



**THE PERCEIVED OF CROSS-BORDER ELECTRONIC COMMERCE TO
PRODUCT PERFORMANCE UNCERTAINTY OF ELECTRONIC
COMMERCE MARKET IN GUANG DONG, CHINA**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE MASTER'S DEGREE OF BUSINESS
ADMINISTRATION GRADUATE SCHOOL OF BUSINESS
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Thematic Certificate

To

LIN SHAOHUA

This Independent Study has been Approved as a Partial Fulfillment of the Requirement
of International Master of Business Administration in International
Business Management

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Date: 7 / 7 / 2023

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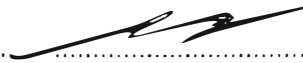
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ABSTRACT

With the rapid development of global economy and the continuous improvement of the level of scientific and technological development, the proportion of cross-border electronic commerce in economic development is increasing. Therefore, this paper studies the innovation and development trend of logistics model in cross-border electronic commerce. In order to solve the problems of relationship among variables between e-commerce concepts of stakeholders, the statistics result have significant at 0.05 on the demographic to inferential analysis. Hence, the study was concluded with two objectives: 1) to study the relationship between demographic and perceived uncertainty of e-commerce behavior to understand individual data which have possibilities impact customer perceive of product uncertainty on e-commerce; 2) to explore the relationship between independent variables (perceived uncertainty, e-commerce description uncertainty, and privacy risk) influencing a dependent variable (product performance uncertainty).

The population and sample for this study is online customer who always buys products in Guang Dong, China. Primary data is data collected by using a questionnaire to collect data for 244 respondents. The results showed that demographic has direct effect on overall perceived uncertainty in e-commerce, e-commerce description uncertainty, privacy risk attitude, product performance uncertainty; Other are the overall perceived uncertainty in e-commerce, e-commerce description uncertainty, privacy risk have direct effect on product performance uncertainty. Finally, contribute to this study is the supply chain must be adjusted and optimized appropriately. Therefore, the development level and development quality of cross-border electronic commerce can be effectively improved to Guang Dong e-commerce markets.

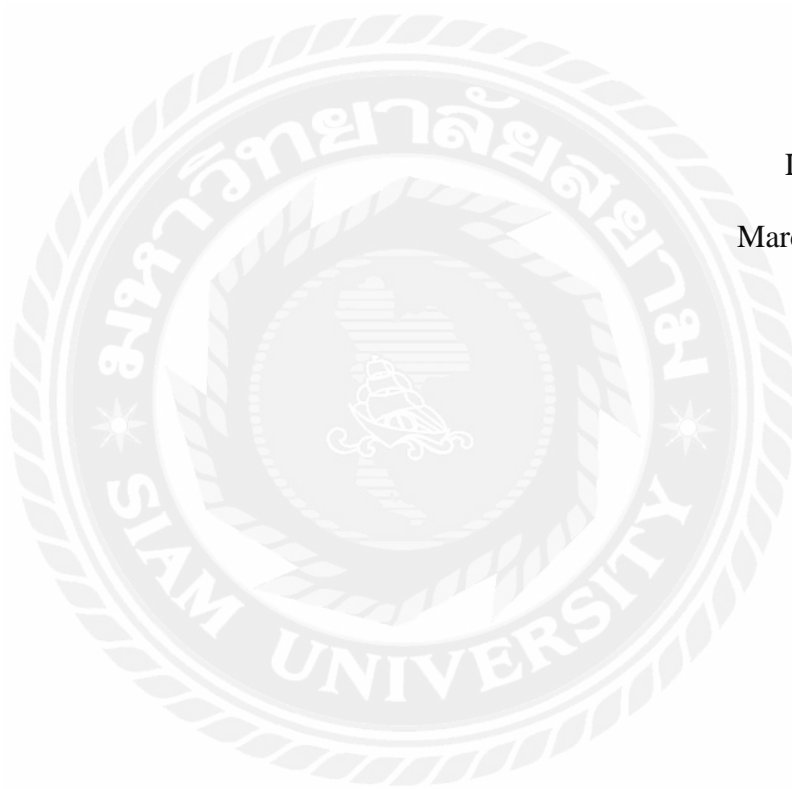
Keywords: cross-border electronic commerce, perceived uncertainty, privacy risk, product performance uncertainty

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Lin Shaohua

March 13, 2023



Declaration

I, Lin Shaohua, hereby certify that the work embodied in this independent study entitled “The Perceived of Cross-border Electronic Commerce to Product Performance Uncertainty of Electronic Commerce Market in Guang Dong, China” is result of original research and has not been submitted for a higher degree to any other university or institution.

Lin Shaohua



Lin Shaohua
March 13, 2023

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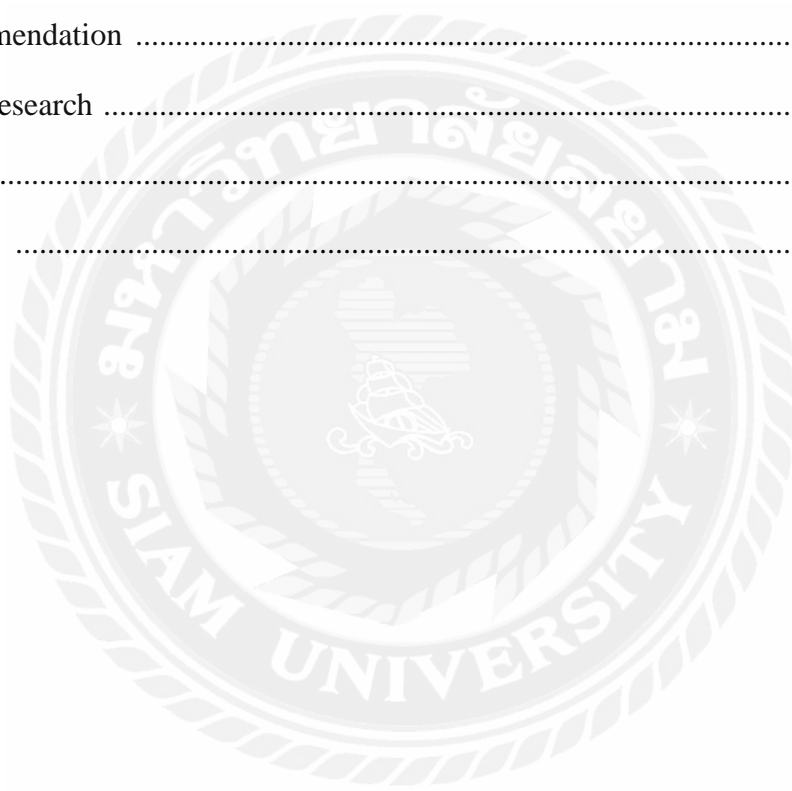
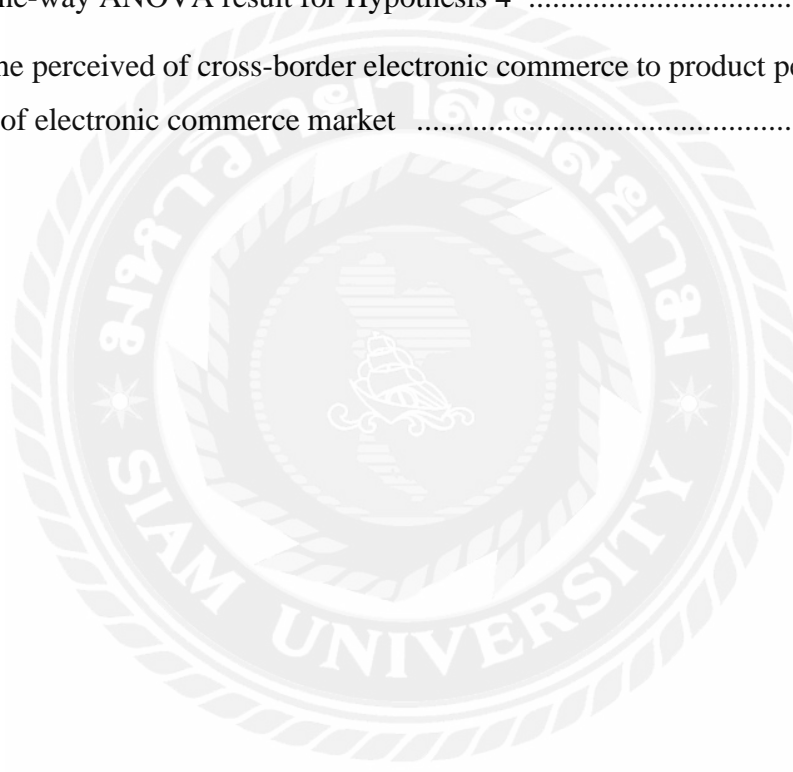


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Chapter 1 Introduction

1.1 Research Background

With the popularization of the Internet and the progress of information technology, e-commerce is booming worldwide. Therefore, more and more enterprises conduct business through the Internet, and more consumers shop online. Especially for cross-border electronic commerce, its logistics are vital (Xiao, 2019). Therefore, it is necessary to innovate the logistics model in cross-border electronic trade, which plays a positive role in promoting e-commerce logistics to adapt to the progress of the times, and at the same time helps to promote the stable development of cross-border electronic commerce. Currently, China's cross-border logistics development lags behind the related growth of e-commerce, which does not constitute a relatively balanced development form. The specific mode of applied logistics, still focuses on postal parcels and international express delivery (Xie, 2019; Wu & Chen, 2019). Now, with the high development of e-commerce, the innovation and development of logistics mode should be deeply explored, to promote the excellent stride development of logistics.

With many available internet channels, each channel has its distinct capabilities and respective vulnerabilities. For instance, a home channel's infrastructure typically offers reliable and acceptable broadband speeds, anti-virus protection, technical support and security options controlled by the user. However, the infrastructure of free public Wi-Fi channels often offers less reliable spotty broadband access, no technical support and a less secure open network. The environment surrounding each channel also presents its unique vulnerabilities. For example, home internet channels are vulnerable to war-driving, the practice of driving around looking for accessible open wireless networks with the intent of poaching data for malicious purposes (Kaleta and Mahadevan, 2020)

The research goal of this paper is to comprehensively study the optimization problem of constructing high-dimensional objectives by using direction vector insertion method, aiming at the three-dimensional which is overall perceived uncertainty, e-commerce description uncertainty, and privacy risk factors. A high-dimensional target based on product performance uncertainty is proposed, and optimization knowledge from cross-border electronic commerce. The study aims to survey relationship between variables and attitudes among e-commerce online customers.

1.2 Research Problems

1. What is the relationship between demographic and perceived uncertainty of e-commerce behavior?

2. Do perceived uncertainty, e-commerce description uncertainty, and privacy risk influence product performance uncertainty?

1.3 The Objective of the Study

1. To study the relationship between demographic and perceived uncertainty of e-commerce behavior to understand individual data which have possibilities impact customer perceive of product uncertainty on e-commerce.

2. To explore the relationship between independent variables (perceived uncertainty, e-commerce description uncertainty, and privacy risk) influencing a dependent variable (product performance uncertainty).

1.4 Scope of the Study

In this paper, the cross-border e-commerce systems in the hinterland park and the market process from Chinese customers as respondents for this research. The channel pushes out the market service was taken as the research object, aiming at upgrading the optimization of an e-commerce capacity instead of the traditional process to multi-link dynamic collaborative decision-making of buyers.

At the same time, the unsecured perception is designed to explain the reason customers utilize the facilitated application or e-commerce system with collaboration privacy system that company provided. Finally, the effectiveness and reliability of the proposed survey method are verified by a practical case.

1.5 Research Significance

In the process of cross-border logistics transactions, the choice of cross-border logistics mode becomes a critical link. The use of different cross-border logistics modes will have a significant impact on the efficiency and service quality of the enterprise, which is directly related to the customer's impression and judgment of the enterprise (Li, 2019; Zhao & Zhang, 2019). Therefore, making cross-border e-commerce enterprises adopt logistics modes accurately and reasonably is critical. In this paper, Since the radiation area of modern ports to hinterland is already huge, and the hinterland area of a million-ton port can even reach a province, we assume the following three characteristics of port-hinterland logistics here:

The task is complex, involving a wide area and being difficult as the port is the starting point and end point of physical transportation of cross-border trade; it will receive goods transported by road, railway, and waterway, which makes the port-hinterland logistics service more difficult: many constraints, complicated processes, and strict ordering requirements. Port-hinterland logistics system takes cargo transportation as its core, but at the same time provides related supporting services such as temporary storage, repackaging, distribution and distribution processing, etc.

This service is numerous, varied and complex. The external environment is dynamic as port-hinterland logistics is a process involving many links and having a strict and complex personnel organization structure. Because the whole process is multi-link, every link in the business process is closely linked.

1.6 Theoretical Framework

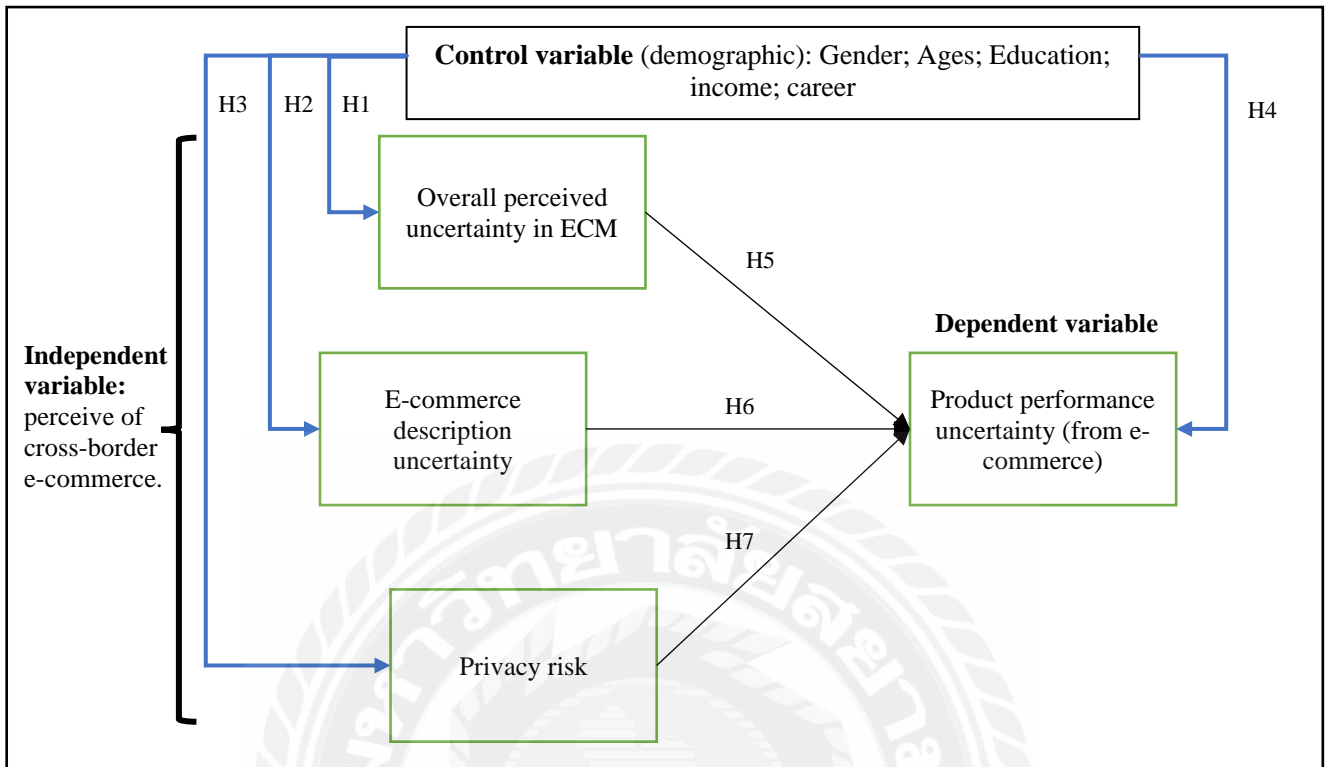
1. Cross-border E-commerce

Cross-border electronic commerce means both parties are located in different countries and conduct e-commerce transactions through e-commerce network platforms. Cross-border electronic commerce is essentially a kind of international trade. In contrast, international trade usually involves international payment and settlement, import and export customs declaration, international transportation, insurance, etc., as well as security and risk control considerations, which makes cross-border electronic commerce and domestic e-commerce different (Niu et al., 2019; Xie & Li, 2020).

2. Cross-border electronic commerce logistics

On the existing related concepts such as "e-commerce logistics" and "bonded logistics" (Wang, 2019), the author thinks that cross-border electronic commerce Logistics is based on e-commerce logistics and combines the characteristics of bonded logistics to transport, store, load and unload, package, distribution processing, customs clearance and distribution the import and export e-commerce goods in particular customs supervision areas such as bonded areas and free trade zones, to meet the needs of cross-border electronic commerce. Similar to the domestic e-commerce mode, cross-border electronic commerce can be divided into B2B and B2C business modes. There are mainly the following logistics modes: self-built logistics team, overseas warehousing mode, large-scale transportation of international parcels and international express delivery, and third-party logistics mode.

Figure 1: theoretical frameworks



1.7 Hypotheses

H1: Demographic has direct effect on Overall perceived uncertainty in e-commerce.

H2: Demographic has direct effect on E-commerce description uncertainty.

H3: Demographic has direct effect on Privacy risk attitude.

H4: Demographic has direct effect on Product performance uncertainty (from e-commerce)

H5: Overall perceived uncertainty in e-commerce has direct effect on Product performance uncertainty (from e-commerce)

H6: E-commerce description uncertainty has direct effect on Product performance uncertainty (from e-commerce)

H7: Privacy risk has direct effect on Product performance uncertainty (from e-commerce)

Chapter 2

Literatures Review

Due to the gradual evolution of cross-border electronic commerce, cross-border electronic commerce logistics has become a booming sunrise industry, and all countries are providing convenience. Literature (Tang & Wang, 2020) comprehensively analyzes the global data of various types of enterprises and concludes that enterprises with competitive advantages have little to do with their size. Literature studies the major influencing factors of e-commerce and points out that laws and regulations play a vital role in e-commerce transactions (Su, 2021). Literature thinks that the success of cross-border electronic commerce marketing transactions is closely related to the influence of social and cultural factors (Huang, Zhou, & Luo, 2020). Literature studies the development status of China's cross-border e-commerce in the Internet era (Rubenstone, 2019), characterized by rapid growth in scale, rapid development of supporting industries, increasing sales platforms, and growing sales models. It analyzes the problems of cross-border e-commerce such as lack of talent, incomplete system, frequent product quality and credit problems, and puts forward corresponding suggestions.

2.1 The definition of cross-border e-commerce

Literature discusses the training of cross-border e-commerce talents under the mode of internet plus (Mehlfelder, 2019), points out that there is a shortage of professionals under the new format of "Internet Plus Foreign Trade, " and proposes that the training of cross-border e-commerce talents should be carried out according to local conditions in combination with location advantages and university resources. Literature studies how to make full use of big data to improve trade level in cross-border logistics supply chains and puts forward a cross-border e-commerce sharing platform based on big data (Schulz, 2019), which applies detailed data in customer evaluation, logistics service, sales and operation, and product support. Literature studies the cross-border e-commerce potential of small and medium-sized enterprises in the globalization environment (Chai & He, 2019), puts forward that technological progress, logistics and distribution make every enterprise face competition in the world, and points out that small and medium-sized enterprises can make up for their disadvantages in the reform by using cross-border e-commerce platforms through public and private support. Literature analyzes what factors promote and hinder the development of cross-border e-commerce enterprises in EU countries and investigates whether distance is still essential for online transactions of physical goods (Luo, Lu, & Li, 2019). Literature studies the development of China's cross-border e-commerce platform and the construction of rule of law (Yang, 2019). From the perspectives of

market legitimacy, relationship legitimacy and social legitimacy, it discusses the relationship between legitimacy and acceptance. It points out that cross-border e-commerce platforms should emphasize establishing legitimacy among stakeholders.

2.2 The uncertainty of cross-border e-commerce

Uncertainty in cross-border e-commerce logistics and related risk management strategies It is widely acknowledged in both literature and practice that internationalization is a risky business. Most of the time, this is because companies need to estimate many variables, including market demand, exchange rates, future economic and political conditions of the new market. At the same time, information scarcity and high uncertainty make the prediction harder to perform. In current literature, supply chain and logistics risk management are highly debated fields and plenty of contributions exist on the identification of uncertainty factors linked to both national and global supply chains.

These uncertainties are categorized by type and often consider mainly offline transactions. Pezderka and Sinkovics (2011) are among the first to provide an initial framework to identify CBEC risk factors, although they do not specifically focus on logistics. A literature review on CBEC logistics in China indeed highlights there are many open research areas in this field. However, CBEC is expected to account for an increasingly larger share of international trade (Wang et al., 2020). As this phenomenon, pervasive at multiple levels, takes over traditional internationalization modes, new challenges arise, especially in the logistics domain.

By looking at contributions analyzing specific uncertainties related to e-commerce logistics on a national level (i.e. not cross-border), we find that factors like on-time delivery, returns management and customer service accessibility are mentioned. If we extend the analysis to a cross-border e-commerce setting, additional complexities need to be considered, such as tracking cross-border deliveries and managing customs clearance.

2.3 Perceived risk

Privacy risk has been conceptualized variously as a belief, attitude, intention, and behavior because it could impact trust in a psychological state, and trust faith is distinct from behavior; instead, it is an antecedent to the behavior. These perceptions may result from prior experience or institutional endorsements from third parties through trust seals. Gurung and Raja (2016), refer to the consumer's perception that the online company will adhere to a set of principles or rules of exchange acceptable to the consumer during and after the sale. Benevolence is the extent to which an online company is perceived to be acting for the well-being of consumers. A subject may have a favorable/positive or unfavorable/negative attitude toward an object. Therefore, in e-commerce, consumers may have excellent/positive or adverse/negative attitudes toward an online company.

Consumers may perceive value from CBEC transactions, yet there are risk uncertainties and fears of seller opportunism that still characterize the context. Therefore, theories of consumer decision-making that consider both the tensions and subjective value of e-commerce are relevant to our study. One such theory of consumer decision-making is the valence framework. The valence framework is rooted in economics and psychology literature and explains consumer behaviors as being simultaneously underpinned by perceptions of risks and rewards through purchasing a product (Mou, Cohen, Dou, and Zhang, 2020).

2.4 The perception of product performance uncertainty from customer behavior

Decision-making refers to the process of considering and choosing Guidelines for the practice. The best and in line with expectations and needs. To lead to the achievement of the desired objectives. The patterns of purchasing behavior. About the process. Decide to buy, say that even though buyers have different buying styles, reasons, or preferences of consumers. The exact purchase decision process. It can be divided as (a) awareness of needs customers will be looking for products that can complement. The feeling that he felt was still missing in their life. (b) data search buyers will try to find information related to the product. as much as possible to be used in decision making. (c) alternative assessment of buyer will bring all data that has been compared to find the best way This may be assessed by a descending rating for each qualification. (e) decision is the actual purchase decision. the buyer must decide about the product, brand, seller, purchase time and purchase quantity. (f) Post-purchase behavior consumers may behave in response, S\satisfaction or dissatisfaction from the purchase or use of such goods or services. That is, when satisfied, it makes repeat purchases and spreads the word. But if they are not happy, they will stop using and not spread the word. or may call for the seller to take responsibility.

Therefore, consumer behavior is a study of behavior in which consumers search, buy, use evaluate the use of products and services which is expected to meet the needs of consumers to know the characteristics, needs and buying behavior of consumers. The behavior of customers is uneasily to point out the scope of customer attitude toward e-commerce products. The readers must understand how to apply to insecure situations that often found in online shopping society.

Chapter 3

Research Methodology

This research study focuses on The perception of cross-border electronic commerce to product performance uncertainty of electronic commerce market in Guang Dong, China. The study is quantitative research using survey research method) and using questionnaire data collection method called survey research. The researcher has conducted the study and research as follows.

3.1 Sample and population

The population and sample for this study is online customer who always buys products in Guang Dong, China. This group must make decisions by themselves and spend money in online market more than a time for month. This study applies volunteer sampling strategy for survey. The questionnaire is a measurement tool for this study.

3.2 Questionnaire design

The researcher has studied information from various documents and research. Related as a guideline for creating the tools used in this research The researcher used a questionnaire. A questionnaire is a tool used to collect data and measure factors related to unsecured online shopping behavior for customers in province, China. The questionnaire was divided into two main sections as follows:

Part 1: A questionnaire on demographic of individual information which is a descriptive analysis method, multiple choice question, and choose the most suitable answer as follows.

Item 1 Gender is the Nominal Scale.

- 1) Male
- 2) female

Item 2. Age is used to measure data on an ordinal scale. The age range can be calculated as follows:

$$\begin{aligned}\text{Range of ordinal rate} &= (\text{Maximum} - \text{Minimum}) / \text{class interval} \\ &= (65-15)/5 \\ &= 10\end{aligned}$$

Part 2: A questionnaire of uncertainty from cross-border e-commerce factor and uncertainty performance from online products which seem like a question on a selected category scale by giving influence levels and providing a score or rating scale. It is a measure of interval scale data with criteria for scoring.

<u>opinion level</u>	<u>rating</u>
strongly agree	5
agree	4
not sure	3
disagree	2
strongly disagree	1

Interpretation and discussion of research results, used the interval scale, a rating scale of the Likert Scale in the questionnaire. The researcher used the average criterion to discuss the results. This results from the calculation using the formula for calculating the width of the intersection layer.

$$\begin{aligned} \text{Range of interval rate} &= (\text{the highest rate} - \text{the lowest rate}) / \text{class interval} \\ &= (5-1)/5 \\ &= 0.8 \end{aligned}$$

The average criterion for the level of opinion in choosing the service is as follows.

The average score of 4.21 – 5.00 means having the most relationship with Product performance uncertainty.

The average score of 3.41 – 4.20 means having a high relationship with Product performance uncertainty.

The average score of 2.61 – 3.40 means having a moderate relationship with Product performance uncertainty.

The average score of 1.81 – 2.60 has little relationship with Product performance uncertainty.

The average score of 1.00 – 1.80 means having the slightest relationship with Product performance uncertainty.

3.3 Research Tool Process

The tool used for collecting data is questionnaire items, which contain the steps to build the device in the following:

Study information from textbooks, academic documents, articles, theories, principles, and related research. as a guideline for creating a questionnaire to cover the purposes of the study.

The modified questionnaire was used to try out with 30 non-sample populations to analyze the results for confidence—reliability of the questionnaire by using the alpha coefficient (α). The obtained alpha value indicates the degree of stability of the questionnaire, with a value between $0 < \alpha > 1$. A value close to 1 indicates high confidence.

No.	Item	Cronbach alpha
1	Overall perceived uncertainty	.883
2	E-commerce description uncertainty	.923
3	Privacy risk	.876
4	Product performance uncertainty (from e-commerce)	.620

3.4 Data Collection

This research is exploratory research on Guang Dong's e-commerce customers. Which the researcher has collected data related to study and analyzed from sources as follows;

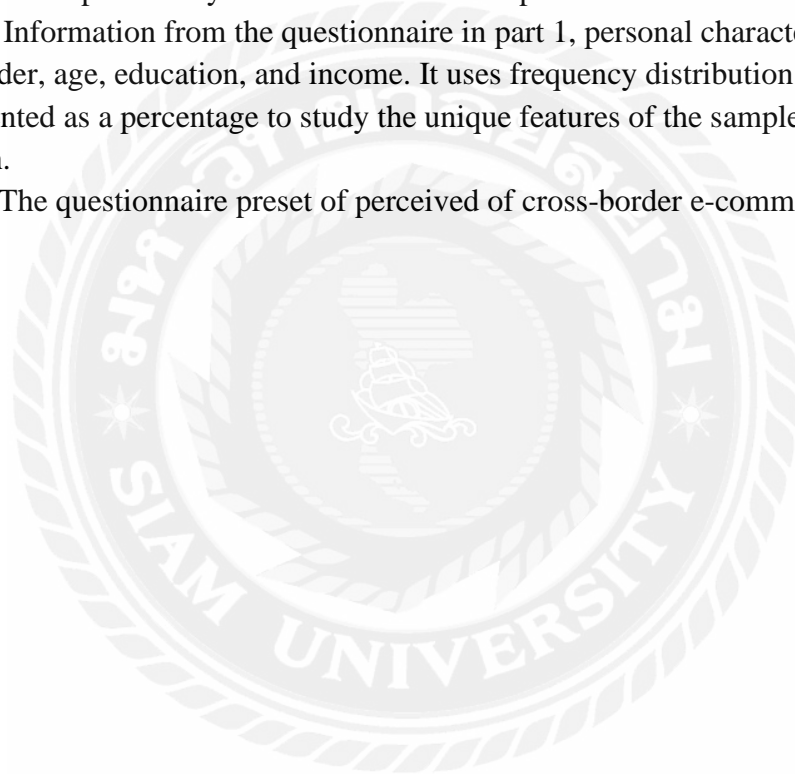
1. Primary data is data collected by using a questionnaire to collect data from 244 to crucial statistic results and analysis.

2. Secondary Data is the collection of data from studies and research from theses, academic articles, journals, Internet sources, and documents. as a guideline for conducting this research study

3.5 Data analysis

Part 1: Descriptive analysis of statistical data explains the basic information about the sample. Information from the questionnaire in part 1, personal characteristics, such as gender, age, education, and income. It uses frequency distribution analysis and is presented as a percentage to study the unique features of the samples used in the research.

Part 2: The questionnaire preset of perceived of cross-border e-commerce factors.



Chapter 4

Finding and Results

4.1 Finding

This research focuses on “The perceived cross-border electronic commerce to product performance uncertainty of electronic commerce market in Guang Dong, China” Data analysis and interpretation of data analysis results. The researcher has defined various symbols. Used in data analysis. The researcher therefore described research methodology as quantitative research method. The process is a quantitative research method using questionnaires to collect data to bring data to support the quantitative research method to obtain more quality research results with the following steps:

4.2 Study Results and data analysis

Descriptive analysis

Demographic, including gender, age, education, and income using basic statistics is the frequency distribution. The number and percentage are shown as follows:

Table 1 presents the number and percentage of personal characteristics factor data.

Item detail	volume	percentage
Male	65	26.6
Female	179	73.4
21-30 ages	113	46.3
31-40 ages	94	38.5
41-50 ages	35	14.3
Above 51 ages	2	0.8
Bachelor	197	80.7
5-10	37	15.2
More than 15	10	4.1
Below 50,000	119	48.8
50,001-100,000	90	36.9
100,001-150,000	25	10.2
Over 150,001	10	4.1
Total	244	100

Table 1, the results of data analysis on demographic information related to product performance uncertainty in e-commerce channels. There were 244 respondents in this study, classified according to the following variables:

Gender: Most respondents were 179 females, representing 73.4 percent, and 65 males, representing 26.6 percent.

Age: Most of the respondents were aged between 21 - 30 years, 113 people, representing 46.3 percent, followed by aged between 31 - 40 years, 94 people,

representing 38.5 percent ; 41-50 years 35 people with 14.3 percent, and final group is above 51 years, two people representing 0.8 percent.

Income per year: Most respondents were below 50,000 Yuan, 119 people, representing 48.8 percent. The second order is 50,001-100,000, 90 people, representing 36.9 percent. The third range is 100,001- 150,000, 25 people, representing 10.2 percent and last group is over 150,001, 10 people representing 4.1 percent.

Table 2: presents mean and SD. of the perceived of cross-border e-commerce

No.	Item	Mean	SD.
Overall perceived uncertainty			
1	purchasing products from e-commerce in China involves a high degree of uncertainty	4.31	0.75
2	the uncertainty associated with buying products from e-commerce in China is high.	4.22	0.75
3	I am exposed to many transaction uncertainties if I purchase online from e-commerce in China	4.15	0.79
E-commerce description uncertainty			
4	E-commerce in China provides sufficient information about the products featured	4.21	0.71
5	E-commerce in China provides precise information to satisfy my needs.	4.30	0.74
6	E-commerce in China provides up-to-date product information.	4.21	0.74
7	I think the information content provided by e-commerce in China is reliable.	4.21	0.75
8	E-commerce in China provides a comprehensive list of the technical specifications of the products featured	4.18	0.78
9	E-commerce in China provides information on a large number of attributes for each of the products featured	4.23	0.78
Privacy risk			
10	I am concerned that e-commerce is collecting too much personal information from me.	4.21	0.74
11	I am concerned that e-commerce will use my personal information for other purposes without my authorization.	4.24	0.74
12	I am concerned that e-commerce will share my personal information with others without my permission.	4.23	0.71
13	I am concerned that unauthorized persons (i.e.	4.25	0.72

	hackers) have access to my personal information		
14	I am concerned about the privacy of my personal information during a transaction.	4.23	0.74
Product performance uncertainty (from e-commerce)			
15	There is a high degree of product uncertainty (i.e. the product you receive may not be exactly what you want) when purchasing products online from e-commerce channels.	4.17	0.68
16	The product quality may be lower than that advertised in the online store.	4.04	0.74
17	The product appearance may be different from the product picture shown in the online store.	3.95	0.80
18	The product dimension may be different from that advertised in the online store	4.04	0.74
19	The quality of the product I bought from e-commerce store is consistent with the seller's description	3.99	0.90
20	If I bought a product from e-commerce store, I worry that the outcome would be fake	3.96	0.77

Overall perceived uncertainty

I feel that purchasing products from e-commerce in China involves a high degree of uncertainty. There are opinions at the agreed level with a mean of 4.31 and a standard deviation of 0.75. I feel the uncertainty associated with purchasing products from e-commerce in China is high has an average of 4.22, a standard deviation of 0.75, with an opinion level of agreeing. I am exposed to many transaction uncertainties if I purchase online from e-commerce in China has an average of 4.15, a standard deviation of 0.79, with an opinion level in the agreed level.

E-commerce description uncertainty

E-commerce in China provides sufficient information about the products featured - There are opinions at the agreed level with a mean of 4.21 and a standard deviation of 0.71. E-commerce in China provides precise information to satisfy my needs having an average of 4.30, a standard deviation of 0.74, with an opinion level of agreeing. E-commerce in China provides up-to-date product information has an average of 4.21, a standard deviation of 0.74, with an opinion level in the agreed level. I think the information content provided by e-commerce in China is reliable having an average of 4.21, a standard deviation of 0.75, with an opinion level of agreeing. E-commerce in China offers a comprehensive list of the technical specifications of the products featured has an average of 4.18, a standard deviation of 0.78, with an opinion level in the agreed level. E-commerce in China provides information on a large number of attributes for each of the products featured has an average of 4.23, a standard deviation of 0.78, with an opinion level in the agreed

level.

Privacy risk

I am concerned that e-commerce is collecting too much personal information from me - There are opinions at the agreed level with a mean of 4.21 and a standard deviation of 0.74. I am concerned that e-commerce will use my personal information for other purposes without my authorization has an average of 4.24, a standard deviation of 0.74, with an opinion level of agreeing. I am concerned that e-commerce will share my personal information with others without my permission has an average of 4.23, a standard deviation of 0.71, with an opinion level in the agreed level. Am concerned that unauthorized persons (i.e., hackers) have access to my personal information has an average of 4.25, a standard deviation of 0.72, with an opinion level of agreeing. I am concerned about the privacy of my personal information during a transaction has an average of 4.23, a standard deviation of 0.74, with an opinion level in the agreed level.

Product performance uncertainty (from e-commerce)

There is a high degree of product uncertainty when purchasing products online from e-commerce channels. There are opinions at the agreed level with a mean of 4.17 and a standard deviation of 0.68. The product quality may be lower than that advertised in the online store has mean 4.04, a standard deviation of 0.74, with an opinion level of agreeing. The product appearance average is different from the product pictures shown in the online store has an average of 3.95, a standard deviation of 0.80, with an opinion level of agreement. The product dimension may differ from that advertised in the online store having an average of 4.04, a standard deviation of 0.74, with an opinion level of agreeing. The quality of the product I bought from e-commerce store is consistent with the seller's description was an average of 3.99, a standard deviation of 0.90, with a level of opinion in the story of agreement. If I bought a product from e-commerce store, I worry that the outcome would be fake was an average of 3.96, a standard deviation of 0.77, with a level of opinion in the story of agreement.

4.3 Hypothesis testing

H1: Gender is related to uncertainty of e-commerce in China factors.

The statistics used in the analysis Independent T-test was used to test the hypothesis using a confidence level of 95% by testing the variance in each group first. If each group variance is equal Test the view from the F-test table and if the contact in each group is not identical, which will reject the primary idea (H0) if Sig. is less than 0.05 and if any belief rejects the primary view (H0) and accepts the secondary hypothesis (H1).

The variance of each group was examined first by using Levene's test, which made the following assumptions.

H0: The variance of each group is the same.

H1: The variance of each group is not equal.

The variance test results using a 95% confidence level will reject the primary hypothesis (H0) and accept the secondary hypothesis (H1) if the Sig. Value is less than 0.05. The test results are shown in Table 3.

Table 3 Independent t-test result

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Overall perceived uncertainty	3.781	.053	2.668	205	.008*	.25350	.09502
E-commerce description uncertainty	4.501	.035	3.801	178.02	.000*	.32113	.08448
Privacy risk	0.034	.845	.113	205	.910	.007733	.06465
Product performance uncertainty	8.912	.003	3.623	172.93	.000*	.28761	.07919

From Table 3, the results of testing the variance of each group of average from gender that there is no significance for an average mean. Levene's Test for Equality of Variances with a Significant is over 0.05; that is, accepting the primary hypothesis (H0) and rejecting the secondary theory (H1) means that the variance of each group of gender is similar results. That means gender affects overall perceived uncertainty, e-commerce description uncertainty, and product performance uncertainty with 0.05 significant levels, except privacy risk.

H2: Ages effect on uncertainty of e-commerce in China factors

The statistics used in the analysis One-Way Analysis of Variance (One Way ANOVA) was used to test the hypothesis using a confidence level of 95% by testing the variance in each group first. If each group's variance is equal Test the view from the F-test table and if the conflict in each group is not similar. Let's test the hypothesis from the table. If Sig. is less than 0.05 and any belief rejects the primary idea (H0) and accepts the secondary hypothesis (H1) with Scheffe to determine which pairs of means were different at the statistical significance level 0.05.

The variance of each group was examined first by using Levene's test, which made the following assumptions.

H0: The variance of each group is the same.

H1: The variance of each group is not equal.

The variance test results using a 95% confidence level will reject the primary hypothesis (H0) and accept the secondary view (H1) if the Sig. Value is less than 0.05. The test results are shown in Table 4.

Table 4 One-way ANOVA result for Hypothesis 2

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Overall perceived uncertainty	Between Groups	3.677	3	1.226	2.638	.050
	Within Groups	111.512	240	.465		
	Total	115.189	243			
E-commerce description uncertainty	Between Groups	5.609	3	1.870	4.826	.003*
	Within Groups	92.977	240	.387		
	Total	98.586	243			
Privacy risk	Between Groups	.621	3	.207	1.001	.393
	Within Groups	49.656	240	.207		
	Total	50.277	243			
Product performance uncertainty	Between Groups	5.065	3	1.688	4.959	.002*
	Within Groups	81.712	240	.340		
	Total	86.778	243			

From Table 4, the results of testing the variance of each group of average from ages that there is no significance for an average mean. The Levene's Test for Equality of Variances with a Significant is over 0.05, that is, accepting the primary hypothesis (H0) and rejecting the secondary theory (H1) means that the variance of each group's average age was similar outcome between groups. That mean age affects, e-commerce description uncertainty and product performance uncertainty with 0.05 significant levels, except overall perceived uncertainty and privacy risk.

H3: background of study effect on uncertainty of e-commerce in China factors.

The statistics used in the analysis One-Way Analysis of Variance (One Way ANOVA) was used to test the hypothesis using a confidence level of 95% by testing the variance in each group first. If each group's variance is equal Test the view from the F-test table and if the conflict in each group is not similar. Let's test the theory from the table. If Sig. is less than 0.05 and any belief rejects the primary idea (H0) and accepts the secondary hypothesis (H1) with Scheffe to determine which pairs of means were different at the statistical significance level 0.05.

The variance of each group was examined first by using Levene's test, which made the following assumptions.

H0: The variance of each group is the same.

H1: The variance of each group is not equal.

The variance test results using a 95% confidence level will reject the primary hypothesis (H0) and accept the secondary hypothesis (H1) if the Sig. Value is less than 0.05. The test results are shown in Table 5.

Table 5: One-way ANOVA result for Hypothesis 3

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Overall perceived uncertainty	Between Groups	3.079	2	1.540	3.310	.038*
	Within Groups	112.110	241	.465		
	Total	115.189	243			
E-commerce description uncertainty	Between Groups	3.357	2	1.678	4.248	.015*
	Within Groups	95.229	241	.395		
	Total	98.586	243			
Privacy risk	Between Groups	3.097	2	1.549	4.460	.013*
	Within Groups	83.680	241	.347		
	Total	86.778	243			
Product performance uncertainty	Between Groups	.467	2	.234	1.130	.325
	Within Groups	49.810	241	.207		
	Total	50.277	243			

From Table 5, the results of testing the variance of each group of average from background of study that there is no significance for an average mean. The Levene's Test for Equality of Variances with a Significant is over 0.05; that is, accepting the primary hypothesis (H0) and rejecting the secondary theory (H1) means that the variance of each group year in job experience is similar results. That mean age affects overall perceived uncertainty, e-commerce description uncertainty, and privacy risk with 0.05 significant levels, except product performance uncertainty.

H4: Income of informant's effect on uncertainty of e-commerce in China factors.

The statistics used in the analysis One-Way Analysis of Variance (One Way ANOVA) was used to test the hypothesis using a confidence level of 95% by testing the variance in each group first. If each group's variance is equal Test the view from the F-test table and if the conflict in each group is not similar. Let's test the theory from the table. If Sig. is less than 0.05 and any belief rejects the primary idea (H0) and accepts the secondary hypothesis (H1) with Schaeffer to determine which pairs of means were different at the statistical significance level 0.05.

The variance of each group was examined first by using Levene's test, which made the following assumptions.

H0: The variance of each group is the same.

H1: The variance of each group is not equal.

The variance test results using a 95% confidence level will reject the primary hypothesis (H0) and accept the secondary hypothesis (H1) if the Sig. Value is less than 0.05. The test results are shown in Table 6.

Table 6: One-way ANOVA result for Hypothesis 4

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Overall perceived uncertainty	Between Groups	5.171	3	1.724	3.760	.011*
	Within Groups	110.018	240	.458		
	Total	115.189	243			
E-commerce description uncertainty	Between Groups	4.925	3	1.642	4.207	.006*
	Within Groups	93.661	240	.390		
	Total	98.586	243			
Privacy risk	Between Groups	2.623	3	.874	2.494	.061
	Within Groups	84.155	240	.351		
	Total	86.778	243			
Product performance uncertainty	Between Groups	.523	3	.174	.841	.472
	Within Groups	49.754	240	.207		
	Total	50.277	243			

From Table 6, the results of testing the variance of each group of average from gender that there is no significance for an average mean. The Levene's Test for Equality of Variances with a Significant is over 0.05; that is, accepting the primary hypothesis (H0) and rejecting the secondary theory (H1) means that the variance of each group year in job experience is similar results. That mean age affects overall perceived uncertainty and e-commerce description uncertainty with 0.05 significant levels, except privacy risk and product performance uncertainty

4.4 Multiple Regression

Multiple regression is a statistical technique to analyze the relationship between a dependent variable and two or more independent variables. It extends the concept of simple linear regression, which examines the relationship between a dependent variable and a single independent variable, by incorporating multiple predictors. In multiple regression, the goal is to determine how changes in the independent variables are associated with changes in the dependent variable, while considering the potential effects of other predictors. It allows for examining the combined impact of several variables on the outcome variable, providing a more comprehensive understanding of their relationships.

Hypothesis 5: Overall perceived uncertainty has direct influence on Product performance uncertainty in Chinese e-commerce

H₀: Overall perceived uncertainty has no direct effect on Product performance uncertainty in Chinese e-commerce

H₁: Overall perceived uncertainty has direct influence on Product performance uncertainty in Chinese e-commerce

Hypothesis 6: E-commerce description uncertainty has direct influence on Product performance uncertainty in Chinese e-commerce

H₀: E-commerce description uncertainty has no direct influence on Product performance uncertainty in Chinese e-commerce

H₁: E-commerce description uncertainty has direct influence on Product performance uncertainty in Chinese e-commerce

Hypothesis 7: Privacy risk has direct influence on Product performance uncertainty in Chinese e-commerce

H₀: Privacy risk has no direct influence on Product performance uncertainty in Chinese e-commerce

H₁: Privacy risk has direct impact on Product performance uncertainty in Chinese e-commerce

Table 7 The perceived of cross-border electronic commerce to product performance uncertainty of electronic commerce market

Independent variable	B	S.E	β	t	Sig
Constant	2.844	0.203		14.040	.000
Overall perceived uncertainty (X ₁)	-0.020	0.062	-0.030	-.313	.754
E-commerce description uncertainty (X ₂)	0.028	0.083	0.40	.343	.732
Privacy risk (X ₃)	0.270	0.078	0.355	3.460*	.001
F = 12.470*		Sig = .000			
R = 0.367		Adjusted R ² = 0.124			
R ² = 0.135		S.E. = 0.425			

**Significant at .05

From Table 7, it was found that informants perceive cross-border electronic commerce products as having Overall perceived uncertainty (X₁), E-commerce description uncertainty (X₂), and Privacy risk (X₃). These variables had a statistically significant influence only on Privacy risk at 0.05, respectively. The product performance uncertainty was 12.40% (R²) with the error in estimating privacy risk was 0.367. Thus, privacy risk has positively correlated with product performance uncertainty.

As for the teachers who applied all technic through online learning, when considering the standardized coefficient (β), the variable most influencing the product performance uncertainty was privacy risk ($\beta = 0.355$).

4.5 Conclusion

This study applied descriptive and inferential analysis in demographic statistics and relationship among factors directed cross-border e-commerce. The model alleviates the contradiction among the production enterprises, logistics carriers and overseas customers in the park, and eliminates the bottleneck restricting the development of cross-border e-commerce in China to a certain extent. A multi-

objective overseas of cross-border e-commerce international cross-border electronic commerce logistics network is established and the corresponding dynamic multi-objective logistics network optimization problem is solved, which brings new methods and new ideas for more rational planning and layout of the complex logistics system in cross-border electronic commerce. The current international economic development is concerned, countries have paid considerable attention to developing cross-border electronic commerce economies. However, some must be improved in the operation and development process. However, this further shows that cross-border electronic commerce economy has a broader development prospect and a brighter future.



Chapter 5

Conclusion and Recommendation

5.1 Conclusion

With the continuous development of my country's current cross-border e-commerce, for cross-border logistics, it is necessary to keep up with the recent development direction and pace of cross-border e-commerce. To enable the coordinated development of cross-border logistics, the relevant staff In the process of actual work, it is necessary to coordinate cross-border logistics and cross-border e-commerce to construct a unified development model to ensure that the development level of cross-border logistics can be effectively improved. The relevant staff is in the process of actual work. To achieve effective coordination from the perspective of the sharing of tangible resources and strategic coordination, cross-border logistics needs to develop synergistically with the development of cross-border e-commerce, use cross-border e-commerce to improve its strategic growth, and give full play to The advantages of network technology and hardware resources can achieve a strategic cooperation situation, and for logistics companies, the supply chain must be adjusted and optimized appropriately, so that the development level and development quality of cross-border logistics can be effectively improved.

In the actual work process, with the continuous development of world network technology and information technology, cross-border logistics must integrate the current development direction of cross-border e-commerce and develop mobile logistics services to cater to the development trend and needs of cross-border e-commerce. It can not only meet the needs and requirements of cross-border logistics for the development of cross-border e-commerce, but also build a new development model for the continuous and vigorous development of cross-border logistics, effectively integrate resources, and achieve a win-win situation. Regarding supply and cross-border e-commerce, use information and network technology to optimize and adjust packaging and transportation routes. Cross-border e-commerce and logistics should carry out in-depth cooperation and exchanges to promote the coordinated development of the two. Under the influence of this background, it can not only meet the logistics needs and requirements of cross-border e-commerce, but also effectively reduce and reduce the time and cost of the entire logistics, minimize the occurrence of damage to the goods during transportation, and promote cross-border logistics. The joint development of cross-border e-commerce is also conducive to improving the level of social and economic development in my country.

5.2 Recommendation

1. The results show customers' information has significant impact on uncertain behavior factors in making decide decisions on cross-border e-commerce. The study results suggest that the marketing management characteristics were more flexible than average for stores and social network businesses. The advantage of a flexible system is that it ensures better market outcomes of undertakings. Furthermore, e-commerce in China will demonstrate competitiveness and support to others in Chinese e-commerce markets. Competitiveness is the ability to accomplish a company's goals to compete with other competitors.

2. The behavior for risk perception in thought buyer behavior was at the agreed level, indicating that the samples had different opinions—The details of privacy risk behavior. Ideas From the sample group, it was found that can apply that idea in operation with support from the organization. The aspect of this thought executive behavior to express opinions on development information technology systems to create security systems.

3. Customers are interested in the way of life on the topic buying in e-commerce style with different favorites, giving importance to the factors in deciding to choose an application or system that makes them feel confident and protect their information. Nowadays, there are many more e-commerce applications open for service; although each e-commerce has provided a unique promotion, other areas of service are similar. Service users therefore ignore differences privacy and uncertainty data that can be leaked outside. The e-commerce business should give attention to protecting consumer data and management systems to develop business owner perception as s common knowledge of online community.

5.3 Future research

1. The study should explore other factors related to the decision to use cross-border e-commerce such as repeat use, loyalty, etc., to be applied in the following research to make it more interesting.

2. The educational attitude of unusual perceived on uncertain situation of cross border e-commerce factors in deciding this business must survey on broader scope by expanding research areas to other regions. The size of study is essential for this research. The rural and suburban provinces will be different in individual behavior. The spending on e-commerce will create differences between these studies.

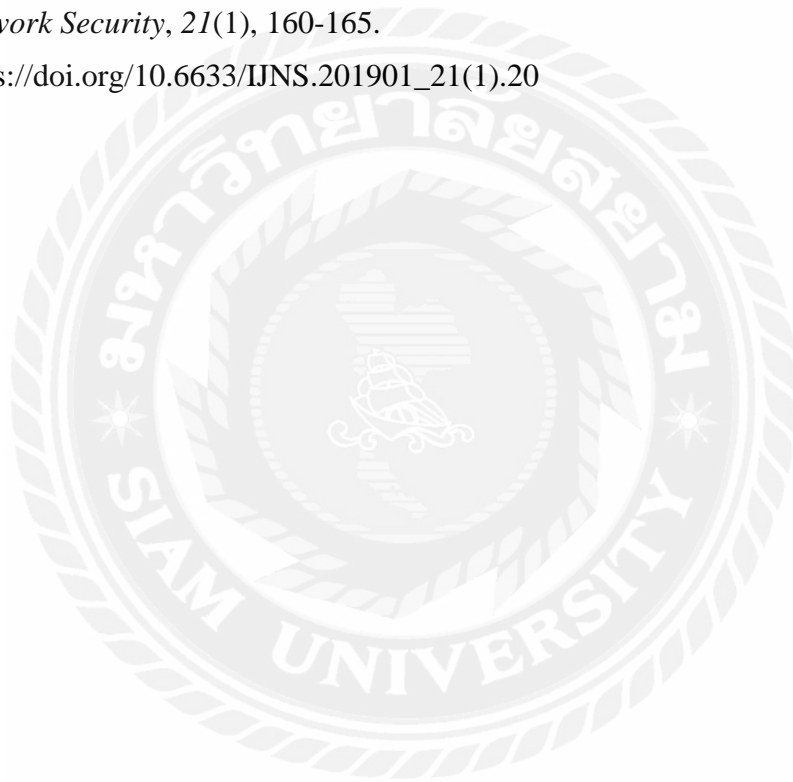
3. The study other types of e-commerce such as foreign chain e-commerce or well-known brand was taken part in further analyze the market share.

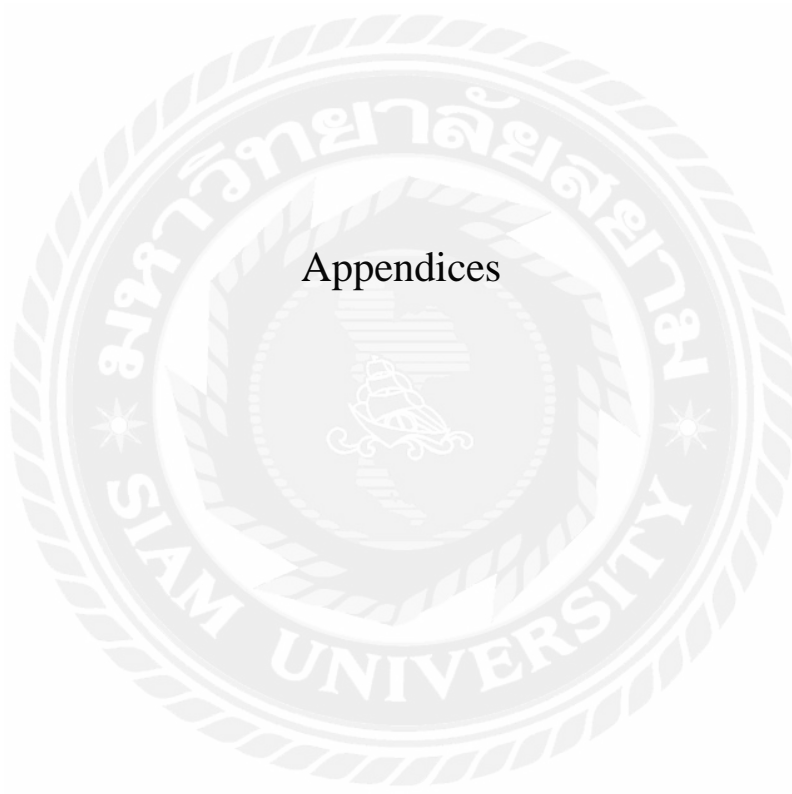
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The Perceived Of Cross-Border Electronic Commerce To Product Performance Uncertainty Of Electronic Commerce Market In Guang Dong, China

To Questionnaire Respondent

This questionnaire is divided into 2 parts. The first part deals with characteristics of dual system and organizational structures. The second part focuses on demographic and relational factors. The information you have shared with the researcher today will be for the use of this study and for academic purposes only. The personal information will be kept confidential. The use of other information you provide will be for the purpose of developing the education innovation system in any participating private university.

I would like to thank you for your respond, if you shall need further information or there is anything we can do to assist you to complete or improve this questionnaire, please do not hesitate to contact me.

Master of Business Administration Student
Siam University

Part 1 Demographic information

Remark: Please choose by using ✓ in or fill information in the blank.

- | | | |
|---------------------|---|--|
| 1. Gender | <input type="checkbox"/> Male | <input type="checkbox"/> Female |
| 2. Age | <input type="checkbox"/> 1. 21-30 ages | <input type="checkbox"/> 2. 31-40 ages |
| | <input type="checkbox"/> 3. 41-50 ages | <input type="checkbox"/> 4. Above 51 ages |
| 3. Education | <input type="checkbox"/> 1. Bachelor | <input type="checkbox"/> 2. 5-10 |
| | <input type="checkbox"/> 3. More than 15 | |
| 4. Income | <input type="checkbox"/> 1. Below 50,000 | <input type="checkbox"/> 2. 50,001-100,000 |
| | <input type="checkbox"/> 3. 100,001-150,000 | <input type="checkbox"/> 4. Over 150,001 |

Part 2 Relational factors

The questionnaire used Likert scale, ranging from 1 to 5 in which 1 = Strongly disagree/ 3 = neutral / 5 = Strongly agree

item	Your Manager/Executive.....	Alternative Answer				
		1	2	3	4	5
1.1	Overall perceived uncertainty					
1	purchasing products from e-commerce in China involves a high degree of uncertainty					
2	the uncertainty associated with buying products from e-commerce in China is high.					
3	I am exposed to many transaction uncertainties if I purchase online from e-commerce in China					
1.2	E-commerce description uncertainty					
4	E-commerce in China provides sufficient information about the products featured					
5	E-commerce in China provides precise information to satisfy my needs.					
6	E-commerce in China provides up-to-date product information.					
7	I think the information content provided by e-commerce in China is reliable.					
8	E-commerce in China provides a comprehensive list of the technical specifications of the products featured					
9	E-commerce in China provides information on a large number of attributes for each of the products featured					
1.3	Privacy risk					
10	I am concerned that e-commerce is collecting too much personal information from me.					
11	I am concerned that e-commerce will use my personal information for other purposes without my authorization.					
12	I am concerned that e-commerce will share my personal information with others without my permission.					
13	I am concerned that unauthorized persons (i.e. hackers) have access to my personal information					
14	I am concerned about the privacy of my personal information during a transaction.					
1.4	Product performance uncertainty (from e-commerce)					

item	Your Manager/Executive.....	Alternative Answer				
		1	2	3	4	5
15	There is a high degree of product uncertainty (i.e. the product you receive may not be exactly what you want) when purchasing products online from e-commerce channels.					
16	The product quality may be lower than that advertised in the online store.					
17	The product appearance may be different from the product picture shown in the online store.					
18	The product dimension may be different from that advertised in the online store					
19	The quality of the product I bought from e-commerce store is consistent with the seller's description					
20	If I bought a product from e-commerce store, I worry that the outcome would be fake					

Thank you for your corporation on this study

