping intention incrementally. Because as mentioned from this research, time saving is defined as the more influencing factor to determine customer satisfaction. Thus giving a strongly influence toward purchase intention. Consequentially, when the purchase intention can continue to grow. It will lead the total online sales value to grow even after the post – Covid-19 situation in Hong Kong, which aligns with the purpose and result in this study.

5.3 Limitation and Further Study

There are two existing limitations in this study, which should be considered for future research. First, due to an internet-based survey method was adopted in this study to collect data for the target population. A future research study is suggested to use both internet-based and phone-based interviewing survey methods to collect more in-depth data and give immediate responses to interviewee to reduce any misunderstanding of the questions to be asked. The second limitation is the pandemic situation is still ongoing during the time conducted in this study in 2021. Therefore, the studied factors from this research might change over the period. It is suggested to conduct more complete research when the pandemic is officially finished in the future. Thus, the target population can provide more comprehensive data to understand the phenomenon of consumer shopping purchase intention within the community in Hong Kong. Consequentially, it can provide more up-to-date valuable data results for commercial and academic purposes.

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Appendix

Questionnaire on Customer Satisfaction and Online Purchasing Intention **During COVID-19 Pandemic in Hong Kong**

The following survey is study toward customer online satisfaction and purchasing intention during COVID-19 pandemic in Hong Kong, all the collected data will be only use for research purpose and will delete after the research is complete.

Your assistance will be highly appreciated, your responses will be kept strictly confidential, and you stay anonymous. And you are allowed to withdraw any time.

PART A

With the following, Rating 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Please kindly choose the ONE with most appropriate description for your answer.

TS01. I believe that using online platform are very useful in the purchasing process.

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

TS02. I believe that using online platform helps me accomplish things more quickly in the purchasing process.

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

TS03. I believe that I can save time by using online platform in the purchase process.

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

TS04. Convenience is one of the main reasons for me to use online platform for shopping.

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

TS05. Time saving is my first consideration whether to use online platform or not for shopping purpose.

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

PS06. I can save money by using prices comparison via different online platform in the purchase process.

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

PS07. I enjoy searching for cheap product deals in different online retailer website.

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

PS08. Online retailers offer better value for money product or service.

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

PS09. Prices is an important for me when I am shopping online.

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

PS10. I always experienced my purchase cheaper at one particular website than if I had made them elsewhere.

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

WOM11. Searching for information about products and services is one of most important things I would consider before make purchase decision for online shopping

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

WOM12. I always share my knowledge and information on online sales websites.

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

WOM13. I always read online consumer reviews when I do online shopping.

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

WOM14. I recommend people to buy products online from the website where I usually buy them

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

WOM15. Good or bad consumer reviews will determine my online purchase decision for product or service display from internet

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

CS16. I find that using online platform to make purchase are enjoyable

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

CS17. I feel comfortable of using online purchase service.

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

CS18. I think online shopping is easy to use.

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

CS19. I feel competent of using the online purchase service.

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

CS20. My attitude toward online shopping is positive.

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

CS21. I feel safe to provide my personal and private data throughout online purchase process.

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

CS22. I am satisfied with my previous online shopping experience

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

PI23. I plan to use online platform to make purchase in the future.

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

PI24. I have strong intention to purchase online in the future

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

PI25. I often consider to buy thing via online channel.

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

PI26. I will continue shopping online at the same website.

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

PI27. I will not be shopping online at the same website if I receive a bad shopping experience last time.

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

PART B

With the following box, please tick the ONE with most appropriate answer below.
Thank you for your help.

DS28. Your gender?

- ☐ Male
☐ Female

DS29. Your age groups?

- ☐ 18 or below
- ☐ 19 - 25
- ☐ 26 - 35
- ☐ 36 - 45
- ☐ 46 or above

DS30. Your education levels?

- ☐ Primary School
- ☐ Secondary School
- ☐ Certificate / Diploma / Professional Diploma
- ☐ Bachelor Degree
- ☐ Postgraduate or above

DS31. How often did you spend on online purchase during in 2020?

- ☐ One time a day
- ☐ One time a week
- ☐ Two times a week
- ☐ One time a month

DS32. What device did you use the most for online purchase during in 2020?

- ☐ Smart Phone
- ☐ Tablet
- ☐ PC / Laptop

DS33. What product / service did you purchase the most during in 2020?

- ☐ Groceries Product and Food Delivery Service
- ☐ Non – Groceries Product
- ☐ All of the above

DS34. How much did you spend on each online purchase during in 2020?

- ☐ HKD 200 or below
- ☐ HKD 201 - 300
- ☐ HKD 301 - 400
- ☐ HKD 401 - above

SURVEY IS COMPELETED. THANK YOU FOR YOUR VALUABLE TIME.