

A Study of On-line Purchase in Hong Kong's Customers

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For the Master of Business Administration

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Abstract

Purpose – The purpose of this study is to identify the factors affecting people select on-line purchase.

Design / methodology / approach – A quantitative approach is adopted, involving both documentary analysis and data analysis. Data were collected by survey of 166 customers who live in Hong Kong with aim of assessing customers select on-line purchase. Statistical Package for the Social Sciences (SPSS) is the principal analytical tool in this study.

Findings – This study gives the Select on-line purchase on save purchasing time, save transportation expense, so convenient to purchase goods and can have cheaper price. It suggests relationships between save time, transportation expense, goods convenience, cheaper price and Select on-line purchase. The analysis indicates that customers tend to select online purchasing rather than shop in store.

Research limitations/implications – Further studies should incorporate other variables such as customer save time, transportation expense, goods convenience and price reduction, since these factors affect customer decision.

Practical implications – The findings help practitioners to understand how the factors of save time, transportation expense, goods convenience and price deduction affect Select on-line purchase.

Originality/value – This study contributes to the current knowledge on online Select on-line purchase and helps to understand online purchasing market development.

Keywords:

Time saving, Transportation expense, Goods convenience and Price deduction, Select On-line purchase.

Declaration

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed _____ (Candidate)

Date _____

STATEMENTS

This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used, the extent and nature of the correction is clearly marked in a footnote(s).

Signed _____ (Candidate)

Date _____

I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organizations.

Signed _____ (Candidate)

Date _____

Acknowledgement

Chapter One: Introduction

1.1 Background

Introduction

Online purchasing has dominated many sectors such as air travel, hotels, computers and appliances.

With globalization, online purchasing trend will undoubtedly happen more and more in Hong Kong. Therefore, it is important to understand the online shopping experience of consumers and retailers so far and their willingness to adapt to future trends.

Online shoppers were asked which site they bought from and which sites they knew. Platform Taobao, Yahoo! And Groupon are the most commonly cited. The platform allows retailers to use huge traffic to attract customers without investing heavily in selling products on their own website. A number of well-known street retailers have emerged and are widely recognized by the online shopping community.

Online consumers were asked what initially attracted them to shopping online. Responses include: "The most popular reason is the recommendation of friends and relatives", especially for women; followed by "quick and convenient" and "cheaper than roadside". Motivations such as "availability", "lack of time to shop on the street", and "variety of products" are far less important for consumers who are trying online shopping for the first time. (Rashed Al Karim, 2013,p19)

Research background

Figure 1.1a shows the online purchasing rate in the US (The Statistics Portal, 2016), Mainland China, Japan (The Statistics Portal, 2016), some major European countries (Eurostat, 2015) in 2015 and in Hong Kong in 2014. The UK has the highest online retail penetration (81%), followed by the US (78%), Germany (73%), Japan (69%) and Mainland China (67%). As shown above, the penetration rate of Hong Kong is far below than the rate of these countries. If Hong Kong catches up with the current overseas trajectory, it is expected that online retail will grow rapidly in coming years. (Consumer council, 2016, p2)

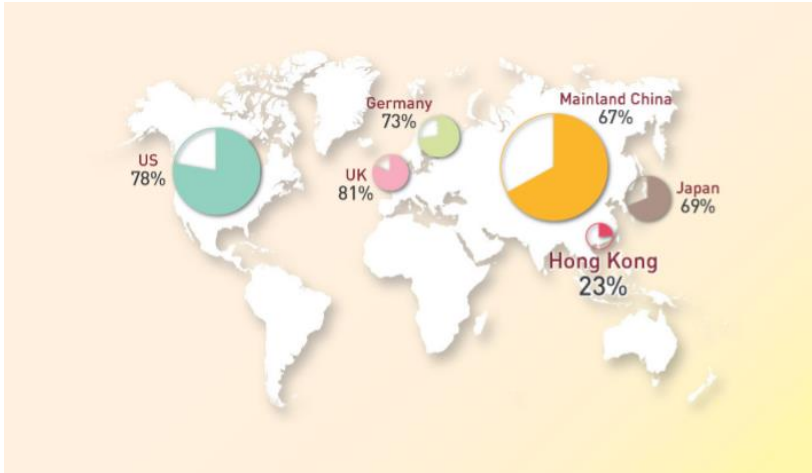


Figure 1.1a: online retail penetration rates in Mainland China, selected EU countries, the US, Japan and Hong Kong (Consumer council, 2016, p2)

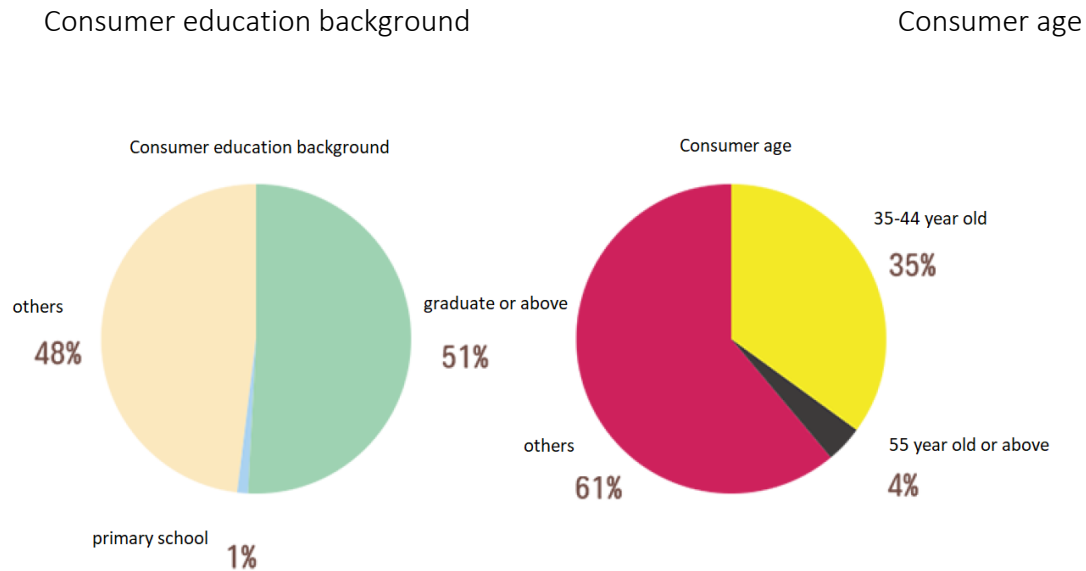
Consumers in mainland China have embraced online retail. According to the National Bureau of Statistics of China, total online retail purchases in 2015 were 387.7 billion yuan, with a penetration rate of 67%. A survey conducted by McKinsey & Co in 2015 found that online retail in Mainland China accounted for 14% of all retail spending (McKinsey & Co, 2015), which is higher than any other country outside the UK. According to research conducted by PricewaterhouseCoopers, shoppers in mainland China are one of the most loyal online shoppers compared to shoppers in the United Kingdom and the United States (PwC, 2012). They said they had purchased at least 10 items. The percentage of online purchases of clothing and footwear is high (60%).

There are several reasons why consumers are shopping online. These reasons vary from person to person and from market to market (Forbes, 2013). In a study of U.S. consumers, 24% of consumers considered lower prices, especially books, electronics and entertainment products, but food and beverage choices were more common, while cleaning products and paper, etc. Some items are free shipping towels.

The online retail boom in mainland China may also drive the growth of online retail in Hong Kong. Chinese websites are relatively easy for Hong Kong people to use. A good shopping experience using Mainland websites will encourage other Hong Kong consumers to shop online. According to reports, compared to the world, online sales of the clothing, furniture and home appliance industries in Hong Kong in 2016 recorded most of the revenue from mainland China (Statistics Inc., 2016).

Background of Hong Kong Online Consumers

Table 2: Educational Level and Age Ratio of Hong Kong Online Shopping Consumers (RTHK, 2018)



In Hong Kong, people with a higher education level shop online more often: 51% of respondents with a college education or higher have online shopping, but only 1% have primary education and online shopping; segment by age Most online shoppers are younger generations: 35% of online shoppers are 35-44 years old, while online shoppers 55 and older receive only 4%. (RTHK, 2018)

1.2 Research Drivers

The reason to do the 'Select on-line purchase' research is the trend and development of the online purchasing in future:

With the increasing competition in the e-commerce market, many people feel that the e-commerce market is saturated. In fact, it is not. However, the current pure e-commerce model is gradually moving closer to content e-commerce. more and more. Hong Kong people spending power has continued to improve, and online shopping habits have gradually developed. Promotional activities on major domestic platforms have contributed significantly to the increase in transaction size. Online and offline integration, community e-commerce, etc. will become important growth points for online retail.

1.3 Research Objectives

- To identify the online customers, select on-line purchasing factors
- To find out the relationship between on-line purchasing and each factor.
- To recommend marketing strategies (product, place, promotion and price) for online purchasing.

1.4 Research Questions

The relationship among Time saving, Transportation expense saving, Goods convenience and Price reduction.

The research questions are as following list:

Is there a relationship between Time saving and On-line purchase?

Is there a relationship between Transportation expense saving and On-line purchase?

Is there a relationship between Goods convenience and On-line purchase?

Is there a relationship between Price reduction and On-line purchase?

1.5 Value of the Research

Although current research reports or academic research on Internet usage or online shopping are quite sufficient, this study believes that it is necessary to target the perceptions of current online users on online purchasing decisions in order to understand their impact on the Internet Shopping considerations. This will not only enrich the academic community's understanding of online consumer behavior, but also provide practical aspects of online marketing, operating e-commerce, and set the best direction for market segmentation marketing strategies.

1-6 Research Flow

Chapter1: Introduction

In this chapter, research background, objectives and aims are introduced. The framework and procedures of study are also primarily outlined to provide a clear picture of all steps.

Chapter2: Literature Review

This chapter is to review the literatures relating to the study topic. Also, it provides the supporting evidences for each variable and develops concrete and different hypotheses for the next stage.

Chapter3: Research Methodology

This chapter is to discuss the research approaches and research framework with the relationships of 5 variables and hypothesis setting. The research design is also to be discussed, such as how to implement data collection, sampling procedures and data analysis methods. Moreover, it mentions the validity, reliability and limitations for the research design.

Chapter4: Data Analysis and Results Discussion

This chapter is to analysis about the total response rates, describe the demographic information of respondents and the observation on characteristics of "Select on-line purchasing".

This chapter is also to perform in-depth analysis, such as correlation analysis and regression analysis. It aims to investigate whether have a positive or negative relationship between each variable and the hypotheses are supported or not.

Chapter5: Conclusion and Recommendations This chapter is to conclude the result's finding whether match with literature review and express all hypotheses are valid or not. In addition, it is to suggest the recommendations for future researchers and Select on-line purchasing in Hong Kong. For the limitations, this chapter is to describe the limitations happened in this study.

Chapter Two: Literature Reviews

2.1 Research Focus Area

The research focus area is as following list:

Online purchasing can save time

Online purchasing can save transportation expense

Online purchasing is convenient

Online purchasing product price reduction

Customer select online purchasing

Relationship between Save time and Select on-line purchasing

Save time

Instead of spending time in the shopping mall, it is better to shop online directly, to save time and to shorten the shopping process. After searching for the product you want on the website, you can simply complete the shopping with a few clicks of the mouse button. Time can be saved to do other things or work.

Traditional shopping, you can only run a few stores even if you take out a day. However, online shopping easily solves this problem. As long as you search for the products you need on the shopping website, the website will list the information of the same product provided by different merchants, so we can select the required products in a short time. Goods, saving a lot of time.

Most online stores provide home-to-home services, which can save users time to pick up products at the store. (Rashed Al Karim, 2013,p19)

Relationship between Transportation expense and Select on-line purchasing

Save on transportation costs

Not everyone has shopping malls and supermarkets near their homes. Assume that people who are far away need to take transportation or drive by themselves to reach the nearest malls and supermarkets. In terms of vehicle oil or transportation costs, a lot of money will be wasted. Through online shopping, any product you buy will be delivered directly to your doorstep, and you can shop without going out. (Rashed Al Karim, 2013,p19)

Online stores communicate directly between merchants and consumers, eliminating the need for intermediate links and the expenses of shopping malls and sales staff. Transportation costs and labor costs of goods are excluded, shop rents, utilities, etc. are also deducted. Therefore, for merchants, because online sales have no inventory pressure, low operating costs, and the scale of operations is not limited by venues, etc., the same products, online sellers will be lower than the retail store sellers give prices.

Relationship between Goods convenience and Select on-line purchasing

Many choices

Unlike a single type of store, online stores can offer different types of goods because there are no restrictions on the size of the store. (They still use warehouses to store goods, but because they don't have to worry about whether customers can reach them, they can build warehouses in remote areas in exchange for more storage space.) The best example is books, general physical bookstores. It is impossible to sell all kinds of books at the same time because of the size of the storefront and the warehouse; however, online stores can sell multiple books at the same time because they do not require physical display space, including the less popular ones. (Rashed Al Karim, 2013,p19)

Everything you need

Watches, vehicles, electronics, fast food, food, miscellaneous grains, buildings, raw materials, decorations, services, etc., anything you can think of or think of can be successfully searched online. Even some special products, such as armor, swords, space suits or heat-vision glasses, can be found on shopping platforms. (Mohammad Hossein, 2012, p90)

Most and most economical brands to choose from

You can find a variety of different brands on the shopping website. This is something traditional merchants cannot do. The latter cannot show all products to customers for reference. If necessary, you can only take out the catalog for you to browse. It is better to browse on the Internet, because the web page is highly extensible, and some have a detailed introduction to the product. In particular, consumers in rural areas no longer need to travel to big cities, nor do they necessarily have LV bags or Sony's top 4K TVs.

More choices

No matter how big the mall is, the number of items that can be accommodated is limited, and the online advantage is that it can accommodate many brands and products. You can shop regardless of time and place and browse and purchase the latest popular items from foreign brands. In addition, if the online store does not have the items you want, you can browse other online stores at any time, which is very convenient. (Dong-MO

Koo,2006,p128)

Breaking geographic boundaries

Because the Internet is global, and coupled with the current transportation, users in different regions can go to different countries in the world to order goods that their country does not have and deliver them to their homes through airmail and other services.

Convenient and fast online shopping without time, location restrictions, no need to go out, as long as customers open the website at home, click the mouse to easily shop, can be completed in a short time; and the seller is responsible for home delivery, as small as a pair of glasses , As big as a washing machine.

Online shopping also offers new and used goods

Internet products also change with each passing day. When last year's models remain, then you have a good chance to buy them at half price. As long as you pay attention, some products are being promoted with extremely favorable discounts, and a bunch of small items, such as electric pots, are also included with fresh-keeping boxes, cooking knives, quick-cooking pots, dipping boards, etc. Fresh, unused, but last year or the year before, if you don't mind using the old model, you can definitely complete your wish in the online store.

First, there is no time limit for online shopping. As an online store, it can be opened to customers 24 hours, as long as users log in to the website at the time they need, they can pick the products they need. In traditional stores, consumers are mostly limited by business hours.

Third, online shopping is easy to find. Basically, online stores have the functions of classification and search of in-store products. Through searching, buyers can easily find the products they need. In traditional stores, buyers need more time and energy to find products. (Dong-MO Koo,2006,p128)

Relationship between Price reduction and Select on-line purchasing

Price reduction

As mentioned in the first point, because they do not need to set up physical stores in various places, they can minimize the cost and sell the same product at a cheaper price than a physical store. (But this is not necessarily, to some extent related to the market share of the online store market and the size of the company, which is what people call "injury people at their own expense.") (Rashed Al Karim, 2013,p19)

Direct deals with production plants

If you have bought something online, it is almost cheaper than the physical storefront, because the Internet is a platform that connects you with the factory, at most it only pays the platform some necessary fees, but does not have the physical storefront Rentals, utilities, personnel costs, etc., so items must be cheap. Moreover, you don't have to pay commissions to middlemen or mid-market dealers. After all, it was difficult for this layer to detect how much it was in the past. There is room for those who are interested to drive up prices. Simply put, going directly from your place of production to your hands is more in line with the spirit of "socialism." (Mohammad Hossein, 2012, p90)

Coupons for exclusive online shopping

Almost every shopping website has discounts and coupons that are uninterrupted throughout the year. When you first become a member, you also provide discounts or bonus points to allow you to reduce prices when shopping. It's hard to do. These coupons are all kinds, some are for clothing, some are for food, some are for home appliances. You can buy cheaper products with different coupons according to your needs throughout the year. (Mohammad Hossein, 2012, p90)

Online shopping has low shopping costs. For online shopping product buyers, they can select and compare products from each other. They only need to log in to different websites or select different channels, which can be completed in a short time, and can be delivered directly by the merchant. The hard work of traditional shopping carts has greatly reduced time and expenses. For traditional shopping, this cannot be achieved.

For merchants, due to the lack of inventory pressure, low operating costs, and unlimited business scale in online sales, more companies will choose online sales in the future, and timely adjust market information through the Internet in a timely manner Business strategy to improve the economic efficiency of enterprises and their ability to participate in international competition. (Rashed Al Karim, 2013,p19)

Better deal price

Because online products are provided directly by the manufacturer and there is no middleman involved in the transaction process, things tend to sell cheaper than physical stores, and online stores often offer special discounts. So when you want to buy something, but find that the store is selling too expensive, you can search online and see if that online store is discounting. You don't need to go out at all to compare item prices and discover more discounted products. (Rashed Al Karim, 2013,p19)

2.2 Literature Reviews on Time Saving

2.2.1 Online purchasing can save time

Save time. Traditional shopping, you can only run a few stores even if you take out a day. However, online shopping easily solves this problem. As long as you search for the products you need on the shopping website, the website will list the information of the same product provided by different merchants, so we can select the required products in a short time.

2.2.2 Definition of Online purchasing can save time

Authors / researcher	Year of Publication	Journals
Meenakshi Handa & Nirupma Gupta	2014	'A Study of the Relationship between Shopping Orientation and Online Shopping Behavior among Indian Youth', Internet Commerce, 13:1, 22-44, DOI: 10.1080/15332861.2014.918437 To link to this article: https://doi.org/10.1080/15332861.2014.918437
Yong-Hui Li and Jing-Wen Huang	2009	Applying Theory of Perceived Risk and Technology Acceptance Model in the Online Shopping Channel World Academy of Science, Engineering and Technology 53 2009
Glenn J Browne , John R Durrett & James C Wetherbe	2004	Consumer reactions toward clicks and bricks: investigating buying behavior on-line and at stores, Behaviour & Information Technology, 23:4, 237-245, DOI: 10.1080/01449290410001685411 To link to this article: https://doi.org/10.1080/01449290410001685411
JEN-HUNG HUANG AND YI CHUN YANG	2010	The relationship between personality traits and online shopping motivations Social behavior and personality; 2010;38,5; ProQuest
Pamela L. Alreck, Gerard R. DiBartolo, Memo Diriker, Howard F. Dover, Kirsten A. Passyn, Robert B. Settle	2009	Time Pressure, Time Saving And Online Shopping: Exploring A Contradiction The Journal of Applied Business Research – September/October 2009 Volume 25, Number 5

2.2.3 Typologies of Online purchasing can save time

Authors / researcher	Year of Publication	Journals
Andrew J. Rohma, Vanitha Swaminathanb	2004	A typology of online shoppers based on shopping motivations Journal of Business Research 57 (2004) 748–757
Patricia Harris, Francesca Dall’Olmo Riley, Debra Riley and Chris Hand	2017	Online and store patronage: a typology of grocery shoppers www.emeraldinsight.com/0959-0552.htm
Ah Keng Kau, YingChan E Tang, Sanjoy Ghose	2003	Typology of online shoppers The Journal of Consumer Marketing; 2003; 20, 2/3; ProQuest pg. 139

2.2.4 Factors affecting Online purchasing can save time

Authors / researcher	Year of Publication	Journals
Bharti Motwani, Sharda Haryani,Sukhjeet Matharu	2013	A Comparative Study between USA And India on Factors Affecting online Shopping International Journal on Customer Relations Volume 1 Issue 2 September 2013 Article can be accessed online at http://www.publishingindia.com
Mohammad Hossein Moshref Javadi, Hossein Rezaei Dolatabadi, Mojtaba Nourbakhsh, Amir Poursaeedi & Ahmad Reza Asadollahi	2012	An Analysis of Factors Affecting on Online Shopping Behavior of Consumers International Journal of Marketing Studies; Vol. 4, No. 5; 2012
ArunKumar SivaKumar & Abirami Gunasekaran	2017	An Empirical Study on the Factors Affecting Online Shopping Behavior of Millennial Consumers ISSN: 1533-2861 (Print) 1533-287X (Online) Journal homepage: https://www.tandfonline.com/loi/wico20

ArunKumar SivaKumar & Abirami Gunasekaran	2017	An Empirical Study on the Factors Affecting Online Shopping Behavior of Millennial Consumers, Journal of Internet Commerce, 16:3, 219-230
Mamoun N. Akroush, Mutaz M. Al-Debei	2015	An integrated model of factors affecting consumer attitudes towards online shopping www.emeraldinsight.com/1463-7154.htm
Elif TÜRK	2019	FACTORS AFFECTING ONLINE SHOPPING DECISION: CUSTOMERS IN TURKEY Journal of International Trade, Logistics and Law, Vol. 5, Num. 1, 2019, 35-43
Subhro Sarkar ¹ , Arpita Khare ¹	2017	Moderating effect of price perception on factors affecting attitude towards online shopping J Market Anal (2017) 5:68–80 DOI 10.1057/s41270-017-0018-2

2.2.5 Application of Online purchasing can save time

Authors / researcher	Year of Publication	Journals
Ching Torng, Wei Chiang Hong, Yi Fun Chen, Yucheng Dong	2010	Application of salesman-like recommendation system in 3G mobile phone online shopping decision support journal homepage: www.elsevier.com/locate/eswa
Ephrem Habtemichael Redda	2019	Attitudes towards Online Shopping Application of the Theory of Planned Behaviour ACTA UNIVERSITATIS DANUBIUS Vol 15, no 2, 2019
PauloDuarte, SuzanneAmaro	2017	Methods for modelling reflective-formative second order constructs in PLS An application to online travel shopping The current issue and full text archive of this journal is available on Emerald Insight at: www.emeraldinsight.com/1757-9880.htm

2.3 Literature Reviews on Online purchasing can save transportation expense

2.3.1 On-line purchasing can save transportation expense

Shopping online is not related to any shipping costs. You just need to order what you want at home. All the products you ordered will also be delivered to your doorstep. Therefore, you will have the opportunity to avoid shipping costs. (Rashed Al Karim, 2013,p19)

2.3.2 Definition of Online purchasing can save transportation expense

Authors / researcher	Year of Publication	Journals
Weihong Li,a, Yang Cheng,bZheng Fang	2014	Analysis on the Consumer Decision Time of Online Shopping Advanced Materials Research Online: 2014-06-25 ISSN: 1662-8985, Vols. 971-973, pp 2289-2292 doi:10.4028/www.scientific.net/AMR.971-973.2289
Bhaskar Kumara,, Kumar Abhishekb, Akshay Deepakb and M. P. Singh	2016	Implementation of Interactive Real Time Online Co-Shopping using Push AJAX Available online at www.sciencedirect.com Procedia Computer Science 89 (2016) 473 – 482

2.3.3 Typologies of Online purchasing can save transportation expense

Authors / researcher	Year of Publication	Journals
Dong Ling Xu-Priour, Gérard Cliquet & Adrian Palmer	2017	The Influence of Buyers' Time Orientation on Online Shopping Behavior A Typology ISSN: 1086-4415 (Print) 1557-9301 (Online) Journal homepage: https://www.tandfonline.com/loi/mjec20

2.3.4 Factors affecting Online purchasing can save transportation expense

Authors / researcher	Year of Publication	Journals
Kosuke Miyatake a, Toshinori Nemoto a, Satoshi Nakaharai a, Katsuhiko Hayashi	2016	Reduction in Consumers Purchasing Cost by Online Shopping Available online at www.sciencedirect.com Transportation Research Procedia 12 (2016) 656 – 666

2.3.5 Application of Online purchasing can save transportation expense

Authors / researcher	Year of Publication	Journals
Chih-Wei Liu, Ai Yun Hsieh, Shao-Kang Lo, Yujong Hwang	2017	What consumers see when time is running out Consumers browsing behaviors on online shopping websites when under time pressure journal homepage: www.elsevier.com/locate/comphumbeh
Chinho Lin, Yu-Huei Wei & Watcharee Lekhawipat	2018	Time effect of disconfirmation on online shopping ISSN: 0144-929X (Print) 1362-3001 (Online) Journal homepage: https://www.tandfonline.com/loi/tbit20

2.4 Literature Reviews on On-line purchasing is convenient

2.4.1 On-line purchasing is convenient

Convenient and fast online shopping without time and location restrictions. No need to go out. As long as customers open the website at home and click the mouse, they can easily shop and can be completed in a short time; and the seller is responsible for home delivery, as small as one Pay for glasses, as big as a washing machine.

Communication. On the shopping website we can see many buyers' evaluation of this product. This information can provide a reference for whether we want to purchase this product. Sometimes you don't know what suits you or what brand is more reliable, you can go to some websites to post questions, and there will be many enthusiastic netizens who follow you to help you choose the most suitable product. Online shopping can also exchange information about this product with netizens who share common interests.

(Mohammad Hossein, 2012, p90)

2.4.2 Definition of Online purchasing is convenient

Authors / researcher	Year of Publication	Journals
Esra Suel, Nicolo Daina, John W Polak	2017	A hazard-based approach to modelling the effects of online shopping on inter shopping duration Transportation (2018) 45:415–428 https://doi.org/10.1007/s11116-017-9838-3
Kees Maat and Rob Konings	2018	Accessibility or Innovation? Store Shopping Trips versus Online Shopping Transportation Research Record 2018, Vol. 2672(50) 1–10 National Academy of Sciences
Esra Suel, Scott Le Vine, and John Polak	2015	Empirical Application of Expenditure Diary Instrument to Quantify Relationships Between In-Store and Online Grocery Shopping Transportation Research Record: Journal of the Transportation Research Board, No. 2496, Transportation Research Board, Washington, D.C., 2015, pp. 45–54. DOI: 10.3141/2496-06 Transportation Research Record 2496

2.4.3 Typologies of Online purchasing is convenient

Authors / researcher	Year of Publication	Journals
Yiwei Zhou, Xiaokun (Cara) Wang	2014	Explore the relationship between online shopping and shopping trips An analysis with the 2009 NHTS data journal homepage: www.elsevier.com/locate/tra Transportation Research Part A 70 (2014) 1–9
Tom Cherrett, Janet Diskinson, Fraser McLeod, Jason Sit, Savin Bailey, Gary Whittle	2017	Logistics impacts of student online shopping – Evaluating delivery consolidation to halls of residence journal homepage: www.elsevier.com/locate/trc Transportation Research Part C 78 (2017) 111–128

2.4.4 Factors affecting Online purchasing is convenient

Authors / researcher	Year of Publication	Journals
Kosuke Miyatake a, Toshinori Nemoto a, Satoshi Nakaharai a, Katsuhiko Hayashi	2015	Reduction in consumers' purchasing cost by online shopping Available online at www.sciencedirect.com ScienceDirect Transportation Research Procedia 12 (2016) 656 – 666
Richard J Lee, Ipek N Sener, Patricia L Mokhtarian, Susan I Handy	2016	Relationships between the online and in-store shopping frequency of Davis, California residents journal homepage: www.elsevier.com/locate/tra Contents lists available at ScienceDirect Transportation Research Part A 100 (2017) 40–52

2.4.5 Application of Online purchasing is convenient

Authors / researcher	Year of Publication	Journals
Yu Ding, Huapu Lu	2015	The interactions between online shopping and personal activity travel behavior: an analysis with a GPS-based activity travel diary Published online: 26 July 2015 Springer Science + Business Media New York 2015
Anne Wiese, Waldemar Toporowski, Stephan Zielke	2012	Transport-related CO2 effects of online and brick-and-mortar shopping A comparison and sensitivity analysis of clothing retailing Contents lists available at SciVerse ScienceDirect journal homepage: www.elsevier.com/locate/trd Transportation Research Part D 17 (2012) 473–477

2.5 Literature Reviews on Online purchasing product price reduction

2.5.1 Online purchasing product price reduction

Save money. Online stores communicate directly between merchants and consumers, eliminating the need for intermediate links and the expenses of shopping malls and sales staff. Transportation costs and labor costs of goods are excluded, shop rents, utilities, etc. are also deducted. Therefore, for merchants, because online sales have no inventory pressure, low operating costs, and the scale of operations is not limited by venues, etc., the same products, online sellers will be lower than the retail store sellers give prices.

(Rashed Al Karim, 2013,p19)

2.5.2 Definition of Online purchasing product price reduction

Authors / researcher	Year of Publication	Journals
Bhavik K. Pathak	2012	Comparison Shopping Agents and Online Price Dispersion: A Search Cost based Explanation This paper is available online at www.jtaer.com DOI: 10.4067/S0718-18762012000100006 Journal of Theoretical and Applied Electronic Commerce Research ISSN 0718–1876 Electronic Version VOL 7 / ISSUE 1 / APRIL 2012 / 64-76 © 2012 Universidad de Talca - Chile
Daniel Sheehana, David M. Hardestya, Alexander H. Ziegler, Haipeng (Allan) Chena	2019	Consumer reactions to price discounts across online shopping experiences Journal of Retailing and Consumer Services 51 (2019) 129–138 journal homepage: www.elsevier.com/locate/jretconser
Shimi Naurin Ahmad, Michael Callow	2018	“FREE SHIPPING” OR “DOLLAR OFF”? THE MODERATING EFFECTS OF LIST PRICE AND E-SHOPPING EXPERIENCE ON CONSUMER PREFERENCE FOR ONLINE DISCOUNT International Journal of Electronic Commerce Studies Vol.9, No.1, pp.55-70, 2018 doi: 10.7903/ijecs.1542

2.5.3 Typologies of Online purchasing product price reduction

Authors / researcher	Year of Publication	Journals
Subhro Sarkar, Arpita Khare	2017	Moderating effect of price perception on factors affecting attitude towards online shopping J Market Anal (2017) 5:68–80 DOI 10.1057/s41270-017-0018-2 Macmillan Publishers Ltd 2017
Shao-Kang Lo·Yu-Jen Chou·Ching-I Teng	2013	Source effect of advertised reference price influences on transaction value in online shopping environments Springer Science + Business Media New York 2013 Electron Commer Res (2013) 13:411–421 DOI 10.1007/s10660-013-9129-9

2.5.4 Factors affecting Online purchasing product price reduction

Authors / researcher	Year of Publication	Journals
Mohammad Faryabi, Kousar Sadeghzadeh, Mortaza Saed	2012	The Effect of Price Discounts and Store Image on Consumer's Purchase Intention in Online Shopping Context Case Study: Nokia and HTC Journal of Business Studies Quarterly 2012, Vol. 4, No. 1, pp. 197-205
Marta Arce-Urriza,Javier Cebollada, Mari ´a Fernanda Tarira	2016	The effect of price promotions on consumer shopping behavior across online and offline channels: differences between frequent and non-frequent shoppers Inf Syst E-Bus Manage (2017) 15:69–87 DOI 10.1007/s10257-016-0310-2 Springer-Verlag Berlin Heidelberg 2016

2.5.5 Application of Online purchasing product price reduction

Authors / researcher	Year of Publication	Journals
Jedrzej MUSIAL, Mario C. LOPEZ-LOCES	2017	TRUSTWORTHY ONLINE SHOPPING WITH PRICE IMPACT FOUNDATIONS OF COMPUTING AND DECISION SCIENCES Vol. 42 (2017) No. 2 ISSN 0867-6356 DOI: 10.1515/fcds-2017-0005 e-ISSN 2300-3405
Hejun Zhuang, Peter T.I., Popkowski Leszcyc, Yuanfang Lin	2018	Why is Price Dispersion Higher Online than Offline The Impact of Retailer Type and Shopping Risk on Price Dispersion Journal of Retailing 94 (2, 2018) 136–153

2.6 Literature Reviews on Customer select online purchasing

2.6.1 Customer select online purchasing

Customers select on-line purchase instead of in stores as following list

Online purchasing can save time

Online purchasing can save transportation expense

Online purchasing is convenient

Online purchasing product price reduction

2.6.2 Definition of Customer select online purchasing

Authors / researcher	Year of Publication	Journals
Chao Wen, Victor R. Prybutok & Chenyan Xu	2015	An Integrated Model for Customer Online Repurchase Intention Pages 14-23 Received 28 Nov 2010, Accepted 18 Feb 2011, Published online: 11 Dec 2015
Chia Chi Lin	2003	A critical appraisal of customer satisfaction and e-commerce Managerial Auditing Journal, ISSN: 0268-6902
Gwo-Guang Lee, Hsiu-Fen Lin	2005	Customer perceptions of e-service quality in online shopping International Journal of Retail & Distribution Management ISSN: 0959-0552

2.6.3 Typologies of Customer select online purchasing

Authors / researcher	Year of Publication	Journals
Priya Nambisan a, James H. Watt b	2011	Managing customer experiences in online product communities Volume 64, Issue 8, August 2011, Pages 889-895

Edward C. S. Ku & Yi Wen Fan	2007	THE DECISION MAKING IN SELECTING ONLINE TRAVEL AGENCIES: AN APPLICATION OF ANALYTIC HIERARCHY PROCESS Pages 482-493 Received 02 Nov 2007, Accepted 04 Nov 2008, Published online: 09 Sep 2009 https://doi.org/10.1080/10548400903163020
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2.6.4 Factors affecting Customer select online purchasing

Authors / researcher	Year of Publication	Journals
Al-maghrabi, Talal, Dennis, Charles, Halliday, Sue Vaux, BinAli, Abeer	2011	Determinants of customer continuance intention of online shopping PDF Logo International Journal of Business Science & Applied Management (IJSAM) ISSN: 1753-0296 Volume: 6, Year: 2011 Issue: 1 Pages: 41-66
Rama Mohana Rao Katta, Chandra Sekhar Patro, Visakhapatnam	2016	Online Shopping Behavior: A Study of Factors Influencing Consumer Satisfaction on Online viz-a-viz Conventional Store Shopping International Journal of Sociotechnology and Knowledge Development (IJSKD) 8(4) Pages: 16
M. Limayem, M. Khalifa, A. Frini	2000	What makes consumers buy from Internet? A longitudinal study of online shopping IEEE Xplore Journals & Magazines IEEE Transactions on System Volume 30 Issue 4

2.6.5 Application of Customer select online purchasing

Authors / researcher	Year of Publication	Journals
Kenneth K. Boyer, G. Tomas M. Hult	2006	Customer behavioral intentions for online purchases: An examination of fulfillment method and customer experience level Volume 24, Issue 2, January 2006, Pages 124-147 https://doi.org/10.1016/j.jom.2005.04.002
Suhartanto, Dwi; Ruhadi; Triyuni, N. N; Leo, Gundur	2018	Online Shopping Loyalty: The Role of Quality, Trust, Value, and Satisfaction American Scientific Publishers Advanced Science Letters, Volume 24, Number 1, January 2018, pp. 735-738(4) https://doi.org/10.1166/asl.2018.11803

2.7 Research Framework and Hypotheses

Rashed Al Karim found that time saving, transportation expense saving, goods convenience and price reduction have a positive impact on on-line purchase. The study aims to understand customer satisfaction in online purchases, and at the same time investigate the main factors that motivate customers to choose online purchases. (Rashed Al Karim, 2013)

Mohammad Hossein Moshref Javadi, Hossein Rezaei Dolatabadi, Mojtaba Nourbakhsh, Amir Poursaeedi & Ahmad Reza Asadollahi (2012) also believe that price reduction is very important for online purchases. If the price is reduced, customers will choose on-line purchasing. (Mohammad Hossein Moshref Javadi, Hossein Rezaei Dolatabadi, Mojtaba Nourbakhsh, Amir Poursaeedi & Ahmad Reza Asadollahi ,2012)

The proposed dependent variable (criterion) of this study is 'On-line purchase'.

The proposed independent variables (predictor) of this study are 'Time saving', 'Transportation expense saving', 'Goods convenience' and 'Price reduction'.

The relationship among all variables are as following:

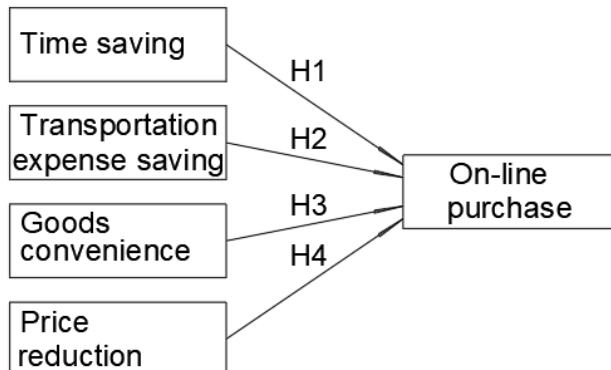


Figure 2.7 Research Framework and hypotheses

Hypotheses

H1: Time saving and on-line purchase is a positive relation.

H2: Transportation expense saving and on-line purchase is a positive relation.

H3: Goods convenience and on-line purchase is a positive relation.

H4: Price reduction and on-line purchase is a positive relation.

Chapter Three: Research Methodology

3.1 Research Method

Quantitative research

Quantitative research is generally carried out in order to obtain statistical results on the totality of specific research objects. Qualitative research has the characteristics of exploratory, diagnostic, and predictive. It does not pursue accurate conclusions, but only understands the problem, finds out the situation, and draws perceptual knowledge. The main methods of qualitative research include: group interviews with several people, in-depth interviews that require detailed answers, and various projection techniques. In quantitative research, information is represented by some kind of number. When processing and analyzing these numbers, we must first clarify the scale on which these information materials are measured and processed. SS Stevens divides the scale into four types, namely nominal scale, sequential scale, Spacing scale and scale (Vishal,2012)

Qualitative research

The qualitative research method is a method or angle to study things based on the social phenomena or the attributes of the things and the contradictory changes in the movement, to engage in the inherent stipulations of the things. It is based on the generally recognized axioms, a set of deductive logic and a large number of historical facts, based on the contradiction of things, and describes and interprets the researched things. To conduct qualitative research, we should directly grasp the main aspects of things based on certain theories and experience, and temporarily ignore the difference in the quantity of homogeneity.

There are two different levels of qualitative research. One is pure qualitative research with no or lack of quantitative analysis. The conclusions are often summarized and more speculative. The second is a higher-level qualitative research based on quantitative analysis. . In actual research, qualitative research and quantitative research are often used together. Before conducting quantitative research, the researcher must use qualitative research to determine the nature of the phenomenon to be studied; during the quantitative research process, the researcher must use qualitative research to determine the quantitative limit of the phenomenon and the cause of the qualitative change. (Vishal, 2012)

Research approaches

Research methods are divided into two types, quantitative and qualitative research. The quantitative approach is used for testing the hypotheses and confirming the applicability of existing theories to a particular context (Polit and Hungler, 1999), therefore, this approach is more preferable in this study.

For qualitative research, it is a subjective analysis and used for in-depth study of less well-known concepts or creation of new theories (Cormack, 1991), so it is not applied here.

Primary and secondary data are both needed in this quantitative study for the testing of hypotheses and results interpretation. Their uses and sources are to be explained as following secondary data and primary data.

The research approach can explain the following procedure:

- i) Establish research topic
- ii) Research divers
- iii) Research objectives
- iv) Research questions
- v) Literature review
- vi) Establish research method
- vii) Establish framework
- viii) Pilot test
- ix) Formal questionnaire design and distribution
- x) Data collection and analysis
- xi) Research conclusion and recommendation

3.2 Research Scope

In order to understand the whole research scope clearly, there is a table shown as below.

Research Topic	
Object of Study (Target)	
Variables	On-line purchasing can save time. On-line purchasing can save transportation expense. Online purchasing is convenient. Online purchasing product cost reduction. Customer select online purchasing.
Data Collection Methods	Literature Review, Online Survey and Street Interview
Data Analysis Tools	Statistical Package for the Social Sciences, SPSS16.0

Research aims and objectives are recognized in this study. In the next step, relevant variables are to be Identified and based on Hong Kong customer select online purchasing factor. For the literature review relating to variables, it is to be carried out for provision of solid and convincing foundation for the whole study.

For the collection of primary data, a questionnaire is to be set for gathering relevant information as well as a sampling frame and a sampling size are to be well-considered. On the final move, the results of questionnaire are inputted in an excel file and a SPSS file, and with the making use of SPSS, data description and analysis can be done in a systematic and efficient way.

3.3 Research Hypothesis (Regression Analysis)

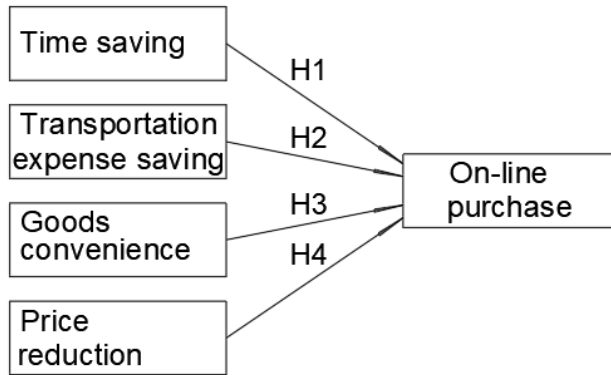


Figure 3.3 Research Framework

3.3.1 Hypothesis

H1: Time saving and on-line purchase is a positive relation.

H2: Transportation expense saving and on-line purchasing is a positive relation.

H3: Goods convenience and on-line purchasing is a positive relation.

H4: Price reduction and on-line purchasing is a positive relation.

3.4 Research Design

3.4.1 Question Design

Coding of Variables

Table 4.2.1: Coding of proposed variables

Proposed variables	Codes	Corresponding names and ranges in distance	Scholar
Save Time	ST	ST1 to ST4	Mohammad Hossein Moshref Javadi, Hossein Rezaei Dolatabadi, Mojtaba Nourbakhsh, Amir Poursaeedi & Ahmad Reza Asadollahi (2012) Rashed Al Karim (2013) Dong-Mo Koo (2005)
Save Transportation Expense	TE	TE1 to TE4	Mohammad Hossein Moshref Javadi, Hossein Rezaei Dolatabadi, Mojtaba Nourbakhsh, Amir Poursaeedi & Ahmad Reza Asadollahi (2012) Rashed Al Karim (2013) Dong-Mo Koo (2005)
Goods Convenience	GC	GC1 to GC4	Mohammad Hossein Moshref Javadi, Hossein Rezaei Dolatabadi, Mojtaba Nourbakhsh, Amir Poursaeedi & Ahmad Reza Asadollahi (2012) Rashed Al Karim (2013) Dong-Mo Koo (2005)
Price reduction	CP	CP1 to CP4	Mohammad Hossein Moshref Javadi, Hossein Rezaei Dolatabadi, Mojtaba Nourbakhsh, Amir Poursaeedi & Ahmad Reza Asadollahi (2012)

			Rashed Al Karim (2013) Dong-Mo Koo (2005)
Select on-line Purchase	PR	PR to PR3	Mohammad Hossein Moshref Javadi, Hossein Rezaei Dolatabadi, Mojtaba Nourbakhsh, Amir Poursaeedi & Ahmad Reza Asadollahi (2012) Rashed Al Karim (2013) Dong-Mo Koo (2005)

3.4.2 Population

The target respondent of the 'Select on-line purchasing' research is no specific limitation. The gender consists male and female. The age group is no specific limitation. The Hong Kong population is 7,500,700 on end of 2019. Hong Kong Population(Census and Statistics Department,2019). The education level is from primary school to postgraduate or above. The respondent should be a Hong Kong citizen.

3.4.3 Sampling

3.4.3.1 Structure of data source

Secondary data source refers to the information from library, government, trade, professional and business, private business firm, advertising media, university research organization. (Arthur, et al.,2012). The advantages of this method are lower cost and time saving.

Primary data source refers to the information from survey, observation and experimental. (Osang. J E 2013). The advantage is the strong objective. The data can be quantitative .

3.4.3.2 Design questionnaire

The questionnaire survey has been widely applied to all levels of society, including social questionnaires, business questionnaires and academic questionnaires.

First, the questionnaire should grasp the length of the questionnaire as a whole. It should not be too much in the design of the question. Generally, it should not exceed 20 minutes.

Second, we must fully consider the basic situation of the respondent, such as identity background, education level, and own ability, do our best to strive for the cooperation of the respondent, and do not ask questions that the respondent does not like, which is likely to cause resistance from the respondent .

Third, the design of the questionnaire should be conducive to the respondents being able to make true answers, so there should be no ambiguity in the design of answers.

Fourth, in the design and overall arrangement of questions, do not use professional terminology, nor can the two questions be combined into one question

Fifth, the order of the questions must have certain logic. Put the simple questions in the front and the complex questions in the back.

Sixth, there should be no subjective guidance and suggestion in the design of the question.

Seventh, the coding of the problem and the setting of variables should facilitate the data entry and statistical analysis in the later period.

(Nugraha & Putrs, 2015)

3.4.3.3 Pilot test

The pilot test is used for preliminary analysis. The pilot test questionnaire has 25 questions. The pilot sample size is 22.

Table 3.4.3.3 Pilot test reliability statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.917	.919	19

Refer to the table 3333, it shows the Cronbach's Alpha is 0.917, which indicating that pilot test passed the feasibility of designed questionnaire.

3.4.3.4 Target population

The target population is Hong Kong citizen. The population of Hong Kong people is size is around 7,500,700 on 2019. (Census and Statistics Department, 2019)

Table 3.4.3.4 Population age group in Hong Kong

Age group	Population in Hong Kong on 2019 (million)
below 19	1161.8
20-29	881.3
30-39	1166
40-49	1154.2
50-59	1201.8
60 or above	1935.6
Total	7500.7

3.4.3.5 Sample size

Sample size formula

$$n = N \times \frac{\frac{Z^2 \times p \times (1 - p)}{e^2}}{\left[N - 1 + \frac{Z^2 \times p \times (1 - p)}{e^2} \right]}$$

population size (N)	7,500,700
critical value (95% confidence level) (Z)	1.96
margin of error (e)	0.05
sample proportion (uncertain)	0.5
sample proportion	0.05

After calculation the sample size is $n = 73$
(David A. Schoenfeld)

3.4.3.6 Sampling method

Sampling refers to the process of taking individuals or samples from the population, that is, the process of testing or observing the population. There are two types of random sampling and non-random sampling. The former refers to a sampling method that draws samples from the population following the principle of randomization. It does not bring any subjectivity, including simple random sampling, systematic sampling, cluster sampling and stratified sampling. The latter is based on the researcher's point of view. (Talib, et.,2013)

Random sample is used for this research.

3.4.4 Data analysis techniques

3.4.4.1 Descriptive statistics

Descriptive statistics refer to activities that use tabulation and classification, graphics, and calculation of summary data to describe data characteristics. Descriptive statistical analysis should carry out a statistical description of the relevant data of all variables in the survey, mainly including frequency analysis, centralized trend analysis, discrete degree analysis, distribution and some basic statistical graphics of the data.

(Ezhilarasi & Iyemperumal, 2013)

3.4.4.2 Reliability test

Reliability mainly refers to whether the questionnaire is accurate. Reliability analysis involves the consistency and stability of the results of the questionnaire, and its purpose is to control and reduce random errors. Reliability is a scale that estimates the size of the measurement error to explain the ratio of the measurement error in the questionnaire test results. (Teobaldo Casanova, 2015)

Cronbach's alpha in reliability test acceptance level is shown in following table. (Dunn, et al., 2014)

Table 3.4.4.2 Cronbach's alpha in reliability test acceptance level

Cronbach's alpha	
More than 0.9	Excellent
0.8 – 0.899	Good
0.7 – 0.799	Acceptable
0.6 - 0.699	Questionable
0.5 – 0.599	Poor
lower than 0.5	Unacceptable

3.4.4.3 Correlation analysis

The most commonly used correlation coefficient, also known as the product difference correlation coefficient, ranges from -1 to 1. The larger the absolute value, the stronger the correlation. The calculation and test of this coefficient is a parametric method, and the applicable conditions are as follows:

(1) The two variables have a linear correlation. If it is a curve correlation, it may not be accurate.

(2) Extreme values will have a greater impact on results

(3) The two variables conform to the bivariate joint normal distribution

(R.J. Hunt ,1986)

Pearson correlation coefficient range is shown in following table. (Xu,et al,. 2012)

Table 3.4.4.3 Pearson correlation coefficient range

Coefficient range	Relationship strength
0.0 – 0.2	Very weak
0.2 – 0.4	Weak
0.4 – 0.6	Moderate
0.6 – 0.8	Strong
0.8 – 1.0	Very strong

3.4.4.4 Regression analysis

The regression method is a tool for analyzing the relationship between variables. It mainly explores the linear relationship between the independent variable (x) and the dependent variable (y). Through the establishment of a regression model, it is possible to infer and predict the researcher's feeling Variable of interest (y).

Simple linear regression: Use a single independent variable (x) to predict a dependent variable (y).

Second, the premise

A. Hypothetical model:

Its estimation formula is: $Y = B_0 + B_1X_1$

B. The error term needs to meet three major assumptions:

(a) Normality: If the parent data shows normal distribution, the error terms will also show

the same distribution. Can use the normal probability plot (normal probability plot) or Shapiro-Wilk normality check.

(b) Independency: The error terms should be independent of each other, otherwise the statistical test power will be reduced when estimating the regression parameters. We can check this with the Durbin-Watson test.

(c) Constant Variance: If the variation numbers are not equal, the independent variable cannot effectively estimate the dependent variable. We can check with the residual plot (Residual Plot).

(Fang Yao, Hans-Georg Müller and Jane-Ling Wang ,2005)

3.4.4.5 Data ANOVA analysis

SPSS Statistics and Analysis-Analysis of Variance Basic Concepts

Analysis of Variance (ANOVA) is a statistical method that uses trials to obtain data and analyze them. It is often used to study whether different effects have a significant impact on the formulation of a trial. In general, the effect of subtype independent variables on numerical dependent variables is studied, such as whether there is a relationship between them and how strong the relationship is.

One-way analysis of variance: Also known as one-dimensional analysis of variance, it analyzes whether there is a significant difference in the mean of the dependent variable when a single control factor takes different levels. The case is classified according to the soil fertility of the experimental field and the quality of the minerals: A, B, and C land. In the experiment, the same crops were planted in experimental fields of different soil types and the yield was observed. That is, the effect of different test fields on crop yield.

The original hypothesis: the impact of each land type on production is the same. $\text{sig} > 0.05$ accept the null hypothesis

(SPSS analysis, 2019)

(Lars Sthle, Svante Wold ,1989)

3.4.4.6 Data Validity analysis

Usually refers to the validity and correctness of the questionnaire, that is, the extent to which the questionnaire can measure the characteristics it wants to measure. The operation process is as follows:

Select Analyze → Scale → Reliability Analysis... → Item (enter the items of the questionnaire or the items included in each factor) from the menu → click the “Statistics” button to pop up the reliability analysis statistics dialog box → Descriptives for: → ☒ Scale if item deleted → OK

Scale if item deleted: Remove the descriptive statistics of the entire questionnaire of the current question, that is, sensitivity analysis, including the following: (1) Scale Mean if Item Deleted: remove the mean of the total score of the questionnaire of the current question; (2) Scale Variance if Item Deleted: Remove the variance of the total score of the current questionnaire; (3) Corrected Item-Total Correlation: Pearson correlation coefficient between the score of the current question and the total score of the current questionnaire; (4) Squared Multiple Correlation: Use the current question as the dependent variable, other All questions are determined by independent variables R^2 ; Alpha if Item Deleted: Cronbach α coefficient of the questionnaire after removing the current question.

KMO statistics: The correlation between variables is judged by comparing the size of the simple correlation coefficient and the partial correlation coefficient between variables. When the correlation is strong, the partial correlation coefficient is much smaller than the simple correlation coefficient, and the KMO value is close to 1. In general, $KMO > 0.9$ is very suitable for factor analysis; $0.8 < KMO < 0.9$ is suitable; 0.7 is acceptable, but the effect is poor at 0.6, and 0.5 is not suitable for factor analysis.

Bartlett 's spherical test (BarlettTest of Sphericity): used to test whether the correlation matrix is a unit matrix, that is, whether each variable is independent. It takes the correlation coefficient matrix of variables as a starting point, the null hypothesis: the correlation coefficient matrix is an identity matrix. If the statistical value of the Bartley sphere test is large and the corresponding probability value is less than the significance level given by the user, the null hypothesis should be rejected; otherwise, the null hypothesis cannot be rejected, and the correlation coefficient matrix may be a unit matrix. , Not suitable for factor analysis. If the hypothesis cannot be denied, it means that these variables may provide some information independently of each other, and the common factor is missing.

(SPSS analysis,2019)

(Bryant, Fred B. ,2000)

3.4.5 Research flow for data collections

Problem statement

Research objectives

Data collection

Get Primary data and Secondary data

Quantitative analysis

Result and finding

Conclusion and Recommendations

3.4.6 Ethical Consideration

Any deception or exaggeration of the purpose and purpose of the research must be avoided. Researcher must declare any form of membership, source of funds and any possible conflict of interest. The dignity of research participants should be respected. Subjects' full consent should be obtained before the study. It is important to ensure that the privacy of research participants is protected. Study participants should not be harmed in any way. Ensure that research data is sufficiently confidential. The anonymity of the individuals and organizations involved in the research must be ensured. Any type of misleading information must be avoided, and the findings of the main data expressed in a biased manner. Any form of communication related to research should be conducted honestly and transparently. (Berenson Mark L. and Levine David M.,1986)

3.4.7 Pre-test

Use 20 questionnaires to do the pilot test.

3.4.8 Research Schedule

11 Nov 2019	Create the research objective and project proposal
17 Nov 2019	SPSS training workshop and paper reading
Nov 2019 to Feb 2020	Data collection / question
Mar to Apr 2020	Paper writing

Chapter Four: Analysis and Results Discussion

4.1 Response Rate Analysis

The survey with the following stats:

- Questionnaires sent: 400
- Number of respondents who entered the survey: 250
- Number of completed surveys: 166

Let's calculate the response rate.

Response rate = Number of completed surveys / Number of emails sent

Response rate = 41.5%

4.2 Descriptive Statistics

Data Analysis

There have some data variables for this project. The code of variables are Save Time, Save Transportation Expense, Goods Convenience, Cheaper Price and Select On-line Purchase.

The independent variables are Save Time, Save Transportation Expense, Goods Convenience and Cheaper Price. The dependent variable is 'Select on-line purchase'.

For the questionnaire design, there consists five parts, such as On-line purchasing can save time, On-line purchasing can save transportation expense, On-line purchasing is convenient, Customer select on-line purchasing and Basic information.

Coding of Variables

Table 4.2.1 Coding of proposed variables

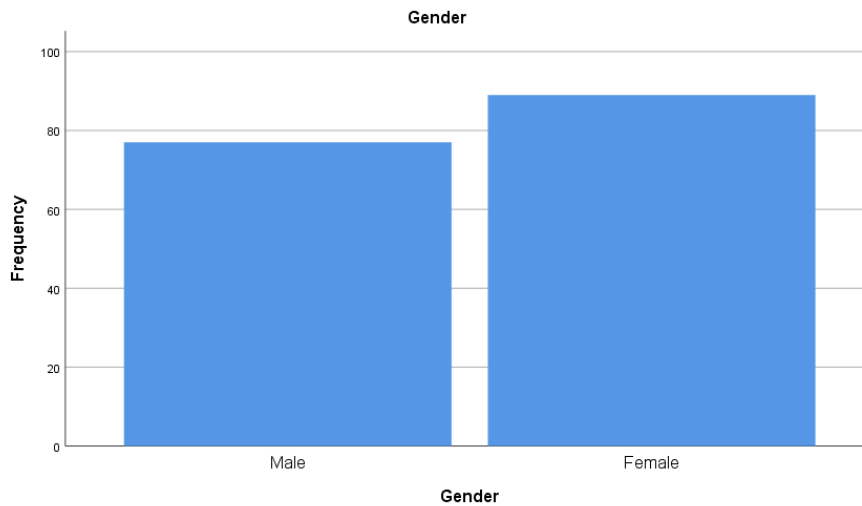
Proposed variables	Codes	Corresponding names and ranges in distance
Save Time	ST	ST1 to ST5
Save Transportation Expense	TE	TE1 to TE5
Goods Convenience	GC	GC1 to GC5
Price reduction (cheaper price)	CP	CP1 to CP5
Select On-line purchase	PR	PR to PR5

Table 4.2.2 Statistics data for Gender

		Gender		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	Male	77	46.4	46.4	46.4
	Female	89	53.6	53.6	100.0
	Total	166	100.0	100.0	

The percentage of male respondent is 46.4 and the percentage of female respondent is 53.6.

Chart 4.2.1 Gender of Respondents



The number of female respondents is slightly more than number of male respondents.

Table 4.2.3 Statistics data for Age group

		Age group			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19-25	46	27.7	27.7	27.7
	26-35	41	24.7	24.7	52.4
	36-45	39	23.5	23.5	75.9
	>45	40	24.1	24.1	100.0
	Total	166	100.0	100.0	

The highest frequency of age group is 19-25 years old and the lowest frequency of age group is 36-45 years old. The minimum age of respondent is 19 years old.

Chart 4.2.2 Age group of Respondents

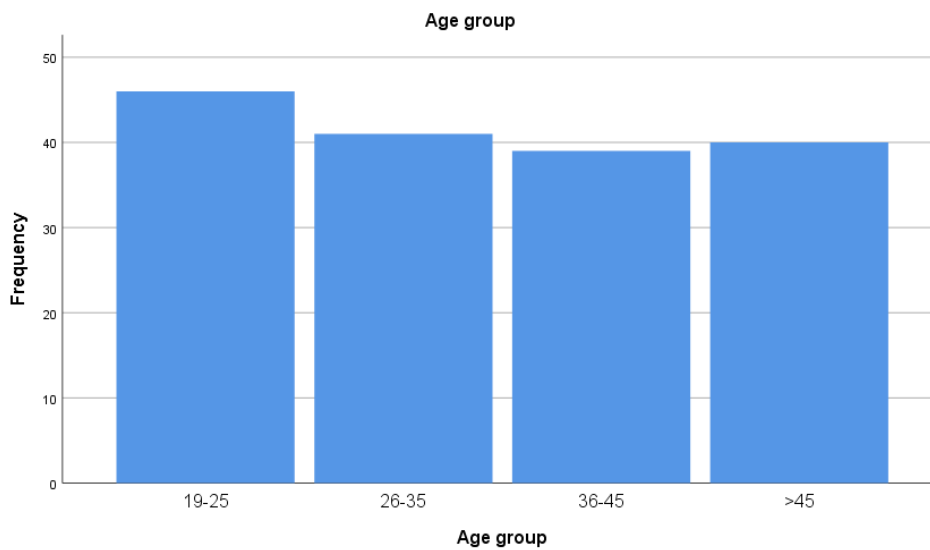


Table 4.2.4 Occupation (frequency, percent, valid percent, and cumulative percent) of Respondents

		Occupation		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	Student	13	7.8	7.8	7.8
	Professional and Manager	44	26.5	26.5	34.3
	Clerical Officer	32	19.3	19.3	53.6
	Housewife	33	19.9	19.9	73.5
	Others	44	26.5	26.5	100.0
	Total	166	100.0	100.0	

The maximum frequency of occupation are Professional, manager, others and the minimum frequency of occupation is student.

Chart 4.2.3 Occupation of Respondents

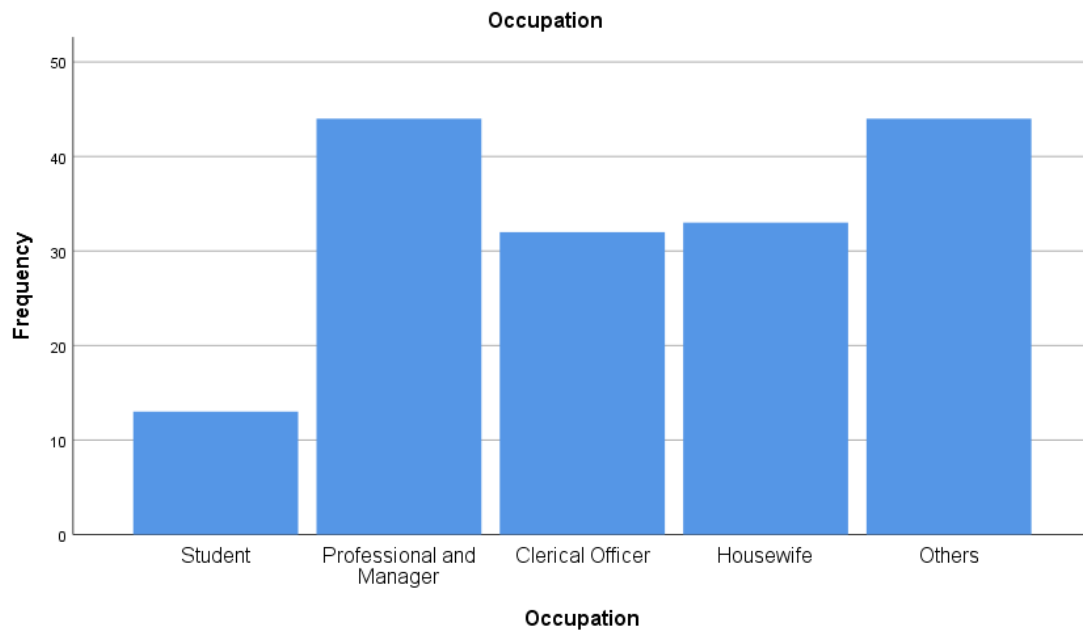


Table 4.2.5 Education level (frequency, percent, valid percent and cumulative percent) of Respondents

		Education level		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	Primary school	11	6.6	6.6	6.6
	Secondary school	30	18.1	18.1	24.7
	Certificate / Diploma	39	23.5	23.5	48.2
	Bachelor	48	28.9	28.9	77.1
	Postgraduate	38	22.9	22.9	100.0
	Total	166	100.0	100.0	

There are total 166 valid respondents shown in table for the survey.

The maximum frequency of education level is Bachelor and the minimum frequency of education level is primary school.

Chart 4.2.4 Education level of Respondents

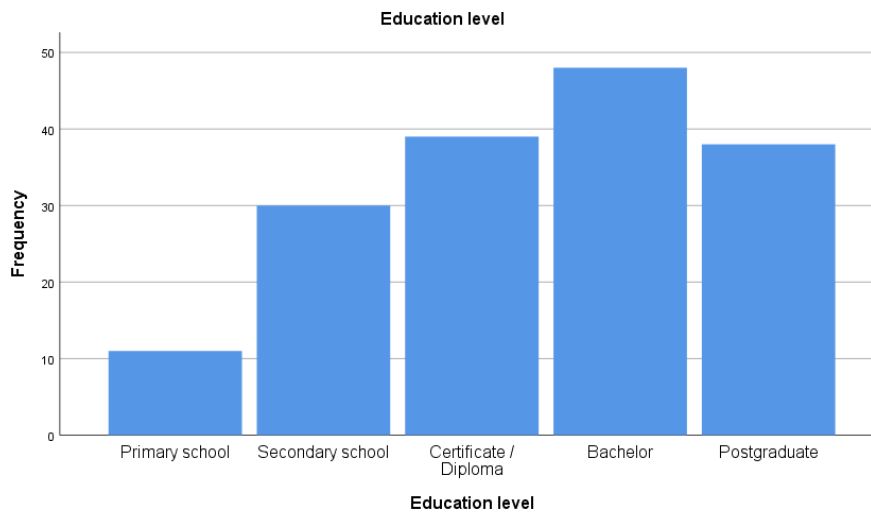


Table 4.2.6 Monthly income (frequency, percent, valid percent and cumulative percent) of Respondents

		Monthly income		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	<=HK\$10,000	21	12.7	12.7	12.7
	HK\$10,001- 20,000	46	27.7	27.7	40.4
	HK\$20,001- 30,000	53	31.9	31.9	72.3
	HK\$40,001- 40,000	31	18.7	18.7	91.0
	>=HK\$40,001	15	9.0	9.0	100.0
	Total	166	100.0	100.0	

There are total 166 valid respondents shown in table for the survey.

The maximum frequency of monthly income is HK\$ 20,001 to 30,000 and minimum frequency of monthly income is >= HK\$ 400,001.

Chart 4.2.5 Monthly income of Respondents



Table 4.2.7 Online purchasing monthly expense (frequency, percent, valid percent and cumulative percent) of Respondents

Spend in On-line purchasing each month		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<=HK\$100	41	24.7	24.7	24.7
	HK\$101-500	67	40.4	40.4	65.1
	HK\$101-1500	37	22.3	22.3	87.3
	HK\$1501-3000	14	8.4	8.4	95.8
	>=HK\$3001	7	4.2	4.2	100.0
	Total	166	100.0	100.0	

There are total 166 valid respondents shown in table for the survey.

The maximum frequency of spend in online purchasing each month is HK\$ 101-500 and the minimum frequency is >= HK\$ 3001.

Chart 4.2.6 Spend in on-line purchasing each month of Respondents



4.3 Related Analysis

Reliability Test

(Gliem and Gliem, 2003) suggest that a single-item set of question is lack of reliability and therefore of minimal ability to meet a meaningful conclusion which can be achieved by multiple-itemed one. As a result, five multiple-itemed sets of question are constructed in this study. To evaluate the inter-consistency between multiple questions adopting Likert Scaling for each variable, Cronbach's Alpha coefficient is used to identify the level of reliability which generally lies between 0 and 1 (Gliem and Gliem, 2003). In addition, the coefficient equaling to or larger than 0.7 is considered as acceptable for a consistent and reliable set of inter-items under the variable (George and Mallery, 2003).

Time saving

Table 4.3.1 Reliability Statistics of Variable 'Save Time' Cronbach's Alpha

Reliability Statistics	
Cronbach's Alpha	N of Items
.738	4

Save Transportation Expense

Table 4.3.2 Reliability Statistics of Variable 'Save Transportation Expense' Cronbach's Alpha

Reliability Statistics	
Cronbach's Alpha	N of Items
.772	4

Goods Convenience

Table 4.3.3 Reliability Statistics of Variable 'Goods Convenience' Cronbach's Alpha

Reliability Statistics	
Cronbach's Alpha	N of Items
.824	4

Price reduction

Table 4.3.4 Reliability Statistics of Variable 'Price reduction' Cronbach's Alpha

Reliability Statistics	
Cronbach's Alpha	N of Items
.818	4

Select Online Purchase

Table 4.3.5 Reliability Statistics of Variable 'Select Online Purchase' Cronbach's Alpha

Reliability Statistics	
Cronbach's Alpha	N of Items
.802	3

Overall reliability

Table 4.3.6 Overall reliability

Reliability Statistics	
Cronbach's Alpha	N of Items
.927	19

Reliability analysis explained:

Variable	Number of questionnaires	Cronbach α
Time saving	4	0.738
Save Transportation Expense	4	0.772
Goods Convenience	4	0.824
Price reduction	4	0.818
Select Online Purchase	3	0.802
Overall	19	0.927

In the reliability analysis of the scales of this questionnaire, the coefficient is between 0.738 and 0.927, which are all above 0.7, which indicates the reliability of the scale.

The coefficients are reliable and stable for further study.

Table 4.3.7 Validity analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.863
Bartlett's Test of Sphericity	Approx. Chi-Square	2278.524
	df	171
	Sig.	.000

Table 4.3.8 Communalities

Communalities		
	Initial	Extraction
ST1	1.000	.938
ST2	1.000	.631
ST3	1.000	.831
ST4	1.000	.472
TE1	1.000	.615
TE2	1.000	.402
TE3	1.000	.530
TE4	1.000	.729
GC1	1.000	.663
GC2	1.000	.824
GC3	1.000	.903
GC4	1.000	.605
CP1	1.000	.833
CP2	1.000	.701
CP3	1.000	.599
CP4	1.000	.602
PR1	1.000	.634
PR2	1.000	.762
PR3	1.000	.735

Communalities		
	Initial	Extraction
STmean	1.000	.818
TEmean	1.000	.699

GCmean	1.000	.711
CPmean	1.000	.676
PRmean	1.000	.574

Extraction Method: Principal
Component Analysis.

Validity analysis explained:

A KMO sampling suitability of 0.863 indicates good and suitable for factor analysis.

Significance of Bartlett's spherical test

It is 0.0000, which is significant and suitable for factor analysis.

All communalities value are acceptable because high than 0.4

A communality is the extent to which an item correlates with all other items. Higher communalities are better. If communalities for a particular variable are low (between 0.0-0.4), then that variable may struggle to load significantly on any factor.

Pearson Correlation analysis

Use the Pearson Correlation analysis method to measure the strength of the linear relationship between two measurement variables using the correlation coefficient (r)

(National Education Research Park, 2000), that is, four hypotheses

Because "(Y). Detailed analysis data is as follows:

To examine whether there are associations between variables, correlation analysis is conducted which is the coefficient usually lies between -1 and 1 representing the strength on relationships (Kelly H. Zou, 2006).

The correlations of Time saving factor, Save Transportation Expense factor, Goods Convenience factor and Price reduction are as follow:

Table 4.3.9 Correlations of Time saving factor

Correlations		STmean	PRmean
STmean	Pearson Correlation	1	.531**
	Sig. (2-tailed)		.000
	N	166	166
PRmean	Pearson Correlation	.531**	1
	Sig. (2-tailed)	.000	
	N	166	166

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

Table 4.3.10 Correlations of Save Transportation Expense factor

Correlations		TEmean	PRmean
TEmean	Pearson Correlation	1	.465**
	Sig. (2-tailed)		.000
	N	166	166
PRmean	Pearson Correlation	.465**	1
	Sig. (2-tailed)	.000	
	N	166	166

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

Table 4.3.11 Correlations of Goods Convenience factor

Correlations		GCmean	PRmean
GCmean	Pearson Correlation	1	.458**
	Sig. (2-tailed)		.000
	N	166	166
PRmean	Pearson Correlation	.458**	1
	Sig. (2-tailed)	.000	
	N	166	166

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

Table 4.3.12 Correlations of Price reduction (Cheaper Price)

Correlations		CPmean	PRmean
CPmean	Pearson Correlation	1	.758**
	Sig. (2-tailed)		.000
	N	166	166
PRmean	Pearson Correlation	.758**	1
	Sig. (2-tailed)	.000	
	N	166	166

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

Table 4.3.13 Table of correlations of Save Time, Save Transportation Expense, Goods Convenience, Cheaper Price and Select Online Purchase

Correlations		STmean	TEmean	GCmean	CPmean	PRmean
STmean	Pearson Correlation	1	.769**	.812**	.621**	.531**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	166	166	166	166	166
TEmean	Pearson Correlation	.769**	1	.684**	.544**	.465**

	Sig. (2-tailed)	.000		.000	.000	.000
	N	166	166	166	166	166
GCmean	Pearson Correlation	.812**	.684**	1	.530**	.458**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	166	166	166	166	166
CPmean	Pearson Correlation	.621**	.544**	.530**	1	.758**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	166	166	166	166	166
PRmean	Pearson Correlation	.531**	.465**	.458**	.758**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	166	166	166	166	166

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

(Monica Franzese, Antonella Iuliano, 2019)

(Peter de B Harrington Aaron Urbas Peter J Tandler, 2000, p149-174)

Related analysis and explanation:

The strength of the linear relationship can be expressed by the correlation coefficient. The value of r ranges from -1 to +1. The value of r is positive, which represents positive correlation. R

A negative value indicates a negative correlation; $r = 0$ means that there is no linear relationship between the two; if the r value is close to -1 or +1, it means that there is

Strong linear relationship. Validation results:

	Y	Pearson Correlation coefficient (r)
Time saving factor, ST	1	0.531
Save Transportation Expense factor, TE	1	0.465
Goods Convenience factor, GC	1	0.458
Price deduction factor, CP	1	0.758

The four hypotheses regarding the "Select on-line purchase" show a positive correlation ($r > 0$, $p < 0.05$), even close to 1, represents a strong linear relationship.

4.4 ANOVA Analysis

For this study, ANOVA results are shown as below.

Table 4.4.1 ANOVA analysis of regression and residual

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.722	4	9.180	55.885	.000 ^b
	Residual	26.448	161	.164		
	Total	63.170	165			

a. Dependent Variable: PRmean

b. Predictors: (Constant), CPmean, GCmean, TEmean, STmean

(Lars St»hle* Svante Wold, 1989, p 259-272)

Sig. column which indicates the statistical significance of the regression model that was run, which is less than 0.05, the regression model statistically significantly predicts the outcome variable. It is good fit for the data.

ANOVA Analysis of ST PR (Save time, Select on-line purchase)

Table 4.4.2 ST PR ANOVA analysis

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.787	1	17.787	64.275	.000 ^b
	Residual	45.383	164	.277		
	Total	63.170	165			

a. Dependent Variable: PRmean

b. Predictors: (Constant), STmean

Sig. column which indicates the statistical significance of the regression model that was run, which is less than 0.05, the regression model statistically significantly predicts the outcome variable. It is good fit for the data.

ANOVA Analysis of TR PR (Transportation Expense, Select on-line purchase)

Table 4.4.3 TR PR ANOVA analysis

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.671	1	13.671	45.293	.000 ^b
	Residual	49.499	164	.302		
	Total	63.170	165			

a. Dependent Variable: PRmean

b. Predictors: (Constant), TEmean

Sig. column which indicates the statistical significance of the regression model that was run, which is less than 0.05, the regression model statistically significantly predicts the outcome variable. It is good fit for the data.

ANOVA Analysis of GC PR (Goods Convenience, Select on-line purchase)

Table 4.4.4 GC PR ANOVA analysis

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.226	1	13.226	43.429	.000 ^b
	Residual	49.944	164	.305		
	Total	63.170	165			

a. Dependent Variable: PRmean

b. Predictors: (Constant), GCmean

Sig. column which indicates the statistical significance of the regression model that was run, which is less than 0.05, the regression model statistically significantly predicts the outcome variable. It is good fit for the data.

ANOVA Analysis of CP PR (Price deduction, Select on-line purchase)

Table 4.4.5 CP PR ANOVA analysis

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.328	1	36.328	221.960	.000 ^b
	Residual	26.842	164	.164		
	Total	63.170	165			

a. Dependent Variable: PRmean

b. Predictors: (Constant), CPmean

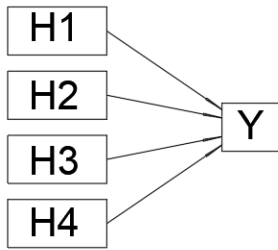
Sig. column which indicates the statistical significance of the regression model that was run, which is less than 0.05, the regression model statistically significantly predicts the outcome variable. It is good fit for the data.

From the ANOVA analysis, F are 55.885, 64.275, 45.293, 43.429, 221.96 ($p = 0$), which means that at a significant level of 0.05%, it is proved that Time saving factor, Save Transportation Expense factor, Goods Convenience factor, Price deduction factor are related to Select on-line purchase factor.

4.5 Regression Analysis

Use regression analysis to understand whether there is "correlation", "strength of relationship", "relevance" and direction consistency between the independent and dependent variables of the four resistance factors (H1-H4) The effect of variable (H) on a dependent variable (Y). The schematic figure is as follows:

Figure 4.5 Independent variables and Dependent variable



Dependent variable (Y) : Select on-line purchase (PR)

Independent variable (H1,H2,H3,H4) :

Time saving (ST), save transportation expense (TR), goods convenient (GC), price reduction (CP)

Understanding the Independent Variables and Dependent Variables of the Four Resistance Factors (H1-H4) by ANOVA (analysis of variance table)

Linear Regression Analysis is conducted for modeling relationships between the independent and dependent variables to identify any specific linear directions or patterns (Kelly H. Zou, 2006). It is also used to estimate the degree of variations imposed by independent variables on dependent variables and can be explained by the model (Sapsford, 2007).

(G.Tripepi K.J.Jager F.W.Dekker C.Zoccali, 2008, p806-810)

Regression Analysis

Linear Regression Analysis is conducted for modeling relationships between the independent and dependent variables to identify any specific linear directions or patterns (Kelly H. Zou, 2006).. It is also used to estimate the degree of variations imposed by independent variables on dependent variables and can be explained by the model (Sapsford, 2007).

(G.Tripepi K.J.Jager F.W.Dekker C.Zoccali, 2008, p806-810)

For this study, there are regression result is shown as below.

Save Time, Save Transportation Expense, Goods Convenience, Price deduction and Select on-line purchase (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

Regression Analysis of ST PR (Save time, Select on-line purchase)

Table 4.5.1 ST PR variables entered

Descriptive Statistics			
	Mean	Std. Deviation	N
PRmean	3.6185	.61875	166
STmean	3.7334	.45903	166

Table 4.5.2 ST PR model summary

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin-Watson
						F Change	df1	df2		
1	.531 ^a	.282	.277	.52605	.282	64.275	1	164	.000	2.139

a. Predictors: (Constant), STmean

b. Dependent Variable: PRmean

The R value represents the simple correlation is 0.531 which indicates a medium degree of correlation. The R square indicates how much of the total variation in the dependent variable PRmean. STmean can be explained by the independent variable. STmean it this case 28.2% can be explained, which is not large.

Table 4.5.3 ST PR coefficients

Coefficients ^a									
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.948	.336	2.825	.005	.285	1.611		
	STmean	.715	.089	8.017	.000	.539	.891	1.000	1.000

a. Dependent Variable: PRmean

To present the regression equation as: $PRmean = 0.948 + 0.715 (STmean)$

Table 4.5.4 ST PR coefficient correlations

Coefficient Correlations ^a			
Model	STmean		
1	Correlations	STmean	1.000
	Covariances	STmean	.008

a. Dependent Variable: PRmean

Table 4.5.5 ST PR Collinearity Diagnostics

Collinearity Diagnostics ^a					
Model	Dimension	Eigenvalue	Condition	Variance Proportions	
			Index	(Constant)	STmean
1	1	1.993	1.000	.00	.00
	2	.007	16.377	1.00	1.00

a. Dependent Variable: PRmean

Table 4.5.6 ST PR Residuals Statistics

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.9151	4.5244	3.6185	.32833	166
Residual	-1.80914	1.36968	.00000	.52445	166
Std. Predicted Value	-2.142	2.759	.000	1.000	166
Std. Residual	-3.439	2.604	.000	.997	166

a. Dependent Variable: PRmean

Chart 4.5.1 ST PR Histogram

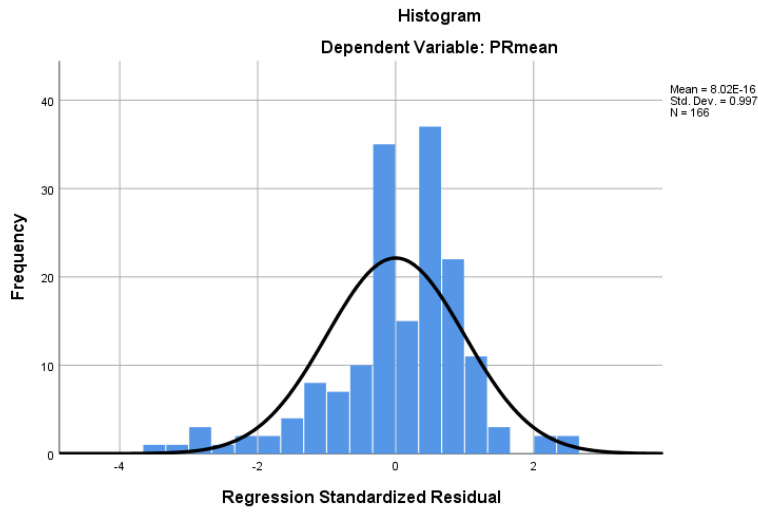


Chart 4.5.2 ST PR Normal P-P plot of Regression Standardized Residual

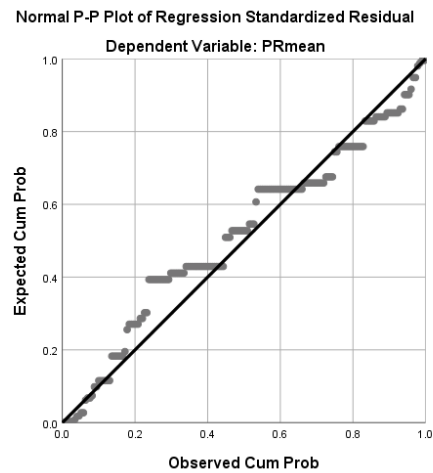
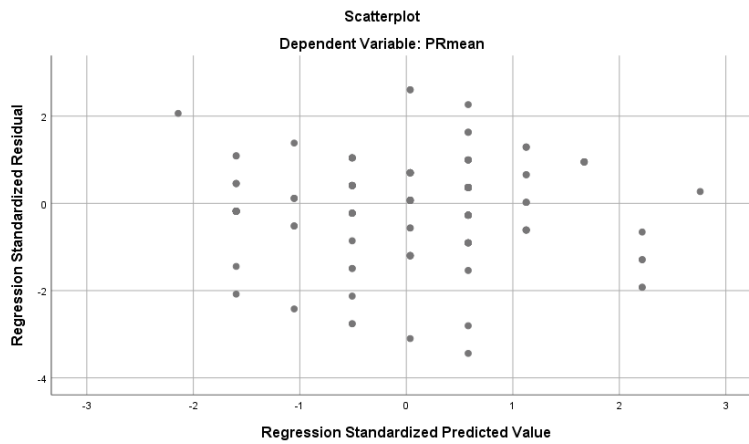


Chart 4.5.3 ST PR scatterplot



Regression Analysis of TR PR (Transportation Expense, Select on-line purchase)

Table 4.5.7 TR PR variables entered

Descriptive Statistics			
	Mean	Std. Deviation	N
PRmean	3.6185	.61875	166
TEmean	3.7666	.43618	166

Table 4.5.8 TR PR model summary

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.465 ^a	.216	.212	.54939	.216	45.293	1	164	.000	2.116

a. Predictors: (Constant), TEmean

b. Dependent Variable: PRmean

The R value represents the simple correlation is 0.465 which indicates a medium degree of correlation. The R square indicates how much of the total variation in the dependent variable PRmean. TEmean can be explained by the independent variable. TEmean it this case 21.6% can be explained, which is not large.

Table 4.5.9 TR PR coefficients

Coefficients ^a							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics
		B	Std. Error	Beta			Tolerance
1	(Constant)	1.133	.372		3.047	.003	
	TEmean	.660	.098	.465	6.730	.000	1.000

a. Dependent Variable: PRmean

To present the regression equation as: $PRmean = 1.133 + 0.660 (TRmean)$

Table 4.5.10 TR PR coefficient correlations

Coefficient Correlations ^a			
Model	TEmean		
1	Correlations	TEmean	1.000
	Covariances	TEmean	.010

a. Dependent Variable: PRmean

Table 4.5.11 TR PR Collinearity Diagnostics

Collinearity Diagnostics ^a					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	TEmean
1	1	1.993	1.000	.00	.00
	2	.007	17.380	1.00	1.00

a. Dependent Variable: PRmean

Table 4.5.12 TR PR Residuals Statistics

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.1126	4.2675	3.6185	.28784	166
Residual	-1.77252	1.55744	.00000	.54772	166
Std. Predicted Value	-1.757	2.255	.000	1.000	166
Std. Residual	-3.226	2.835	.000	.997	166

a. Dependent Variable: PRmean

Chart 4.5.4 TR PR Histogram

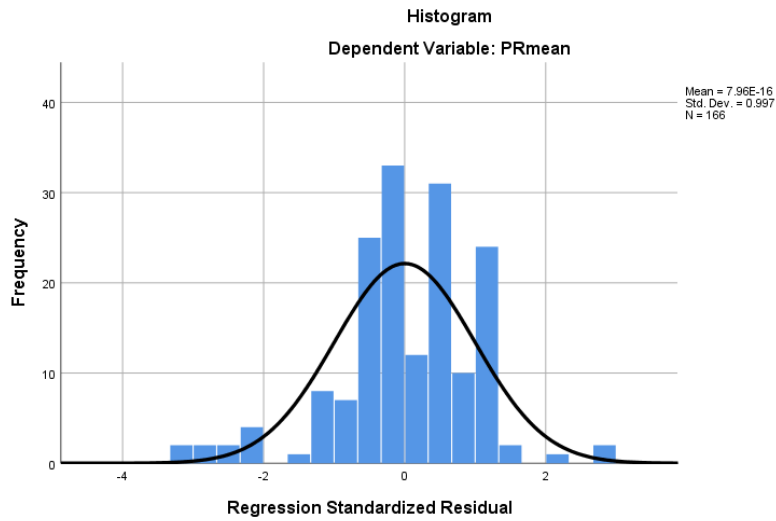


Chart 4.5.5 TR PR Normal P-P plot of Regression Standardized Residual

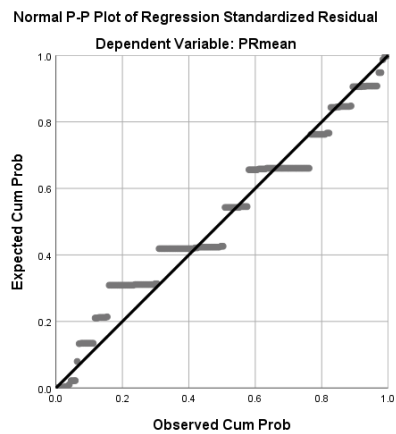
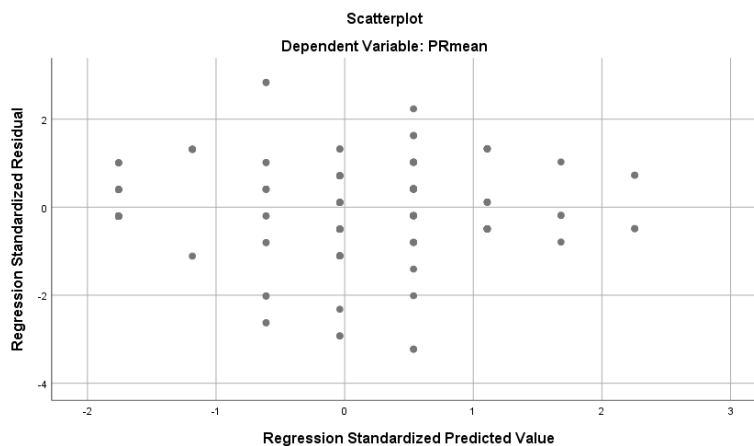


Chart 4.5.6 TR PR scatterplot



Regression Analysis of GC PR (Goods Convenience, Select on-line purchase)

Table 4.5.13 GC PR variables entered

Descriptive Statistics			
	Mean	Std. Deviation	N
PRmean	3.6185	.61875	166
GCmean	3.7003	.50168	166

Table 4.5.14 GC PR model summary

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.458 ^a	.209	.205	.55185	.209	43.429	1	164	.000	2.119

a. Predictors: (Constant), GCmean

b. Dependent Variable: PRmean

The R value represents the simple correlation is 0.458 which indicates a medium degree of correlation. The R square indicates how much of the total variation in the dependent variable PRmean. GCmean can be explained by the independent variable. GCmean it this case 20.9% can be explained, which is not large.

Table 4.5.15 GC PR coefficients

Coefficients ^a							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics
		B	Std. Error	Beta			Tolerance
1	(Constant)	1.530	.320		4.786	.000	
	GCmean	.564	.086	.458	6.590	.000	1.000

a. Dependent Variable: PRmean

To present the regression equation as: $PRmean = 1.530 + 0.564 (GCmean)$

Table 4.5.16 GC PR coefficient correlations

Coefficient Correlations ^a			
Model		GCmean	
1	Correlations	GCmean	1.000
	Covariances	GCmean	.007

a. Dependent Variable: PRmean

Table 4.5.17 GC PR Collinearity Diagnostics

Collinearity Diagnostics ^a					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	GCmean
1	1	1.991	1.000	.00	.00
	2	.009	14.864	1.00	1.00

a. Dependent Variable: PRmean

Table 4.5.18 GC PR Residuals Statistics

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.2233	4.3519	3.6185	.28312	166
Residual	-1.92869	1.49456	.00000	.55017	166
Std. Predicted Value	-1.396	2.591	.000	1.000	166
Std. Residual	-3.495	2.708	.000	.997	166

a. Dependent Variable: PRmean

Chart 4.5.7 GC PR Histogram

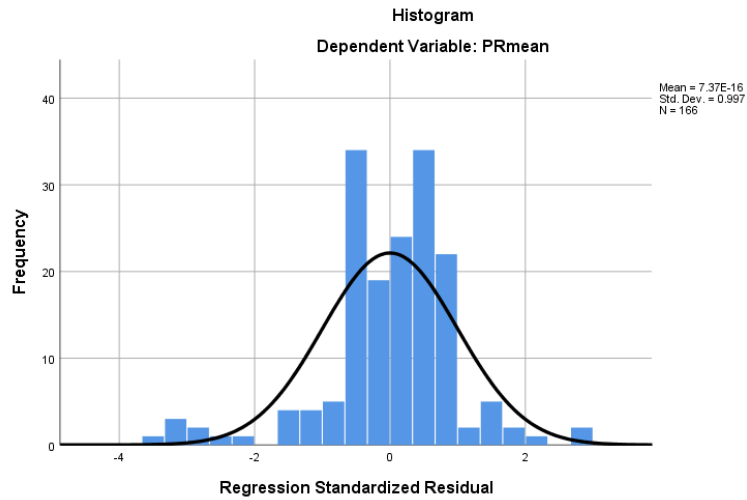


Chart 4.5.8 GC PR Normal P-P plot of Regression Standardized Residual

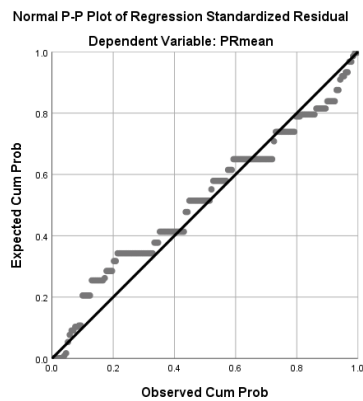
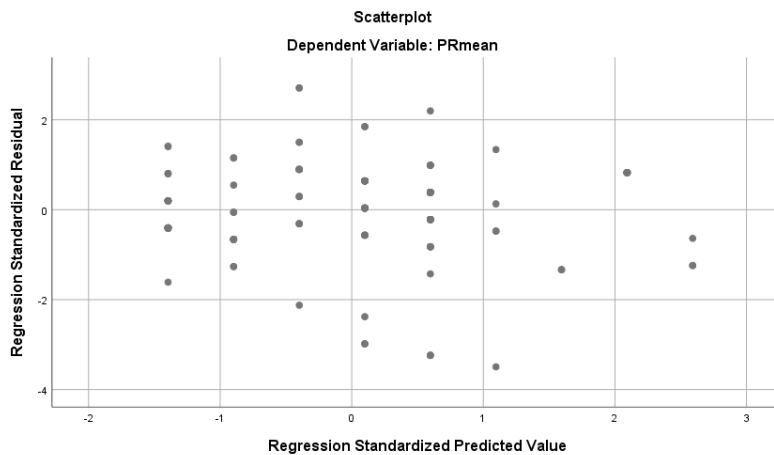


Chart 4.5.9 GC PR scatterplot



Regression Analysis of CP PR (Price deduction, Select on-line purchase)

Table 4.5.19 CP PR variables entered

Descriptive Statistics			
	Mean	Std. Deviation	N
PRmean	3.6185	.61875	166
CPmean	3.6084	.57629	166

Table 4.5.20 CP PR model summary

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.758 ^a	.575	.572	.40456	.575	221.960	1	164	.000	1.950

a. Predictors: (Constant), CPmean

b. Dependent Variable: PRmean

The R value represents the simple correlation is 0.758 which indicates a higher degree of correlation. The R square indicates how much of the total variation in the dependent variable PRmean. CPmean can be explained by the independent variable. CPmean it this case 57.5% can be explained, which is medium large.

Table 4.5.21 CP PR coefficients

Coefficients ^a									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance
1	(Constant)	.680	.200		3.407	.001	.286	1.075	
	CPmean	.814	.055	.758	14.898	.000	.706	.922	1.000

a. Dependent Variable: PRmean

To present the regression equation as: $PRmean = 0.680 + 0.814 (CPmean)$

Table 4.5.22 CP PR coefficient correlations

Coefficient Correlations ^a			
Model		CPmean	
1	Correlations	CPmean	1.000
	Covariances	CPmean	.003

a. Dependent Variable: PRmean

Table 4.5.23 CP PR Collinearity Diagnostics

Collinearity Diagnostics ^a					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	CPmean
1	1	1.988	1.000	.01	.01
	2	.012	12.640	.99	.99

a. Dependent Variable: PRmean

Table 4.5.24 CP PR Residuals Statistics

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.3089	4.5480	3.6185	.46922	166
Residual	-1.12308	1.28403	.00000	.40333	166
Std. Predicted Value	-2.791	1.981	.000	1.000	166
Std. Residual	-2.776	3.174	.000	.997	166

a. Dependent Variable: PRmean

Chart 4.5.10 CP PR Histogram

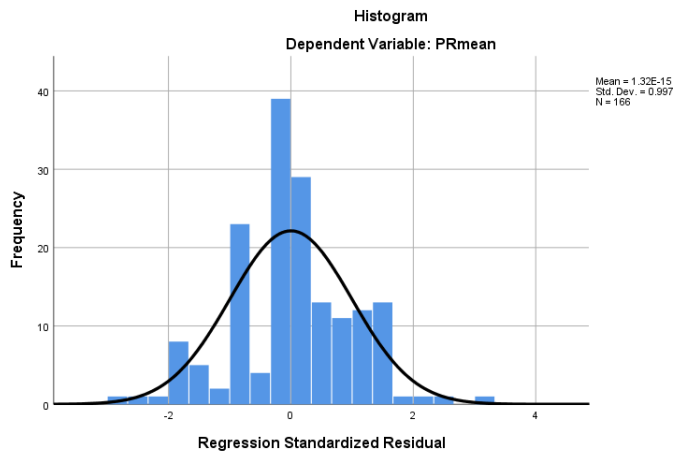


Chart 4.5.11 CP PR Normal P-P plot of Regression Standardized Residual

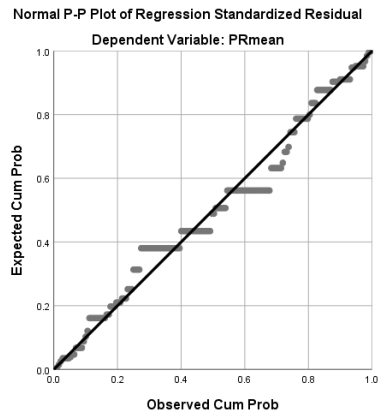
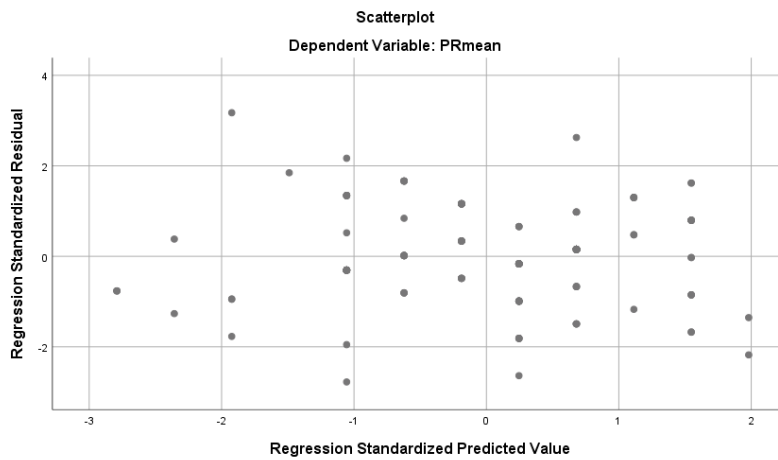


Chart 4.5.12 CP PR scatterplot



4.6 Conclusion on Correlation and Regression Analysis

In respect of the Correlation Analysis, all Pearson Correlation coefficients between 0.458 and 0.812 are reasonable as there are other factors that cannot be included in this study due to limitations; the two correlation coefficients R are all sensible larger than 0.4. Two R squares (0.581) is also reasonable as other potential variables are not included in the study. Moreover, since the sig. values (p values) of all predictor variables are smaller than 0.05, all null hypotheses are rejected and H1, H2, H3 and H4 are all accepted.

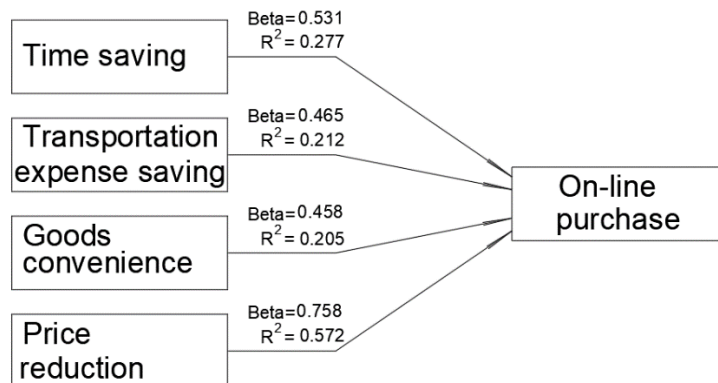
4.7 Conclusion on Hypothesis Testing

The overall results of hypothesis testing are summarized as follows:

Table 4.7.1 Overall Results on Hypothesis Testing

Coded Hypotheses	Regression Coefficient (Beta)	R Square	Sig. Values (p-values)	
H1: ST – PR	0.531**	0.277	.000	Supported
H2: TE – PR	0.465	0.212	.000	Supported
H3: GC – PR	0.458	0.205	.000	Supported
H4: CP – PR	0.758***	0.572	.000	Supported

Figure 4.7.2 The Overall Result of Research Framework



The final decision makings on proposed hypotheses are as follows:

Table 4.7.2 Overall Decision Makings on Hypothesis Testing

Proposed Hypotheses	
H1: Time Saving and on-line purchase is a positive relation	Accepted
H2: Save Transportation Expense and on-line purchase is a positive relation	Accepted
H3: Goods Convenience and on-line purchase is a positive relation	Accepted
H4: Price Reduction and on-line purchase is a positive relation	Accepted

Chapter Five: Conclusion and Recommendations

5.1 Conclusion

Relationship between data results and H1 to H4

Since all Beta and R data are positive, H1 to H4 are acceptable.

From the descriptive statistics result, people who has higher education background, his or her income is more, and he or she will select online purchase more.

With reference to the consumer survey in this study, online shopping is most common in Hong Kong at the level of higher education such as a bachelor's degree. 51.8% of bachelor and university graduates use online shopping, but only 6.6% of people in basic education use online shopping. The types of occupations are professionals and managers, while others use online shopping most often. In terms of age, 27.7% of people shop online and 23.5% of people shop online. For those who shop online, the frequency of the highest monthly expenditure is only about HK \$ 350, and the time to conduct this study in Hong Kong is from December 2019 to February 2020. On 2019, the business environment is very poor.

Ask what online consumers initially attracted, and then choose to buy online. The countermeasures include: saving time, reducing transportation costs, and more convenient to purchase goods and lowering the price compared with in-store purchases.

Table 5.1 Coding of proposed variables

Proposed variables	Codes	Corresponding names and ranges in distance
Save Time	ST	ST1 to ST5
Save Transportation Expense	TE	TE1 to TE5
Goods Convenience	GC	GC1 to GC5
Price reduction (cheaper price)	CP	CP1 to CP5
Select On-line purchase	PR	PR to PR5

5.2 Recommendation

Artificial intelligence assistants can also infuse personality into the shopping experience. As the traditional physical shopping approach changes online, consumers are losing the opportunity to contact shop assistants. Instead, they search on a website and often have to grope for shopping without help.

If there is a chat bot or artificial intelligence assistant on a website, then the shoppers can get the shopping experience in the store while sitting in the living room.

Artificial intelligence technology can be used for marketing strategy (4p)

Product (Product): Pay attention to the function of development, require the product to have a unique selling point, and put the functional appeal of the product in the first place.

Price (Price): According to different market positioning, formulate different price strategies, product pricing is based on the company's brand strategy, focusing on the gold content of the brand.

Distribution (Place): Enterprises do not directly face consumers, but pay attention to the cultivation of dealers and the establishment of sales networks. The contact between enterprises and consumers is carried out through distributors.

Promotion: Companies pay attention to changes in sales behavior to stimulate consumers, and promote consumption growth with short-term behaviors (such as profit-making, buy one get one free, marketing site atmosphere, etc.), attract consumers of other brands or cause early consumption To promote sales growth.

(Gandolfo Dominici, 2009)

Companies should start using more artificial intelligence in marketing because it can greatly improve the accuracy and effectiveness of their work. Smart tools are no longer expensive, and are no longer only applicable to specific industries.

5.3 Limitation and Further Study

The limitation of the research study is the collected data are relatively superficial, and the explanation of the phenomenon is weak. The study took a long time and the cost is relatively high and the research study is unable to dig deeper.

Questionnaire

Questionnaire of the 'A Study of On-line Purchase in Hong Kong's Customers'

I am studying the master's degree in business administration at University of Wales of England in partnership with Hong Kong Management Association. Now, I am conducting an academic research to evaluate and identify Time saving, Transportation expense saving, Goods convenience, Price reduction and On-line purchase. This questionnaire will take around 5-8 minutes to complete, if you are on-line purchase customers in Hong Kong. All information collected is kept in confidential and used for academic purpose only. Thank you for your co-operation.

C S Seto

31 / 12 / 2019

《香港顧客網上購物研究》問卷調查

我正在與香港管理協會合作，在英格蘭威爾士大學攻讀工商管理碩士學位。現在，我正在進行一項學術研究，以評估和確定節省時間，節省運輸費用，便利商品，降低價格和在線購買。如果您是香港的在線購買客戶，則此問卷大約需要 5-8 分鐘才能完成。收集的所有信息都將保密，僅用於學術目的。謝謝您的合作。

C S Seto

2019 年 12 月 31 日

Please evaluate below statements toward the 'A Study of On-line Purchase in Hong Kong's Customers'

(Please click the answer on the right, "1" indicates strong opposition, "3" indicates neutrality, "5" indicates strong agreement)

請評估以下對“香港客戶在線購買研究”的陳述

(請點擊右側的答案, 1表示強烈反對, “3”表示中立, “5”表示強烈同意)

Part 1: On-line purchasing can save time

第1部分：在線購買可以節省時間

	非常不同意 Strongly Disagree	非常同意 Strongly Agree
Q1 Online shopping can save time to select goods. 在線購物可以節省選擇商品的時間。	(1)(2)(3) (4) (5)	
Q2 Online shopping can save travel time. 在線購物可以節省乘車時間。	(1)(2)(3) (4) (5)	
Q3 Online shopping can save payment time. 在線購物可以節省付款時間。	(1)(2)(3) (4) (5)	
Q4 Online shopping can save receive goods time. 在線購物可以節省收貨時間。	(1)(2)(3) (4) (5)	

Part 2: On-line purchasing can save transportation expense

第2部分：在線購買可以節省運輸費用

	非常不同意 Strongly Disagree	非常同意 Strongly Agree
Q5 On-line purchasing can save transportation expense. 在線購買可以節省運輸費用。	(1)(2)(3) (4) (5)	
Q6 The goods will not be damaged during transportation. 貨物在運輸過程中不會受損。	(1)(2)(3) (4) (5)	
Q7 No cargo will be lost during transportation. 在運輸過程中不會貨物丟失。	(1)(2)(3) (4) (5)	
Q8 Shopping online can deliver goods to your home without the need for physical effort 在線購物可將商品運送到您的家中，而無需花體力。	(1)(2)(3) (4) (5)	

Part 3: On-line purchasing is convenient 第 3 部分：客戶可以隨時在線購物	非常不同意 Strongly Disagree	非常同意 Strongly Agree
Q9 Customer can on-line purchase at any time. 客戶可以隨時在線購物。	(1) (2) (3) (4) (5)	
Q10 On-line shop open at any time.	(1) (2) (3) (4) (5)	
Q11 Customer can on-line purchase at any place. 客戶可以在任何地方在線購物。	(1) (2) (3) (4) (5)	
Q12 Customer can on-line purchase at any bad weather. 客戶可以在任何惡劣天氣下在線購買	(1) (2) (3) (4) (5)	
Part 4: On-line purchasing products are cheaper. 第 4 部分：在線購買產品更便宜。	非常不同意 Strongly Disagree	非常同意 Strongly Agree
Q13 Online shopping products are cheaper than physical shop 網上購物商品比實體商品便宜	(1) (2) (3) (4) (5)	
Q14 Online shopping is a great resource to compare price 網上購物是比較價格的絕佳資源	(1) (2) (3) (4) (5)	
Q15 Online stores are on the same promotional calendar as the brick-and-mortar stores, offering great seasonal sales and discounts. 在線商店與實體商店的促銷日曆相同， 可以提供出色的季節性銷售和折扣。	(1) (2) (3) (4) (5)	
Q16 It is easy to get discount coupon in On-line purchasing 在線購買很容易獲得折扣券	(1) (2) (3) (4) (5)	

Part 5: Customer select online purchasing

第 5 部分：客戶選擇在線購買

	非常不同意 Strongly Disagree	非常同意 Strongly Agree
Q17 I could easy switch from On-line to Physical shop 我可以輕鬆地從在線商店切換到實體店	(1) (2) (3) (4) (5)	
Q18 I will select on-line purchasing 我會選擇在線購買	(1) (2) (3) (4) (5)	
Q19 Online shopping is convenient to shop 網上購物方便購物	(1) (2) (3) (4) (5)	

Part 6: Basic Information 基本信息

Please note all the following information collected to provide for analysis purposes only. All your responses are confidential. Thanks

請注意以下所有收集的信息僅用於分析目的。您的所有答案都是機密的。謝謝

Q20 Gender 性別	(a) () Male 男性	(b) () Female 女性
Q21 Age group 年齡組		
(a) () 18 or below	18 歲或以下	
(b) () 19 - 25	19 - 25	
(c) () 26 - 35	26 - 35	
(d) () 36 - 45	36 - 45	
(e) () 45 or above	45 歲或以上	
Q22 Occupation 工作職業		
(a) () Student	學生	
(b) () Professional and Manager	專業及經理	
(c) () Clerical Officer	文書主任	
(d) () Housewife	家庭主婦	
(e) () Others, please specify: _____	其他，請具體說明：_____	
Q23 Education level 教育程度		
(a) () Primary school	小學	
(b) () Secondary school	中學	
(c) () Certificate/Diploma/Higher Diploma	證書/文憑/高級文憑	
(d) () Bachelor	學士	
(e) () Postgraduate or above	研究生以上	

Q24 Monthly income 月收入

- | | | |
|------------|-------------------------|-------------------------|
| (a) () | HK\$10,000 or below | HK \$ 10,000 或以下 |
| (b) () | HK\$10,001 – HK\$20,000 | HK\$10,001 – HK\$20,000 |
| (c) () | HK\$20,001 – HK\$30,000 | HK\$20,001 – HK\$30,000 |
| (d) () | HK\$30,001 – HK\$40,000 | HK\$30,001 – HK\$40,000 |
| (e) () | HK\$40,001 or above | HK \$ 40,001 或以上 |

Q25 How much do you spend in On-line purchasing each month?

您每月在網上購物上花費多少？

- | | | |
|------------|---------------------|---------------------|
| (a) () | HK\$100 or below | HK \$ 100 或以下 |
| (b) () | HK\$101 – HK\$500 | HK\$101 – HK\$500 |
| (c) () | HK\$501 – HK\$1500 | HK\$501 – HK\$1500 |
| (d) () | HK\$1501 – HK\$3000 | HK\$1501 – HK\$3000 |
| (e) () | HK\$3001 or above | HK \$ 3001 或以上 |

The End 結束

Questionnaire data

#	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	ST1	ST2	ST3	ST4	TE1	TE2	TE3	TE4	GC1	GC2	GC3	GC4	CP1	CP2	CP3	CP4	PR1	PR2	PR3	Q20	Q21	Q22	Q23	Q24	Q25
2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	1	2	5	2	1	1
3	4	4	4	4	4	3	3	4	5	4	4	4	2	2	2	2	2	2	2	2	5	2	1	2	2
4	4	4	4	4	4	4	4	3	4	4	4	3	4	4	3	4	4	4	4	1	2	5	2	1	2
5	3	4	3	4	4	4	4	4	5	3	3	4	3	2	2	2	2	2	2	2	5	2	1	2	2
6	3	4	4	4	4	5	3	4	4	4	3	4	4	4	4	4	4	4	4	2	5	2	2	3	4
7	3	3	4	3	3	3	3	3	4	4	3	4	4	3	3	4	3	4	3	1	2	5	2	3	4
8	5	5	5	5	5	4	5	5	5	4	5	5	5	5	3	5	4	5	5	2	1	3	1	1	1
9	4	4	4	4	4	4	4	4	5	4	4	3	2	2	4	4	3	4	4	1	2	1	3	1	1
10	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	2	2	1	3	2	2
11	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	1	2	1	3	2	3
12	3	3	5	4	4	4	4	3	5	4	3	4	5	3	4	5	4	3	4	2	2	1	4	1	1
13	4	5	5	4	4	4	4	5	5	5	4	5	5	4	5	3	5	5	4	2	2	1	4	1	1
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15	4	4	4	3	4	3	4	4	4	4	4	4	2	2	2	2	2	2	2	2	1	5	2	3	4
16	4	3	4	3	4	3	4	3	4	4	4	4	2	2	2	2	2	2	2	2	1	5	1	2	2
17	5	5	5	4	5	5	3	5	5	5	5	5	5	5	5	4	4	5	3	1	2	1	5	2	1
18	4	4	3	3	4	4	4	4	4	3	4	4	3	2	4	2	3	4	4	1	2	1	5	2	1
19	4	1	4	4	4	3	4	4	4	4	4	4	2	3	2	3	2	2	2	2	2	3	2	2	1
20	3	4	3	3	3	3	3	4	4	3	3	3	3	3	4	3	4	4	4	1	2	2	3	2	1
21	4	4	3	3	4	4	3	4	4	4	4	3	3	2	4	3	3	4	3	1	2	2	4	3	2
22	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	4	4	4	4	1	2	2	4	3	2
23	3	2	3	4	3	4	3	4	4	4	3	3	3	2	2	3	3	2	2	2	2	5	3	3	3
24	4	2	4	4	4	4	4	4	4	4	4	4	4	5	5	5	3	4	4	2	2	3	2	2	1
25	5	5	4	4	5	4	5	5	5	5	5	4	4	4	5	4	5	5	4	1	2	3	2	2	1
26	3	4	3	4	4	4	4	4	4	3	3	3	3	3	4	3	4	4	3	2	2	3	2	2	1
27	4	4	3	3	4	3	4	4	4	4	4	3	3	4	4	4	3	4	4	2	2	3	2	2	2
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31	3	3	2	3	3	4	4	3	4	3	3	3	4	4	4	4	4	4	4	2	2	3	3	2	2
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36	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	4	2	2	2
37	4	4	2	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	1	2	4	3	2	3
38	3	4	4	4	4	3	4	4	4	4	3	4	4	3	4	4	3	4	3	2	2	4	4	2	4
39	3	5	4	5	4	3	4	5	3	4	3	4	4	5	3	5	4	4	5	1	2	4	5	3	4
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Pilot test questionnaire data

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22	3	2	3	4	3	4	3	4	4	4	3	3	3	2	2	3	3	2	2	2	2	2	5	3	3

Reference

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Declaration/Statements page

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed CS Seto..... (candidate)

Date 15/4/2020.....

STATEMENT 1

This work is the result of my own investigations, except where otherwise stated.

Other sources are acknowledged by footnotes giving explicit references.
A bibliography is appended.

Signed CS Seto..... (candidate)

Date 15/4/2020.....

STATEMENT 2

I hereby give consent for my work, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

Signed CS Seto..... (candidate)

Date 15/4/2020.....

NB: *Candidates on whose behalf a bar on access has been approved by the University (see Note 1), should use the following version of Statement 2:*

I hereby give consent for my work, if accepted, to be available for photocopying and for inter-library loan **after expiry of a bar on access approved by the University.**

Signed CS Seto..... (candidate)

Date 15/4/2020.....

EXAMINATION OF TAUGHT MASTER'S DEGREE DISSERTATION:

NOTICE OF CANDIDATURE FORM

Please complete this form when your dissertation is ready to be submitted for examination.

Surname/Family Name Seto..... Date of Birth 7 Sep 1970

Forenames (in full) Chi Shing Title Mr

Institution Number (if known).....

Title of Degree (eg MA, MSc, MBA

etc).....MBA.....

Title of Taught Master's degree scheme followed (eg Equine Studies)

Department/School in which study pursued.....

Name of your Supervisor Dr Joe Leung

Full Title of dissertation submitted

A Study of On-line Purchase in Hong Kong's Customers

Please indicate that the following will all be submitted along with this form:

☐ two permanently bound copies of your dissertation plus 1 electronic copy submitted via Turnitin;

SUBMISSION OF DISSERTATIONS

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Appendices 2: The ethic form and research proposal



MBA Research Project Proposal

Project title A Study of Customer Online Purchasing Reasons in Hong Kong

Date 8th November 2019

Student Detail

Institution / Center of study	Hong Kong Management Association
Student family / surname	Seto
Student given / first name	Chi Shing
Student number	1812207
Student email	setochishing@yahoo.com
Faculty and school	Faculty of Business and Management
Are you a member of staff at UWTSD?	No
Are you an international student currently on a Tier 4 visa?	No
Start date	
End date	
Mode of study	Part time
Course	MBA
Project supervisor	Dr Leung Wing Chung Joe

Appendices 2: The ethic form and research proposal

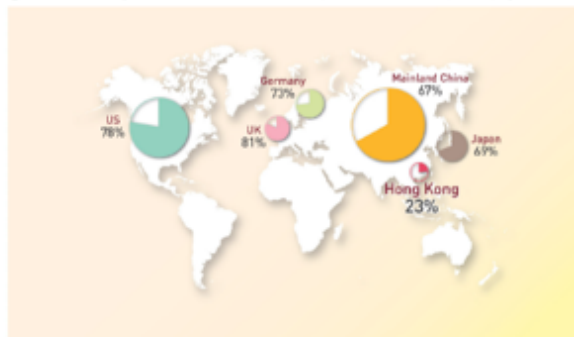
Chapter 1 Introduction

1.1 Background

Online retail grows in popularity all around the world. Despite the convenience and ubiquity of its on-street retail outlets, the same is true in Hong Kong. According to the Census and Statistics Department (CSD) (<http://www.statistics.gov.hk/pub/B11302542015XXXXB0100.pdf>) the "percentage of people (age 15 – 64) that has shopped online in the last 12 months has been rising steadily from 7 percent in 2004 to 16 percent in 2009 to 23 percent in 2014. Some 1415600 people made online purchase of products/services for personal matters in 2014.

Figure 1 shows the online retail penetration rate in US (<http://www.statista.com/statistics/183755/number-of-us-internet-shoppers-since-2009/>), Mainland, China, Japan (<http://www.statista.com/statistics/261650/digital-buyer-penetration-in-japan/>), some major European countries (http://ec.europa.eu/eurostat/statistics-explained/index.php/E-commerce_statistics_for_individuals#Date_source_and_availability) in 2015 and in Hong Kong in 2014. The UK has the highest online retail penetration (81%), followed by the US (78%), Germany (73%), Japan (69%) and Mainland China (67%). As shown above, the penetration rate of Hong Kong is far below than the rate of these countries. If Hong Kong catches up with the current overseas trajectory, it is expected that online retail will grow rapidly in coming years.

Figure 1: Online retail penetration rates in Mainland China, selected EU countries, the US, Japan and HK*



1.2 Research drivers (problem, issues)

Nowadays there are so many customers who select online purchasing because it is very convenience, better prices, more variety, you can send gifts more easily, more control, easy price comparisons, no crowd, no sales pressure, access to used or damaged inventory, privacy for discreet purchases, etc.

But online shopping still has so many problems, such as product quality, logistics are a mess, delivery time is not clear, payment preferences are limited, the trouble with hidden costs, unclear website policies, problem of plenty, no sales assistance, no support for local retailers etc.

Appendices 2: The ethic form and research proposal

1.3 Research objectives

A Study of Customer Online Purchasing Reasons in Hong Kong

To understand the state of Hong Kong customer online purchasing behavior and reason;

to assess consumer's satisfaction with online purchasing and what draws them online;

and to identify the characteristics of the people who are digitally excluded from engaging in this form of shopping;

To identify the various trade practice that online service providers in Hong Kong are engaging in, and to review the scope and the relevance of legal protection provided by local laws and regulations for online shoppers;

To make recommendations to Hong Kong online company and customer that will enhance the effectiveness of self-regulatory and legal measures to address consumer concerns with on online purchasing. The hope is that such improvements in the online purchasing environment, will benefit consumers and business alike by improving consumers' perceived and actual safety so that a rising proportion of Hong Kong consumers can participate in this growing form of online purchasing consumption.

1.4 Research questions

What are the Hong Kong customers online purchasing behaviors?

How many kinds of online business models, online trade practices?

How to reduce security risk from online purchasing?

How to deal with complaints received from online shoppers?

How to deal with misleading advertising and other deceptive commercial practices?

What are the legal and other remedies?

How to increase customer satisfaction and trust in online purchasing?

1.5 Value / contribution of the research

The value and contribution of this research is to increase customer have better online shopping satisfaction and make online shopping model safer and more reliable. As the result to make online shop grow more.

Appendices 2: The ethic form and research proposal

1.6 Research flow

The research flow of the project is shown as following list:

Create the research objective

State the research questions

State the research focus area

Find out reference research paper, document and relative information

Draw research framework

Design the research methodology

Preform analysis and result discussion

To make conclusion and recommendation

Chapter 2 Literature review

2.1 Research focus area (further exploration)

Hong Kong online business models

Hong Kong customers online purchasing behaviors

Hong Kong online purchasing business improvement

Increase customer satisfaction and trust in online purchasing

Hong Kong online business growth

2.2 Research paper list

Jin Baek Kim (2012) 'An empirical study on consumer first purchase intention in online shopping', *Electron Commer Res*, DOI 10.1007/s10660-012-9089-5

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Appendices 2: The ethic form and research proposal

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Jura Liaukonyte, Thales Texeira, Kwnneth C. Wibur (2014) 'TV advert and online shopping', Marketing Science vol.34, no.3 pp. 311-330

2.9 Research framework



Appendices 2: The ethic form and research proposal

Chapter 3 Research methodology

3.1 Research method

Quantitative Market Research

The procedure of the Quantitative Market Research is as following:

Survey question

Survey design

Survey distribution

Survey collection

Survey analysis

Qualitative Market Research

The procedure of the Qualitative Market Research is as following:

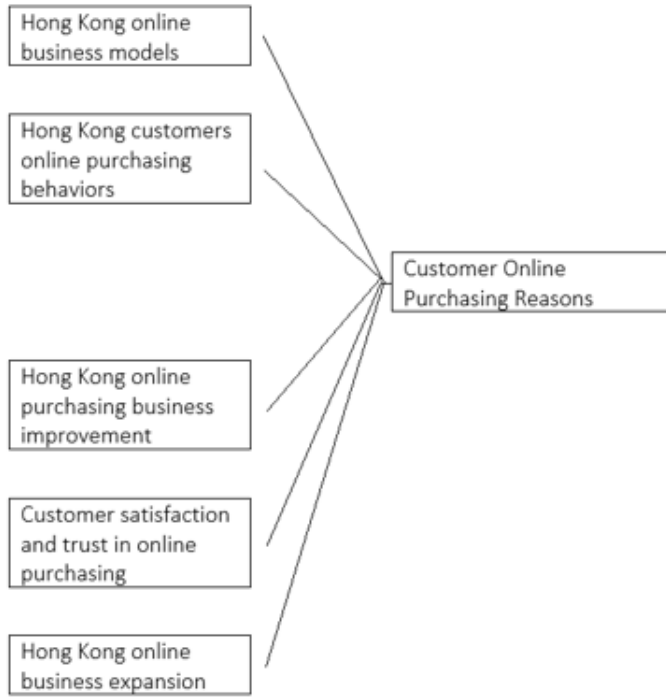
Focus Groups

On-call interviews

Innovation research

Appendices 2: The ethic form and research proposal

3.2 Research framework



3.3 Research hypotheses (regression analysis)

Regression Analysis

Regression analysis is a quantitative research method which is used when the study involves modelling and analyzing several variables, where the relationship includes a dependent variable and one or more independent variables. In simple terms, regression analysis is a quantitative method used to test the nature of relationships between a dependent variable and one or more independent variables.

The basic form of regression models includes unknown parameters (β), independent variables (X), and the dependent variable (Y).

Regression model, basically, specifies the relation of dependent variable (Y) to a function combination of independent variables (X) and unknown parameters (β)

$$Y \approx f(X, \beta)$$

Regression equation can be used to predict the values of 'y', if the value of 'x' is given, and both 'y' and 'x' are the two sets of measures of a sample size of 'n'. The formulae for regression equation would be

Appendices 2: The ethic form and research proposal

$$y^* = a + bx$$

Where,

$$b = \frac{n \sum xy - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2}$$
$$a = \frac{\sum y - b \sum x}{n}$$

Do not be intimidated by visual complexity of correlation and regression formulae above. You don't have to apply the formula manually, and correlation and regression analyses can be run with the application of popular analytical software such as SPSS.

Linear regression analysis is based on the following set of assumptions:

1. Assumption of linearity. There is a linear relationship between dependent and independent variables.
2. Assumption of homoscedasticity. Data values for dependent and independent variables have equal variances.
3. Assumption of absence of collinearity or multicollinearity. There is no correlation between two or more independent variables.
4. Assumption of normal distribution. The data for the independent variables and dependent variable are normally distributed

3.4 Research design

3.4.1 Question design

3.4.2 Population

The target research population is that someone who is using online shopping. The age is no limitation.

3.4.3 Sampling

The target research sampling is that someone who is using online shopping. The age is no limitation.

3.4.4 Research instrument for data collection

The measurement devises are survey, test, questionnaire, etc.

Appendices 2: The ethic form and research proposal

3.4.5 Ethical consideration

Ethics in business research refers to a code of conduct or expected societal norm of behavior while conducting research.

Ethics refers to those assumptions based on which a person decide anything as right or wrong.

If the behavior presented by the researcher is out of values and norms of research is considered as unethical behavior.

The goal of ethics in research is to ensure that no one is harmed or suffers adverse consequences from research activities.

3.4.6 Pre-test

3.4.7 Research schedule

11 Nov 2019 Create the research objective and Project proposal

17 Nov 2019 SPSS training workshop

Nov 2019 Data collection/questionnaire

Jan 2020 Paper writing

Appendices 3: The completed supervisory

POSTGRADUATE TAUGHT DISSERTATION SUPERVISION RECORD

This form is to be used to record a summary of the outcomes of each formal meeting between the student and the dissertation supervisors for Part II of a Masters' Programme.

Student Name:	Seto Chi Sing	Student No:	1812207
Programme of Study:	MBA	Campus:	
Faculty/School/Centre:		Module Code:	
Mode of study:	Full-time / Part-time	Method of study:	Campus based / Distance learning
Dissertation Title:	A Study of On-Line Purchase in Hong Kong's Customers		
Dissertation Supervisor:	Dr Joe Leung		
Programme Director:			

SUPERVISION RECORD

Date of meeting	Type of meeting	Summary of outcomes	Student	Supervisor	Duration of meeting	Running total
23 Oct 2019	WhatsApp and Telephone	1. Discussion of Research Topic 2. Discussion of Research Proposal	CS Seto	Joe Leung	1 hour	1 hour
2 Nov 2019	Face-to-face	3. Discussion of Research Proposal 4. Discussion of Research Focus Areas	CS Seto	Joe Leung	2 hours	3 hours
8 Nov 2019	WhatsApp and Telephone	1. Review of Proposal	CS Seto	Joe Leung	1.5 hours	4.5 hours
29 Dec 2019	Face-to-face	1. Discussion of Research Topic 2. Discussion of Research Focus Areas	CS Seto	Joe Leung	3.5 hours	8 hours
19 Jan 2020	Face-to-face	1. Discussion of Overall Project 2. Discussion of Chapter 1 3. Discussion of Chapter 2	CS Seto	Joe Leung	3.5 hours	11.5 hours
21 Feb 2020	Zoom Meeting and Email	1. Discussion of Chapter 3	CS Seto	Joe Leung	2 hours	13.5 hours

September 2016

1

PGT Dissertation Supervision Record

Date of meeting	Type of meeting	Summary of outcomes	Student	Supervisor	Duration of meeting	Running total
20 March 2020	Zoom Meeting and Email	1. Discussion of Chapter 4	CS Seto	Joe Leung	2 hours	15.5 hours
26 March 2020	Zoom Meeting and Email	1 Abstract	CS Seto	Joe Leung	2 hours	17.5 hours
		2 Chapter 1 p.5-8				
		3 p.13				
		4 p.16-17				
		5 p.17				
		6 p.28				
3 April 2020	Zoom Meeting and Email	1 Chapter 1 p.14	CS Seto	Joe Leung	3 hours	20.5 hours
		2 p.16				
		3 p.17				
		4 Chapter 2 p.17				
		5 p.31				
		6 p.32				
		7 p.39				
		8 Chapter 3				

Appendices 3: The completed supervisory

Date of meeting	Type of meeting	Summary of outcomes				Student	Supervisor	Duration of meeting	Running total
6 April 2020	Zoom Meeting and Email	1	Chapter 1	p.17	- Remove Figure 1.4 Research Framework to p.40. - Revise Research questions. 1.5 Value of the Research, explain more about your personal and industry gains.	CS Seto	Joe Leung	3 hours	23.5 hours
		2	Chapter 2	p.37	- Write a summary about how can you develop the research framework. - Delete the word of assumptions. - Revise the Hypothesis H1-H4 same as at above hypothesis.				
		3	Chapter 3	p.40	- Rename 3.3 as Research Framework. - Add the Research Framework and Research Hypothesis H1-H4.				
		4	Chapter 4	p.77	- Remove Table 4.5.26 to Chapter 5. - Revise the H1-H4 wording in the Table same as at above hypothesis. - Add the Correlation and Regression Coefficient on Figure 4.4.1.				
		5	Chapter 5	p.80-83	- Add the Table 4.5.25 as the Conclusion. - Mark clearly the sub-points of recommendations.				
		6	Referencing		For the referencing style, refer to and follow the Harvard Style in University Handbook.				

Date of meeting	Type of meeting	Summary of outcomes				Student	Supervisor	Duration of meeting	Running total
7 April 2020	Zoom Meeting and Email	1	Chapter 1	p.17	- Delete Figure 1.4. - Rephrase the research questions. - Value of the research - Explain what can you learn from the study. - Explain what can the industry gain from this study.	CS Seto	Joe Leung	3 hours	26.5 hours
		2	Chapter 2	p.37	- Add a summary how you develop the 5 variables of research framework. - Revise the 2.7 Research Framework H1, H2, H3 H4 (not H1+) - Rephrase the Hypothesis. - Revise the Hypothesis H1-H4 same as at above hypothesis.				
		3	Chapter 3	p.40	- Add Research Framework on p.40 and replace 3.3 Research Hypothesis. - Add the Research Framework and Research Hypothesis H1-H4. 3.4.2 Population: Explain how many of the population? 3.4.2 Sampling: Explain how many you select the sample (refer to the sample size formula).				
		4	Chapter 4	p.77	- Table 4.5.25: Sig. value as .000 (not 0) - Table 4.5.26: Rephrase the Hypothesis wording H1-H4.				
		5	Chapter 5	p.78	- Add the results (relationship) of H1-H4 at the beginning of the Conclusion. - Based on your analysis, explain more about the findings and results, e.g. relating to descriptive statistics, customer experience or other reasons.				
		6	Chapter 5	p.83	Explain the Further Study.				
		7	Questionnaire	p.84	Revise the simple cover letter to explain your study to the respondents.				
		8	Referencing		For the referencing style, refer to and follow the Harvard Style in University Handbook.				

Appendices 3: The completed supervisory

Date of meeting	Type of meeting	Summary of outcomes				Student	Supervisor	Duration of meeting	Running total
11 April 2020	Zoom Meeting and Email	1	Chapter 1	p.18-	- Edit the text. - Typing error (e.g. Global enterprise. Am?)	CS Seto	<i>Joe Leung</i>	3 hours	29.5 hours
		2	Chapter 3	p.39	Explain how to develop the Research Framework.				
		3	Chapter 3	p.42	Delete the explanation of Regression Analysis				
		4	Chapter 3	p.50	Delete C. Hypothesis Testing.				
		5	Chapter 3	p.51	Add Research Flow here, delete Research Instrument.				
		6	Chapter 4	p.56	Explain more about Table 4.2.4.				
		7	Chapter 5	p.83	Recommendation: explain more (relevant to the research findings).				
		8	Presentation	p.84	Overall, it should play attention to the proofing reading and editing. The context has grammatical mistakes.				
		9	Questionnaire	p.84	Revise the simple cover letter to explain your study to the respondents.				
		10	Referencing		For the referencing style, refer to and follow the Harvard Style in University Handbook.				

Notes on the Postgraduate Taught Dissertation Supervision Record

Record the date and type of meeting – e.g. face-to-face, video conference, telephone, email, letter

Note the outcomes agreed by both the student and the supervisor

Both the student and the supervisor should initial

Record the duration of the meeting

Update the running total for duration by adding the duration of the meeting to the previous running total