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# E-commerce and retail in China

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2016 Laurea

Laurea University of Applied Sciences

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Gao Ge  
Degree Programme in  
Bachelor's Thesis  
Month, 2016

Laurea University of Applied Sciences  
Degree Programme in Business Management  
Bachelor's Thesis

Abstract

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Year	2016	Pages	30
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The purpose of this thesis project was to study the marketing and strategy of the China's largest electric commercial enterprises JD.com, and the small-to-medium-sized retail company, Wuhan Da Shi Trade Company Ltd. In order to find the weakness of e-commerce and make a plan for the chosen partner company to improve their strategy. The improvement tasks are moving their emphasis from low-end electronic products to high-end electronic products and focusing more on value-added services than products. E-commerce includes communications perspective, business process perspective, service perspective, and online perspective. A questionnaire was used to gather data. The main results of this thesis are that the company should change its products portfolio and focus more on services than products. This outcome is based on an analysis of the data from the survey.

Keywords: E-commerce, Retailers, online shop

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## 1 Introduction

In this information age, there is a continuously rapid increase in the number of internet users. It is already a fact that the internet is transforming the world's economy.

Compared to European and American countries, China is more suitable for e-commerce. Because China has a population density, traffic inconvenience, retail underdevelopment, a huge consumer market and rising household incomes for e-business to better meet the needs of Chinese customers, which reflects its great value. The next 5 - 10 years, China's electricity supplier industry how to develop it? Here is foreseen in just ten trends. (Finance.sina, 2016). Yugang claim that China's e-commerce will continue to average 29% compound annual growth rate of rapid development, more than Europe and other advanced countries in the next five years. This is mainly due to the following factors: a) the rapid increase Internet penetration, especially mobile Internet; b) the growing popularity of online payment; c) improve the coverage of the logistics network and distribution services; rise d) e-commerce businesses and intense competition; e) to improve public acceptance of online shopping. (Finance.sina, 2016).

In contrast, with the development of e-commerce, the traditional commerce has been threatened. A lot of retailers and agents have been suffering the high cost and low profit. Many of them are eventually go bankrupt.

The author is motivated to study the e-business and retail business of B2C in China. This introduction part will be followed by the theoretical backgrounds. These include in-depth analysis of e-commerce, retails, and SMEs. These topics are discussed in chapters 2 and 3 respectively. Chapter 5 contains the current situation analysis of the target company and as well as the results and conclusions drawn.

### 1.1 Aim of study

This thesis topic aims to study the marketing and strategy of the China's largest electric commercial enterprises JD.com and the SMEs retail company Wuhan Da Shi Trade Company Ltd. In order to find the weakness of e-commerce and make a plan for the chosen partner company to improve their strategy.

### 1.2 Research questions

The main research question is to find the weakness of China's largest electric commercial enterprises JD.com and make a plan for the chosen partner company to improve their marketing

strategy. In order to working on this research question, it is essential to study what is e-commerce and e-commerce strategy.

### 1.3 Company presentation

Wuhan Da Shi Trade Company Ltd is SME (Small and Medium Enterprise) which is set up in 2002. There are 20 employers and the turnover is 1 million yuan. Their slogan is: Focus on customers' needs sincerely; pursue the satisfaction of customer with wisdom.

#### 1.3.1 Business areas and organizational structure

The business areas of the company are electronic products and related services. The capital of Wuhan Da Shi Trade Company Limited is 500 million yuan. And the information management and shareholding structure have been adopted. The company composed by four departments that are finance department, marketing department, network engineering, product design services department.

Finance department includes one general ledger accounting, two accountings that are responsible for business-related units, and 1 cashier. They are all responsible for assets, capital, budgeting, financing and management of the contract. Besides, they are also in charge of the file storage, tissue collection, auditing expenses, tax planning, financial analysis, investment analysis, industry tracking, etc.

Marketing department involves one inside sales, two sales, and one product manager. They are all in charge of customer resource management, market expansion (including the expansion of dealers, the development and follow-up of direct customer, etc.), dunning and returning a visit to the customer, dealing with the external affairs which are related to the market expansion, and marketing planning process.

Network engineering and product design services contain 13 staff. They are responsible for construction, product design, product installation, etc. Providing technical support to the marketing department, in order to coordinate the market development work and then complete pre and after sales service.

#### 1.3.2 Current situation and problems

In recent years, the company focuses on reconstructing the care equipment (nursing carts, medical car, etc.) in the hospital, in order to increase the efficiency and the service level. They got 2 big deals from Wuhan University Renmin Hospital and Guangzhou military hospital in Wuhan. However, there is a potential problem which is the products they sell are cheaper

on JD.com (one of the largest B2C e-commerce company in China). With the widely spread of online shopping, they have a great impact on retailers. Many people choose to shop online instead of shopping in store. Thus, many retailers are suffering in this situation and some go bankrupt, not expecting Wuhan Da Shi Trade Company Ltd.

## 2 Theoretical background

### 2.1 Retail

The sale of products to the public in comparatively small quantities for use or consumption instead of resale (Oxford Dictionaries). Ayers and Odegaard (2008) refer it as 'the final sales to mostly nonbusiness customers or end-users often called consumers'.

### 2.2 E-commerce

Many commentators believe that e-commerce is all electronically mediated transactions between an organization and any third party it deals with (Chaffey, 2004). Kalakota and Whinston (1997) claim that there are four perspective of e-commerce. They are communications perspective, business process perspective, service perspective, and online perspective respectively.

#### 2.2.1 E-commerce strategy

Rayport and Jaworski (2001) claim that there are seven e-commerce strategies. They are framing the market opportunity, business model, customer interface, market communications and branding, implementation, metrics, and valuation. Framing the market opportunity answers the question "Where will I play?" The authors considered that the potential business customers play a significant role in e-commerce, while traditional market focuses more on customers and competitors. This reveals that retail companies would lose their current customers when facing the competition with e-commerce. Business model address the question "How will I win?" There are four selections of the business model, value proposition, or "clusters" to the segment, supply specific product, benefits provided by the resource system, and pursuing financial model. Customer interface answers the question "How will consumers become aware of my business?" The customer interface indicates the screen-to-customer interface. It contains outward appearance and sense, content, transaction ability, and community building aspects. Market communications believe that the firms utilize all of the online and offline routines to attract the consumers. As for branding, the logo or slogan of the firm would influence the meaning of the brand. Brand equity catches all of the property related to the brand, therefore offering value for both consumers and the company. These answer the question "How do I attract and retain customers?" Once a strategy is approved above, the company must decide the way of implementation. The company should focus on how to serve

the consumer innovatively. Metrics involve a reflection and financial metrics that map onto the complete strategy formulation procedure. Valuation refers forecasting the market value of New Economy businesses. It addresses the question “How do we create value for stakeholders or shareholders?”

### 3 Research setting

#### 3.1 Background of the largest e-commercial enterprises

According to third-party market research firm iResearch data, Jingdong (JD.com) is China's largest import and electric commercial enterprises. First quarter 2015 share of China's self-style B2C electricity supplier market was 56.3%. In 2014, Jingdong market turnover reached 260.2 billion yuan, net income of 115 billion yuan. The second quarter of 2015, Jingdong market turnover reached 114.5 billion yuan, an increase of 82%; net income reached 45.9 billion yuan, an increase of 61%.

Currently, the Group has Jingdong Mall, Jingdong finance, patted, Jingdong intelligent, Jingdong home and overseas business. May 2014, Jingdong officially listed on the NASDAQ stock exchange, the United States is China's first successful large-scale comprehensive listing of electronic business platform, and among the world's top ten Internet companies list. July 2015, Jingdong selected because of its high growth NASDAQ-100 Index and the NASDAQ 100 Equal Weighted Index, the Nasdaq 100 index to become one of only two Chinese Internet companies.

Jingdong is committed to providing consumers with a pleasant online shopping experience. Through rich content, user-friendly website ([www.jd.com](http://www.jd.com)) and mobile clients, Jingdong at competitive prices, providing goods and services category with rich and excellent quality, fast and reliable way to reach consumers, and offer flexible payment. In addition, Jingdong also for third-party sellers offer online sales platform and a series of value-added logistics services.

Jingdong provide rich quality of goods, category include: computers, mobile phones and other digital products, home appliances, auto parts, clothing and footwear, luxury goods (such as: handbags, watches and jewelry), home and household products, cosmetics and other personal care, food and nutrition, books, electronic books, music, movies and other media products, baby products and toys, sports and fitness equipment and virtual goods (such as: domestic air tickets, hotel reservations, etc.).



Jingdong has China's largest electricity supplier industry storage facilities. As of June 30, 2015, the country has seven Jingdong logistics center in the country 44-city operations 166 large warehouse, with 4,142 distribution stations and from mentioning the point, covering 2043 counties. Jingdong professional delivery team can provide a range of professional services to consumers, such as: limit of 211, the next day, and at night with a speed up to three hours, GIS real-time package tracking, sale 100, as well as fast return home appliance installation services, protect users to enjoy excellent and comprehensive logistics and complete "end to end" shopping experience.

## 3.2 Market problems of e-commerce

### 3.2.1 Credit problems need to be resolved

According to Finance Sina (2014), E-commerce in China is still in its infancy. The false information and deceptive phenomena still exist. There are many low-quality and fake products. The customers are lack confidence for online shopping because they cannot see the physical products.

### 3.2.2 Lack of e-commerce professionals

According to Finance Sina (2014), compound talent is the foundation for sustainable development of the Internet business. Although in recent years our country focus on fostering e-commerce talent, it is still not enough. After all, a mature technology needs a long time to accumulate experience. Network security is concerned as a secure e-commerce system, the first infrastructure security to prevent hackers break into networks to steal information, followed by trade secrets and personal privacy protection. For China, there is lot of hidden trouble in safety of network.

### 3.2.3 E-commerce lack of supervision

According to a website of data reported in the online shopping consumer satisfaction rate was 64.3%, of which consumers are not satisfied with the result in terms of false propaganda, service and courier services, including business. And when consumers encounter various forms of online fraud, only 23% of consumers chose to safeguard their rights, while the remaining 77% of consumers chose silence. For the rights of consumers in terms of choice, which has 3 percent of consumers chose the complaint to the shopping site. The complaint rate has the effect of most regulatory agencies established by the Government received less than 10%. In such statistics, we can easily find the e-commerce network platform does change the traditional consumption patterns of consumers, but also a new type of consumption structure adjustment, but consumers are not satisfied due to the increase of factors, which covered a large number of negative emotions bound for the future development of e-commerce is worri-

some. Besides, consumers have to spend a lot of time in this process of rights. This is also an important factor that influence consumer rights protection (Finance Sina, 2014).

#### 4 Methodology and data

There are quantitative and qualitative methods to do the research. In order to solve this problem and help the chosen partner company to overcome obstacles, getting to know the competitor is initial step. In this thesis, data is collected by quantitative method that is questionnaire. Then, the data will be analyzed by qualitative method, which is chi-square test analysis.

##### 4.1 Questionnaire

I made a questionnaire through wj.qq.com which is a Chinese survey website, in order to find weakness of e-commerce by analyzing the consumer behavior. The questionnaire that I share to my friends, my families and their colleagues for collecting data is in Chinese. I also made an English version, which is shown in Appendix 1.

##### 4.2 Data of questionnaire

After a few weeks, I have got 95 answers about this questionnaire. Here are the results. Figure 1 shows that female is 61.1% of the total and the male is 38.9% of the total. Figure 2 represents that our respondents are mainly between 18-25. This group occupies 77.9%. 25-35 groups take up 18.9%. 35-65 groups take up 3.2% of the total. Figure 3 reveals that 48.4% of our respondents are student. 15.8% of respondents are white-collar and 9.5% are blue-collar. Civil servant accounts for 2.1%. Freelance accounts for 9.5%. And 15.8% respondents choose others. Some of them are teacher, pilot, chef, coffee maker, and owner of a company. Figure 4 shows that 31.6% respondents' monthly incomes are less than 1000CNY. 41.1% of their monthly incomes are between 1000-4000CNY. 14.7% of them are between 4000-7000CNY. 5.3% of them are between 7000-10,000CNY. 4.2% of them are between 10,000-30,000CNY. And 1.1% of them are above 50,000CNY. As the pie chart (Figure 5) shown that 100% of respondents have experienced online shopping. The reason why they choose to shopping online can be revealed by Figure 6. 85.3% of them claim that online shopping is fast and convenience. 66.3% of them believe that there is more species and choices shopping online. 54.7% of them think the price would cheaper online. 38.9% of them choose online shopping because they could not find the products in store. Only one person claims that he (she) does not have time to go to store. When it comes to the reason of the most satisfied online shopping experience, they are shown by bar chart (Figure 7). 74.7% and 62.1% of them claim that the reasons are homogeneity of products and cheap price respectively. 60% of them consider that the reason is the delivery is fast. 35.8% and 30.5% of them believe that the reasons are good custom-

er services and good post-sales service respectively. In contrast, the reasons of the most terrible online shopping experience are represented by bar chart (Figure 8). 83.2% of respondents claim that the reason is discordance of products. 47.4% of them feel that the delivery is slow. 29.5% and 25.3% of them hold that the reasons are bad customer services and bad post-sales service respectively. 15.8% of respondents claim that they are cheated due to the internet fraud. Only one person chose others, he (she) claims that the online shop disappear after he (she) paid. As for the products that are not suitable for online shopping (Figure 9), 45.3% of them think that jewelry, glasses, and watch are not suitable for online shopping. 40% of them vote cosmetics, skin care, and health products. 36.8% of them choose flowers and pets. Car, second-hand car, and auto accessories account for the same percentage as flowers and pets. 24.2% of them vote appliances, digital product, and mobile phone. Estate, decoration, and building materials occupy the same percentage. 26.3% of them claim that wealth investment products and insurance are not suitable for online shopping. 22.1% of them vote motherhood, maternity, and toys. 23.2% of them choose food, alcohol, fresh food, and special local products. 21.1% of respondents choose clothes. 16.8% of them think computers and office supplies are not suitable for online shopping. 11.6% of them choose shoes, suitcase, and fitting. 4.2% of them vote sports, outdoor, and musical instrument. Lottery ticket, top-up service, and ticketing takes up the same percentage. 7.4% of them choose others. They claim that all of those species are suitable for online shopping. And one person claims that medicine is not suitable for online shopping.

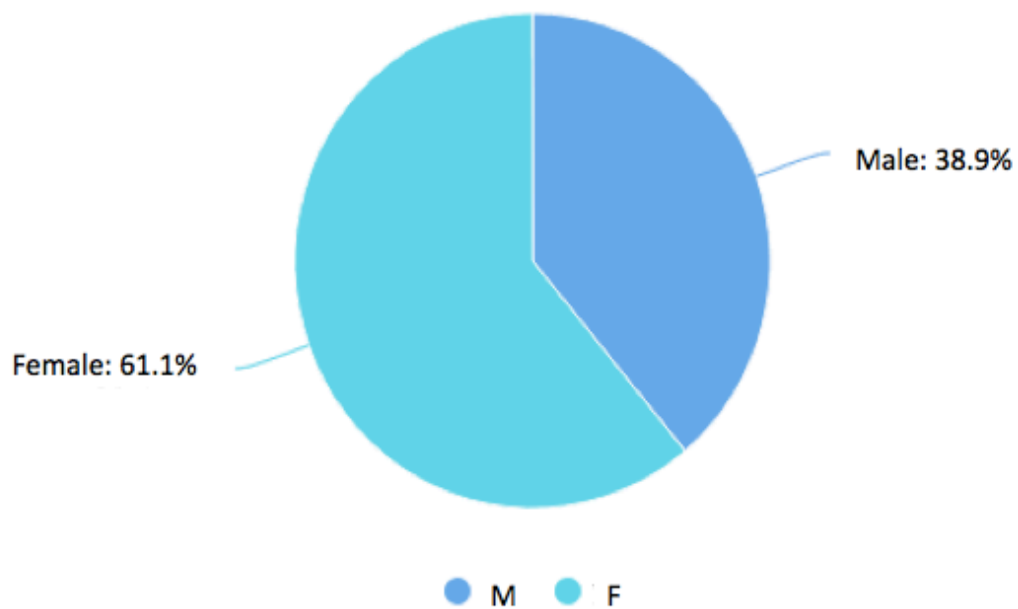


Figure 1. The ratio of male and female

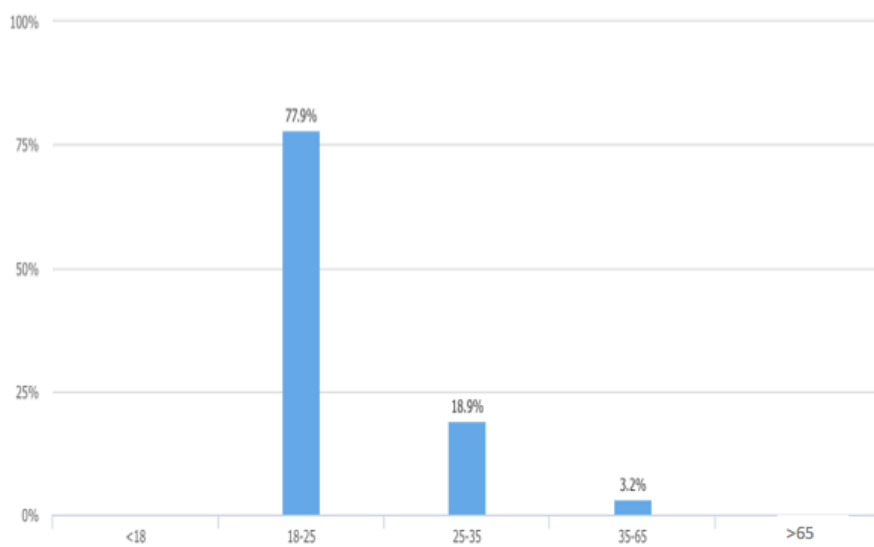


Figure 2. The percentage of age group

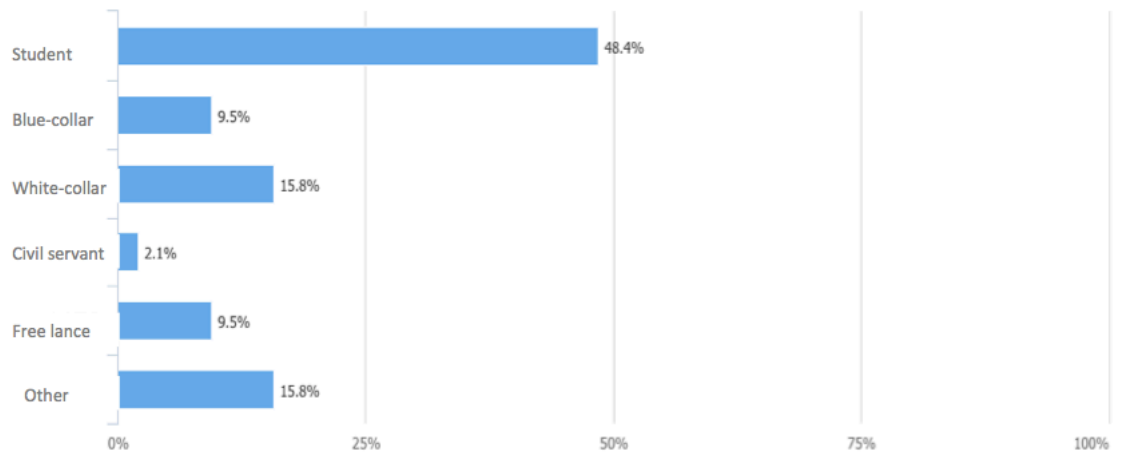


Figure 3. The percentage of occupation

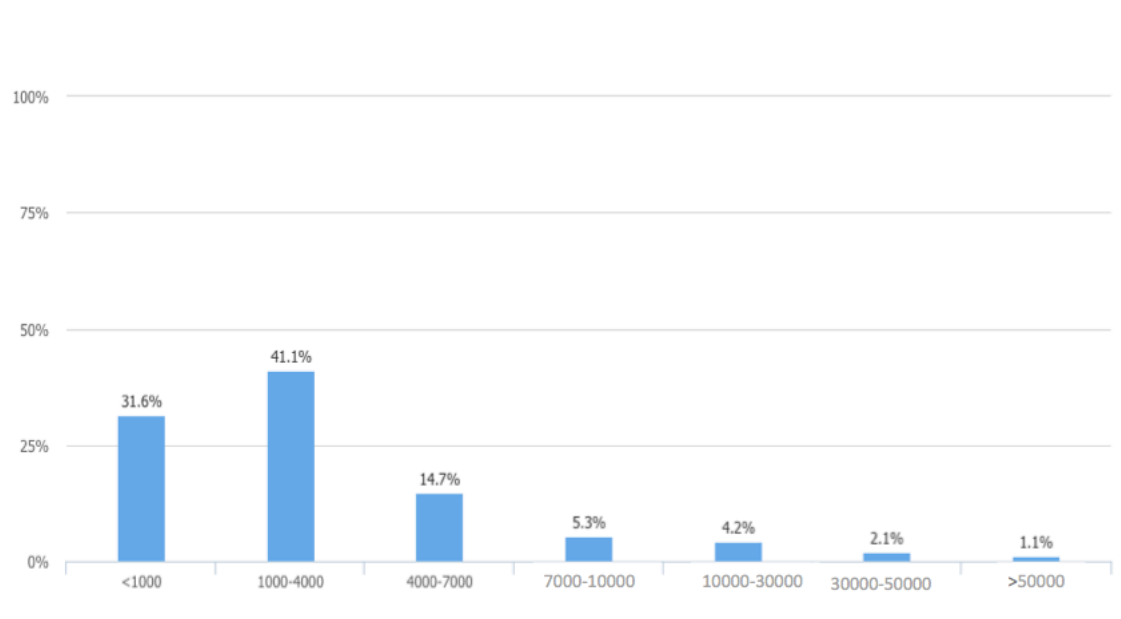


Figure 4. The percentage of monthly income

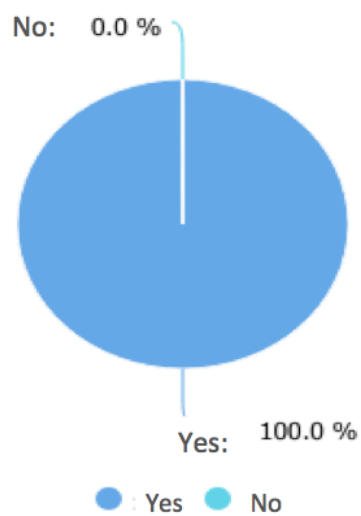


Figure 5. The ratio of people who shopping online

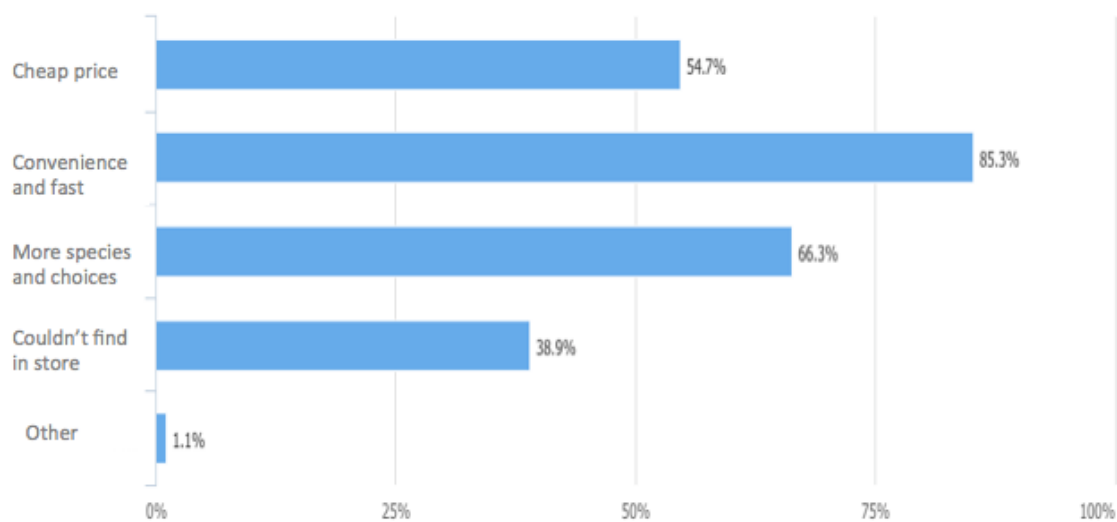


Figure 6. The reason why people shopping online

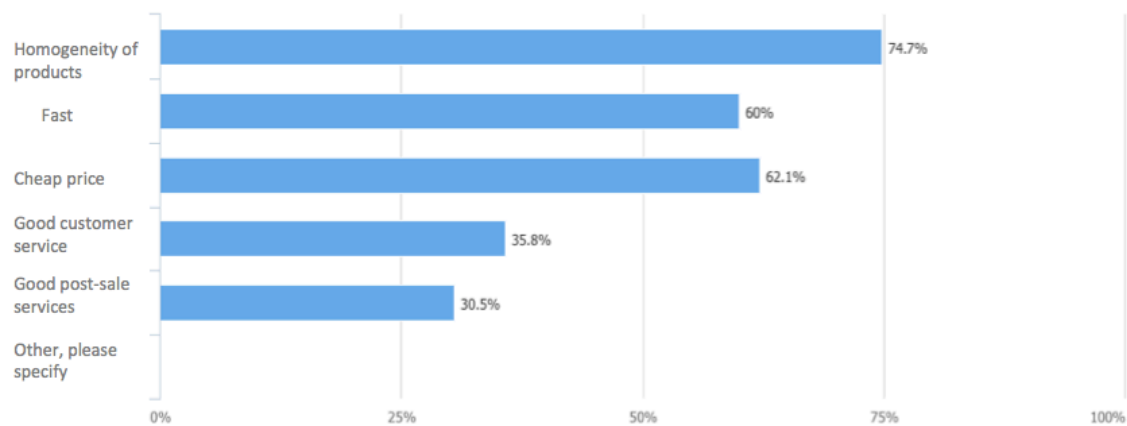


Figure 7. The reason of satisfied online shopping experiences

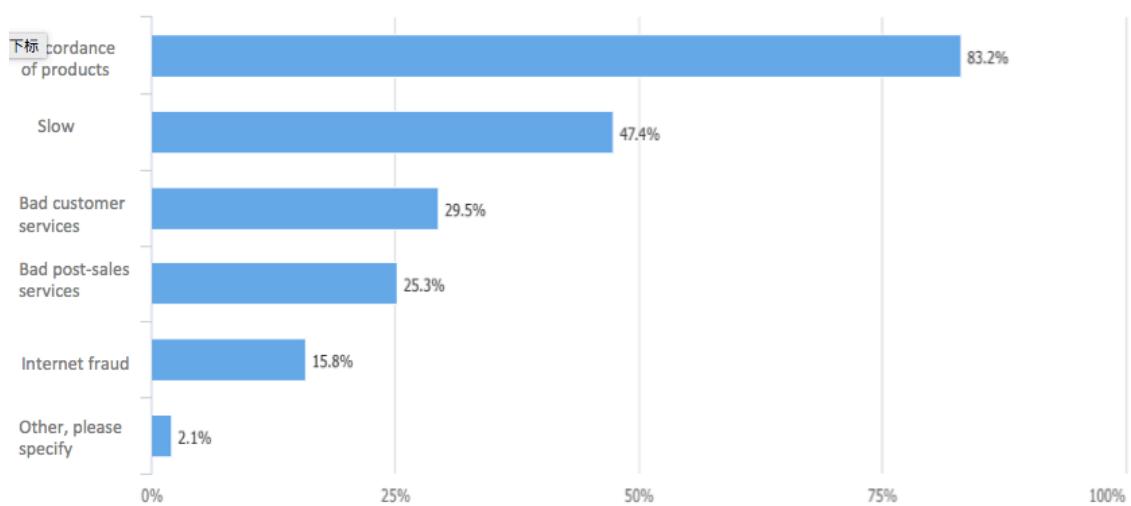


Figure 8. The reason of terrible online shopping experiences

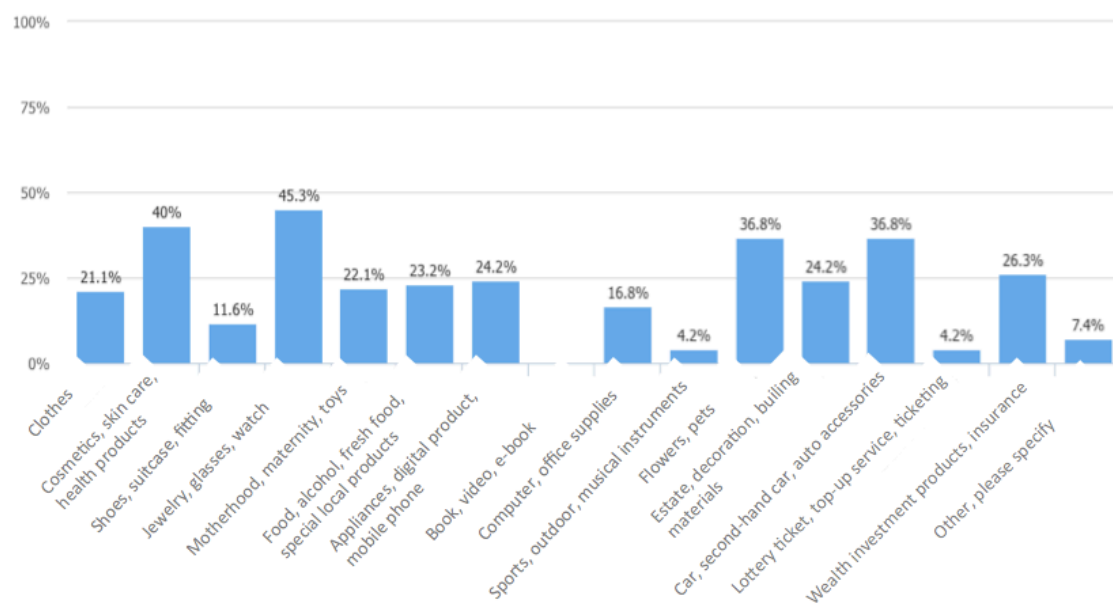


Figure 9. Products that not suitable for online shopping

#### 4.3 Analysis of the data

In this section, I would introduce a method of analyzing data named chi-square test. Chi-square test of hypothesis testing is a very versatile method of counting data. It belongs to the category of non-parametric tests, mainly compare two or more samples rates (proportions) and correlation analysis two categorical variables. The fundamental idea is to compare the frequency of coincidence of theory and actual frequency or the goodness of fit problems. (Coolidge, 2006)

Firstly, do the different types of products would affect the customers' preference of shopping online or go to store. Secondly, if they do have relationships, would sex, age, and monthly income affecting the customers' preferences? Would age influence the reason of shopping online?

##### 4.3.1 Chi-square test analysis

In the first part, I would use chi-square test to analyze the statistics of the question which products would you buy them in store rather than shopping online in the questionnaire. First of all, there are 15 kinds of products and the books, sports, and lettery tickets are less than 5 revisited. Coolidge (2006) claim that the solution is to collapse into three cells to increase the frequency while the observed cell frequency is less than 5. So I collapse books, sports, and lettery tickets into one cell. There are 321 valid votes in total. The null hypothesis would be



that the probability of respondents choosing each kind of products is same. So it is 24.69, which is shown in Table 1.

Products	Clothes	Cosmetics	Shoes	Jewelry	Motherhood	Food	Appliances	Computer	Flowers	Estate	Car	Books, sports, lettery tickets	Wealth investment products
Observed cell frequency	20	39	11	43	21	22	23	16	35	23	35	8	25
Expected cell frequency	24.69	24.69	24.69	24.69	24.69	24.69	24.69	24.69	24.69	24.69	24.69	24.69	24.69

Table 1. Chi-square test of the question that which products would you buy them in store rather than shopping online

The first step is to calculate the  $\chi^2$  based on chi-square test formula:  $\chi^2 =$

$$\sum_{i=1}^k \frac{(\text{Observed Cell Frequency}_i - \text{Expected Cell Frequency}_i)^2}{\text{Expected Cell Frequency}_i}$$

And the answer would be  $\chi^2=54.48$ . Secondly,

the degrees of freedom ( $df$ ) should be calculated with the formula  $df = \text{number of cells} - 1$ . Then, we got the result that  $df = 12$ . According to the Appendix A: Chi-square distribution, the derived value of  $\chi^2=54.48$  does exceed the tabled critical value of  $\chi^2=32.91$  at  $p=0.001$  with  $df=12$ . Therefore,  $p < 0.001$  while  $\chi^2=54.48$ . Thus, the different types do have influence on the customers' preference of shopping online or go to store.

This reveals that the different types of products do affect people choosing online shopping or shop at store. It is easy to find that some expensive or valued products such as jewelry, cars are concerned as unsuitable for online shopping. Moreover, lots of people believe cosmetics are not suitable for online shopping. They claim that it would be better to try on some kind of products before make the decision of purchasing. Furthermore, some respondents think that appliance are inappropriate product for online shopping due to its hardness of post-sale services. Besides, small groups of people claim that flowers, pets could not be suitable for long-time and long-distance delivery. So it could not be a good choice for online shopping.

Then moving on to the second part, I would use chi-square test: two-by-two design to analyze the question would sex, age, monthly income, and occupation affect the customers' preferences respectively.

Firstly, I would analyze the relationship between gender and customer preferences. The first step is to construct a table of the observed cell frequencies.

Products	Clothes	Cosmetics	Shoes	Jewelry	Motherhood	Food	Appliance	Computer	Sports	Flowers	Estate	Car	Lettery tickets	Wealth investment	Total
Male	8	13	2	18	6	13	11	4	3	15	8	13	1	8	123
Female	12	25	9	25	15	9	12	12	1	20	15	22	3	17	197
Total	20	38	11	43	21	22	23	16	4	35	23	35	4	25	320

Table 2. Observed cell frequencies of customers' preferences based on gender

The next step is to calculate the expected cell frequency according to the formula:

$Expected\ Cell\ Frequency = \frac{(column\ Total\ for\ Cell * Row\ total\ for\ Cell)}{Overall\ Total}$ . Then, I would table the observed and expected cell frequencies as follows:

	Male		Female	
	Observed	Expected	Observed	Expected
Clothes	8	7.69	12	12.31
Cosmetics	13	14.61	25	23.39
Shoes	2	4.23	9	6.77
Jewelry	18	17.87	25	26.47
Motherhood	6	8.07	15	12.93
Food	13	8.46	9	13.54
Appliance	11	8.84	12	14.16
Computer	4	6.15	12	9.85
Sports	3	1.54	1	2.46
Flower	15	13.45	20	21.55
Estate	8	8.84	15	14.16
Car	13	13.45	22	21.55
Lettery tickets	1	1.54	3	2.46
Wealth investment products	8	9.61	17	15.39

Table 3. Observed and expected cell frequencies of customers' preferences based on gender

According to the chi-square test formula:  $\chi^2 =$

$$\sum_{i=1}^k \frac{(Observed\ Cell\ Frequency_i - Expected\ Cell\ Frequency_i)^2}{Expected\ Cell\ Frequency_i}, \chi^2 = 12.54. df = 13.$$

Based on Appendix A, the derived value of  $\chi^2 = 12.54$  does not exceed the tabulated critical value of  $\chi^2 = 22.36$  at  $p = 0.05$  with  $df = 13$ . Therefore,  $p > 0.05$  while  $\chi^2 = 12.54$ . Thus, there is no statistically significant difference between male and female, although the observed frequencies are different from the expected frequencies.

Secondly, I would use the same way to analyze the relationship between age and customers' preferences.

Products/Age	Clothes	Cosmetics	Shoes	Jewelry	Motherhood	Food	Appliance	Computer	Sports	Flowers	Estate	Car	Lettery tickets	Wealth investment	Total
18-25	14	29	10	35	18	17	20	13	4	29	20	31	4	23	267
25-35	5	7	1	7	2	5	3	3	0	5	2	3	0	2	45
35-65	1	2	0	1	1	0	0	0	0	1	1	1	0	0	8
Total	20	38	11	43	21	22	23	16	4	35	23	35	4	25	320

Table 4. Observed cell frequencies of customers' preferences based on age

According to the formula:  $Expected\ Cell\ Frequency = \frac{(column\ Total\ for\ Cell * Row\ total\ for\ Cell)}{Overall\ Total}$ , tabulating the observed and expected cell frequencies as follows:

	18-25		25-35		35-65	
	Observed	Expected	Observed	Expected	Observed	Expected
Clothes	14	16.69	5	2.81	1	0.5
Cosmetics	29	31.71	7	5.34	2	0.95
Shoes	10	9.18	1	1.55	0	0.28
Jewelry	35	35.88	7	6.05	1	1.08
Motherhood	18	17.52	2	2.95	1	0.53
Food	17	18.36	5	3.09	0	0.55
Appliance	20	19.19	3	3.23	0	0.58
Computer	13	13.35	3	2.25	0	0.4
Sports	4	3.34	0	0.56	0	0.1
Flower	29	29.2	5	4.92	1	0.88
Estate	20	19.19	2	3.23	1	0.58
Car	31	29.2	3	4.92	1	0.88
Lettery tickets	4	3.34	0	0.56	0	0.1
Wealth investment products	23	20.86	2	3.52	0	0.63

Table 5. Observed and expected cell frequencies of customers' preferences based on age

Accordance with the chi-square test fomular:  $\chi^2 =$

$$\sum_{i=1}^k \frac{(\text{Observed Cell Frequency}_i - \text{Expected Cell Frequency}_i)^2}{\text{Expected Cell Frequency}_i}, \chi^2=13.93. df=26. \text{ Based on Appendix A, the}$$

derived value of  $\chi^2=12.54$  does not exceed the tabled critical value of  $\chi^2=38.88$  at  $p=0.05$  with  $df=26$ . Therefore,  $p>0.05$  while  $\chi^2=13.93$ . Thus, there is no statistically difference between different age groups, although the observed frequencies are different with the expected frequencies.

Thirdly, I would analyze the monthly income and customers' preferences.

Products/Monthly income	Clothes	Cosmetics	Shoes	Jewelry	Motherhood	Food	Appliance	Computer	Sports	Flowers	Estate	Car	Lettery tickets	Wealth investment	Total
<1000	6	17	7	15	10	6	10	7	2	13	12	14	3		10
1000-4000	8	12	3	13	8	10	6	5	0	18	10	15	1		11
4000-7000	4	4	0	6	1	2	4	2	1	3	0	2	0		3
7000-10000	0	2	0	5	1	3	2	0	0	0	0	1	0		1
10000-30000	1	2	0	2	1	0	0	1	0	1	0	1	0		0
30000-50000	0	0	0	1	0	0	0	0	0	0	0	1	1		0
>50000	1	1	1	1	0	1	1	1	1	0	0	1	0		0
Total	20	38	11	43	21	22	23	16	4	35	23	35	4		25

Table 6. Observed cell frequencies of customers' preferences based on monthly income

According to the fomular:  $\text{Expected Cell Frequency} = \frac{(\text{column Total for Cell} * \text{Row total for Cell})}{\text{Overall Total}}$ , ta-

bling the observed and expected cell frequencies as follow:

	<1000		1000-4000		4000-7000		7000-10000		10000-30000		30000-50000		>50000	
	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected
Clothes	6	8.25	8	7.5	4	2	0	0.94	1	0.56	0	0.19	1	0.56
Cosmetics	17	15.68	12	14.25	4	3.8	2	1.78	2	1.07	0	0.36	1	1.07
Shoes	7	4.54	3	4.13	0	1.1	0	0.52	0	0.31	0	0.1	1	0.31
Jewelry	15	17.74	13	16.13	6	4.3	5	2.02	2	1.21	1	0.4	1	1.21
Motherhood	10	8.66	8	7.88	1	2.1	1	0.98	1	0.59	0	0.2	0	0.59
Food	6	9.08	10	8.25	2	2.2	3	1.03	0	0.62	0	0.21	1	0.62
Appliance	10	9.49	6	8.63	4	2.3	2	1.08	0	0.65	0	0.22	1	0.65
Computer	7	6.6	5	6	2	1.6	0	0.75	1	0.45	0	0.15	1	0.45
Sports	2	1.65	0	1.5	1	0.4	0	0.19	0	0.11	0	0.04	1	0.11
Flower	13	14.44	18	13.13	3	3.5	0	1.64	1	0.98	0	0.33	0	0.98
Estate	12	9.49	10	8.63	0	2.3	0	1.08	0	0.65	1	0.22	0	0.65
Car	14	14.44	15	13.13	2	3.5	1	1.64	1	0.98	1	0.33	1	0.98
Lettery tickets	3	1.65	1	1.5	0	0.4	0	0.19	0	0.11	0	0.04	0	0.11
Wealth investment products	10	10.31	11	9.38	3	2.5	1	1.17	0	0.7	0	0.23	0	0.7

Table 7. Observed and expected cell frequencies of customers' preferences based on monthly income

Accordance with the chi-square test fomular:  $\chi^2 =$

$$\sum_{i=1}^k \frac{(\text{Observed Cell Frequency}_i - \text{Expected Cell Frequency}_i)^2}{\text{Expected Cell Frequency}_i}, \chi^2=59.91. df=78. \text{ Based on Appendix B, the}$$

derived value of  $\chi^2=59.91$  is between the tabled critical value of  $\chi^2=57.15$  at  $p=0.975$  with  $df=80$  and  $\chi^2=60.39$  at  $p=0.950$  with  $df=80$ . Therefore,  $0.95 < p < 0.975$  while  $\chi^2=59.91$ . Thus, the monthly income factors are slightly affecting the customers' preferences.

Finally, I would analyze the monthly income and the reason of shopping online.

Reason/Monthly income	Cheap price	Convenience and fast	More species and choices	Couldn't find in store	Total	
<1000	22		24	21	13	80
1000-4000	19		36	27	12	94
4000-7000	7		13	9	7	36
7000-10000	2		3	3	2	10
10000-30000	1		2	2	3	8
30000-50000	1		2	1	0	4
>50000	0		1	0	0	1
<b>Total</b>	<b>52</b>		<b>81</b>	<b>63</b>	<b>37</b>	<b>233</b>

Table 8. Observed cell frequencies of the reason why people shopping online and monthly income

According to the fomular:  $\text{Expected Cell Frequency} = \frac{(\text{column Total for Cell} * \text{Row total for Cell})}{\text{Overall Total}}$ , ta-

bling the observed and expected cell frequencies as follow:

	Cheap price		Convenience and fast		More speccies and choices		Couldn't find in store	
	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected
<1000	22	17.85	24	27.81	21	21.63	13	12.7
1000-4000	19	20.98	36	32.68	27	25.42	12	14.93
4000-7000	7	8.03	13	12.52	9	9.73	7	5.72
7000-10000	2	2.23	3	3.48	3	2.7	2	1.59
10000-30000	1	1.79	2	2.78	2	2.16	3	1.27
30000-50000	1	0.89	2	1.39	1	1.08	0	0.64
>50000	0	0.22	1	0.35	0	0.27	0	0.16

Table 9. Observed and expected cell frequencies of the reason why people shopping online and month-ly income

Accordance with the chi-square test fomular:  $\chi^2 =$

$\sum_{i=1}^k \frac{(Observed\ Cell\ Frequency_i - Expected\ Cell\ Frequency_i)^2}{Expected\ Cell\ Frequency_i}$ ,  $\chi^2=9.17$ .  $df=18$ . Based on Appendix B, the derived value of  $\chi^2=9.17$  is between the tabled critical value of  $\chi^2=8.23$  at  $p=0.975$  with  $df=18$  and  $\chi^2=9.39$  at  $p=0.950$  with  $df=18$ . Therefore,  $0.95 < p < 0.975$  while  $\chi^2=9.17$ . Thus, the month-ly income factors are slightly affecting the customers' preferences.

#### 4.3.2 Cross-analysis between chosen factors

According to the chi-square test analysis above, it is easily to find that there is relationship between sex, monthly income, customers preferences, and the reason of people shopping online.

I assume those questions as dependent variable and make cross-analysis between chosen factors. It is easy to see that 18-25-age group accounts the most percentage of shopping online. 25-35-age group are less. Only a few of 35-65-age group choose to shop online. This indicates that younger people are main customer segmentation of e-commerce. Elder people are not good at using Internet and adapt to the changes in lifestyle. After making analysis between monthly income and the reason of shopping online, it is easy to find that the people who have lower monthly income choose online shopping due to the cheap price. In contrast, people who have higher monthly income choose online shopping due to the convenience. Moreover, through the cross-analysis between monthly income and which products are not suitable for online shopping. We may reasonably come to the conclusion that people whose monthly income is under 4000CNY think that they would not buy many products online because they cannot trust the Internet and they do not want to be charge with this loss. A person whose monthly income is above 4000CNY regards fewer products as unsuitable.

#### 4.3.3 SWOT analysis of e-commerce and competitors

According to the feedback I got from the questionnaire, I select some valuable results and make a SWOT analysis for e-commerce.

Strength of e-commerce is that they could offer cheap price and large sales volume. Moreover, our competitor Jingdong has their logistics system and logistics management advantages. According JD website, JD.com has formed its own delivery system and operate independently

in March of 2015. This development makes a big progress of guarantee the safety and efficiency of delivery. Besides, many people are attracted by the variable species of products.

Weakness of e-commerce could be illustrated as follow. Firstly, most of respondents claim that they have had unhappy online shopping experiences because of the discordance of the products and bad pre-sales and post-sales services. They believe sometimes they could buy fake products especially the electronic products. They think that they would not buy valuable products online. Secondly, some of respondents believe that it would be better to seeing the physical sample or trying the products (such as computers, keyboards, etc.) before made the decision of purchase. Otherwise, it could cause series refundable and exchangeable problems. Thirdly, e-commerce provides high sales volume with lower price. However, this could lead to the low quality and mistakes.

Opportunity of e-commerce could be achieve globalization. With the rapid development of information communication network and technology has created a borderless digital world, products and service can instantly be transacted everywhere in the world.

Threats could be the security risks. Due to the lack of e-commerce talents, the Internet security problems should be concerned. There is potential risks that hackers break into networks to steal information. Thus, consumers' rights and interests could not be protected.

##### 5 How to improve e-commerce strategy of chosen partner company

The strategy of surviving in this competition is avoiding the strength of e-commerce and focusing more on the weakness of e-commerce. Our partner company would focus on quality rather than quantity.

In this case, the business area of the partner company are electronic products and related services. According to this survey, if 30 of 100 people claim that they will not buy high-end electronic products online, it means there could be 300 of 1000 people choose to buy high-end electronic products in store.

Firstly, our company should move their emphasis from low-end electronic products to high-end electronic products. Based on the research, the main strategy of e-commerce is offering cheaper price in order to get high sales volume to make the profit. And it is easily to find that people tend to buy high-end products in store rather than online shop. Since our chosen company could not make profit with such low price. Simply our partner company should focus more on offering the high-end electronic products and slow down the inventory of low-end

electronic products. Our target customer groups are mainly those people who have higher monthly income and pursuing the high quality and user experience.

Secondly, our company could focus more on value-added services than products. According to the research, many respondents mentioned that they experienced bad pre-sales and post-sales services online. Li and Zhang (2010) claim that the consumers' shopping habits have become accustomed to use look, smell, touch and other senses to determine and choose goods. However, online shopping cannot fulfill the consumers' habits. Our company could provide complete set of services to satisfy the customers' needs. Firstly, we could offer an advisor to introduce the products and suggest the best products according to the customer needs. Then, our company provide trial experiences for the customer to ensure that the products are suitable for our customers. Moreover, we could provide the delivery and installation services. Finally, we are offering free warranty. This would include maintain or change and serve to the doorstep free within 3 years. Our target customer groups are those people who are pursuing the perfect customer services.

To sum up, e-commerce earns the popularity in 21<sup>st</sup> Century. There is rapid and continuous development in information technology and information communication system. However, there is still some weakness of e-commerce, which is the main factor for losing many potential customers. Through this study of e-commerce strategy, I came up with some solutions for our partner company to face this situation and survive in this competition.

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## Appendices

### Appendix 1:

2016/4/3

Would you prefer Online Shopping or go to Store? - 腾讯问卷

## Would you prefer Online Shopping or go to Store?

This is about my thesis study. Hope you could spend some time on this research, I will appreciate your participation!

### 1. Gender \*

- Male  
 Female

### 2. Age \*

- <18  
 18-25  
 25-35  
 35-65  
 >65

### 3. Occupation [多选题] \*

- Student  
 Blue-collar  
 White-collar  
 Civil servant  
 Free lance  
 Other, please specify

### 4. Monthly Income \*

2016/4/3

Would you prefer Online Shopping or go to Store? - 腾讯问卷

- <1000
- 1000-4000
- 4000-7000
- 7000-10,000
- 10,000-30,000
- 30,000-50,000
- >50,000

5. Have you ever shopping online? \*

- Yes
- No

6. Why would you choose online shopping? [多选题] \*

- Cheap price
- Convenience and fast
- More species and choices
- Couldn't find in store
- Other, please specify

7. Why did you have the most satisfied experience of online shopping? [多选题] \*

- Homogeneity of products
- Fast
- Cheap price
- Good customer service
- Good post-sale service
- Other, please specify

2016/4/3

Would you prefer Online Shopping or go to Store? - 腾讯问卷

8. Why did you have the most terrible experience of online shopping? [多选题] \*

Discordance of products

Slow

Bad customer services

Bad post-sales service

Internet fraud

Other, please specify

9. Which products would you buy them in store rather than shopping online? [多选题] \*

Clothes

Cosmetics, skin care, health products

Shoes, suitcase, fitting

Jewelry, glasses, watch

Motherhood, maternity, toys

Food, alcohol, fresh food, special local products

Appliances, digital product, mobile phone

Book, video, e-book

Computer, office supplies

Sports, outdoor, musical instruments

Flowers, pets

Estate, decoration, building materials

Car, second-hand car, auto accessories

Letter ticket, top-up service, ticketing

Wealth investment products, insurance


2016/4/3

Would you prefer Online Shopping or go to Store? - 腾讯问卷

Other, please specify

10.Above, please specify the reason \*

提交

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## Appendix A: The Chi-square Distribution

**The Chi-Square Distribution**

Critical Values of Chi-Square

df	$\alpha$ Level of Significance			
	.05	.02	.01	.001
1	3.84	5.41	6.64	10.38
2	5.99	7.82	9.21	13.82
3	7.82	9.84	11.34	16.27
4	9.49	11.67	13.28	18.46
5	11.07	13.39	15.09	20.52
6	12.59	15.03	16.81	22.46
7	14.07	16.62	18.48	24.32
8	15.51	18.17	20.09	26.12
9	16.92	19.68	21.67	27.88
10	18.31	21.16	23.21	29.59
11	19.68	22.62	24.72	31.26
12	21.03	24.05	26.22	32.91
13	22.36	25.47	27.69	34.53
14	23.68	26.87	29.14	36.12
15	25.00	28.26	30.58	37.70
16	26.30	29.63	32.00	39.25
17	27.59	31.00	33.41	40.79
18	28.87	32.35	34.80	42.31
19	30.14	33.69	36.19	43.82
20	31.41	35.02	37.57	45.32
21	32.67	36.34	38.93	46.80
22	33.92	37.66	40.29	48.27
23	35.17	38.97	41.64	49.73
24	36.42	40.27	42.98	51.18
25	37.65	41.57	44.31	52.62

(Continued)

(Continued)

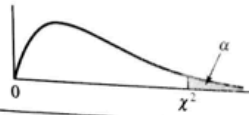
26	38.88	42.86	45.64	54.05
27	40.11	44.14	46.96	55.48
28	41.34	45.42	48.28	56.89
29	42.56	46.69	49.59	58.30
30	43.77	47.96	50.89	59.70

SOURCE: This table is taken from Table IV of Fisher and Yates (1995), *Statistical Tables for Biological, Agricultural, and Medical Research*, published by Longman Group Ltd., London (previously published by Oliver and Boyd, Ltd., Edinburgh).

NOTE: Reject the null hypothesis if the derived chi-square value is equal to or greater than the tabled chi-square value.

Appendix B: Upper Percentage Points of the  $\chi^2$  Distribution

**Table E.1**  
Upper Percentage Points of the  $\chi^2$  Distribution



df	.995	.990	.975	.950	.900	.750	.500	.250	.100	.050	.025	.010	.005
1	.00	.00	.00	.00	.02	.10	.45	1.32	2.71	3.84	5.02	6.63	7.88
2	.01	.02	.05	.10	.21	.58	1.39	2.77	4.61	5.99	7.38	9.21	10.60
3	.07	.11	.22	.35	.58	1.21	2.37	4.11	6.25	7.82	9.35	11.35	12.84
4	.21	.30	.48	.71	1.06	1.92	3.36	5.39	7.78	9.49	11.14	13.28	14.86
5	.41	.55	.83	1.15	1.61	2.67	4.35	6.63	9.24	11.07	12.83	15.09	16.75
6	.68	.87	1.24	1.64	2.20	3.45	5.35	7.84	10.64	12.59	14.45	16.81	18.55
7	.99	1.24	1.69	2.17	2.83	4.25	6.35	9.04	12.02	14.07	16.01	18.48	20.28
8	1.34	1.65	2.18	2.73	3.49	5.07	7.34	10.22	13.36	15.51	17.54	20.09	21.96
9	1.73	2.09	2.70	3.33	4.17	5.90	8.34	11.39	14.68	16.92	19.02	21.66	23.59
10	2.15	2.56	3.25	3.94	4.87	6.74	9.34	12.55	15.99	18.31	20.48	23.21	25.19
11	2.60	3.05	3.82	4.57	5.58	7.58	10.34	13.70	17.28	19.68	21.92	24.72	26.75
12	3.07	3.57	4.40	5.23	6.30	8.44	11.34	14.85	18.55	21.03	23.34	26.21	28.30
13	3.56	4.11	5.01	5.89	7.04	9.30	12.34	15.98	19.81	22.36	24.74	27.69	29.82
14	4.07	4.66	5.63	6.57	7.79	10.17	13.34	17.12	21.06	23.69	26.12	29.14	31.31
15	4.60	5.23	6.26	7.26	8.55	11.04	14.34	18.25	22.31	25.00	27.49	30.58	32.80
16	5.14	5.81	6.91	7.96	9.31	11.91	15.34	19.37	23.54	26.30	28.85	32.00	34.27
17	5.70	6.41	7.56	8.67	10.09	12.79	16.34	20.49	24.77	27.59	30.19	33.41	35.72
18	6.26	7.01	8.23	9.39	10.86	13.68	17.34	21.60	25.99	28.87	31.53	34.81	37.15
19	6.84	7.63	8.91	10.12	11.65	14.56	18.34	22.72	27.20	30.14	32.85	36.19	38.58
20	7.43	8.26	9.59	10.85	12.44	15.45	19.34	23.83	28.41	31.41	34.17	37.56	40.00
21	8.03	8.90	10.28	11.59	13.24	16.34	20.34	24.93	29.62	32.67	35.48	38.93	41.40
22	8.64	9.54	10.98	12.34	14.04	17.24	21.34	26.04	30.81	33.93	36.78	40.29	42.80
23	9.26	10.19	11.69	13.09	14.85	18.14	22.34	27.14	32.01	35.17	38.08	41.64	44.18
24	9.88	10.86	12.40	13.85	15.66	19.04	23.34	28.24	33.20	36.42	39.37	42.98	45.56
25	10.52	11.52	13.12	14.61	16.47	19.94	24.34	29.34	34.38	37.65	40.65	44.32	46.93
26	11.16	12.20	13.84	15.38	17.29	20.84	25.34	30.43	35.56	38.89	41.92	45.64	48.29
27	11.80	12.88	14.57	16.15	18.11	21.75	26.34	31.53	36.74	40.11	43.20	46.96	49.64
28	12.46	13.56	15.31	16.93	18.94	22.66	27.34	32.62	37.92	41.34	44.46	48.28	50.99
29	13.12	14.26	16.05	17.71	19.77	23.57	28.34	33.71	39.09	42.56	45.72	49.59	52.34
30	13.78	14.95	16.79	18.49	20.60	24.48	29.34	34.80	40.26	43.77	46.98	50.89	53.67
40	20.67	22.14	24.42	26.51	29.06	33.67	39.34	45.61	51.80	55.75	59.34	63.71	66.80
50	27.96	29.68	32.35	34.76	37.69	42.95	49.34	56.33	63.16	67.50	71.42	76.17	79.52
60	35.50	37.46	40.47	43.19	46.46	52.30	59.34	66.98	74.39	79.08	83.30	88.40	91.98
70	43.25	45.42	48.75	51.74	55.33	61.70	69.34	77.57	85.52	90.53	95.03	100.44	104.24
80	51.14	53.52	57.15	60.39	64.28	71.15	79.34	88.13	96.57	101.88	106.63	112.34	116.35
90	59.17	61.74	65.64	69.13	73.29	80.63	89.33	98.65	107.56	113.14	118.14	124.13	128.32
100	67.30	70.05	74.22	77.93	82.36	90.14	99.33	109.14	118.49	124.34	129.56	135.82	140.19

(Source: The entries in this table were computed by the author.)