

Analysis of online shopping in China: An empirical study of online consumer behavior

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1. Introduction

Nowadays the Internet plays a critical role in a large and ever-growing array of activities such as communicating, information searching, and entertaining, shopping, and social networking. China is one of the leading countries in terms of internet users, reaching approximately 620 million in December 2013 (Chinese Internet Network Information Center, 2014). As one of the most important online activities, online shopping has witnessed a rapid growth in China: there were 194 million online consumers in 2011; in just two years this number has increased by 56%, to 302 million in 2013 (Chinese Internet Network Information Center, 2014). While online shopping has influenced consumers' shopping behaviors and the way buyers and sellers interact, it has also made significant contributions to the economy: in 2012 the online consumptions reached to RMB 1.3 trillion (approximately US \$ 213 billion), which accounted for 6.1% of the total retail sales in China (Chinese Internet Network Information Center, 2013).

Many factors may affect consumers' use of online shopping. Researchers have identified four determinants of consumers' adoption of online shopping (Lian & Lin, 2008), namely consumer characteristics (such as demographics and socioeconomic status), consumer perceptions (such as perceived convenience, ease-of-use, benefits, enjoyment, and risk), e-tailer attributes (such as web quality, reputation, security, and privacy protection), and product characteristics (such as product type, cost, and customization). Empirical studies have indicated that many of those factors are indeed influential in Chinese consumers' use of the Internet for shopping. Jun and Jaafar (2011) found that product reputation and marketing variables, such as price and promotion, were correlated with Chinese consumers' online shopping adoption, whereas their perceived security, privacy, service quality were not. Using a comprehensive online shopping adoption framework, Clemes, Gan, and Zhang (2013) also found a number of influential factors for Chinese consumers' online shopping, including their demographics, perceived risk, product characteristics, and website factors.

Most of those factors' constructs, however, are basically individual characteristics and utilitarian in nature, i.e., performance perception, effort expectancy, and benefits of searching

and transaction. As its personal/social nature and ubiquitous communication patterns are features of online shopping, both individual and environmental/social factors should play important roles in determining consumers' use of online shopping. The current study aims to investigate the impact of Chinese consumers' life environment and online behaviors on their use of online shopping. [More information needed from the study of 鈴木雄高(2011) for the development of the hypotheses.] Therefore, the following hypotheses were proposed:

H1: There is a positive relationship between online shoppers' income and their frequency of online shopping;

H2: There is a positive relationship between online shoppers' income and the types of commodities they have purchased.

H3: The online shoppers with less leisure time will shop online more frequently;

H4: There is a positive relationship between the number of online shopping sites the online shoppers have visited and the frequency of their online shopping;

H5: There is a positive relationship between the types of commodities the online shoppers have purchased and the number of online shopping sites they have visited;

H6: There is a positive relationship between the types of commodities the online shoppers have purchased and the frequency of their online shopping;

H7: There is a positive relationship between the amount of information online shoppers gather routinely and the number of online shopping sites they visit.

H8: There is a positive relationship between the amount of online shoppers' social interactions and the information online shoppers gather routinely.

2. Methodology

2.1 Questionnaire Development

2.2 Data

The data was collected in 30 provinces/cities in China in 2013 from December 6 to December 16 using an online survey. The survey used a targeted sampling approach and collected 200 complete responses. Also, a weighted sampling was used in such a way that 25% of the respondents were from the economically-advanced areas such as Beijing, Shanghai, and Shenzhen; 50% of the respondents were from big cities in eastern provinces; the rest of 25% were from small cities in western provinces.

3. Analysis and Results

3.1 Descriptive Analysis

Online shoppers' demographics. Table 1 shows the demographic characteristics of the respondents. The 200 respondents were comprised of 35% of males and 65% of females and single individuals were the highest percentage in the sample: 116 of them were single versus 84 were married. The dominant age groups were 25-29 (37%) and 30-34 (33%). Respondents

who had a bachelor's degree and a graduate degree made up the major education groups, accounting for 43% and 32% of the sample, respectively. The dominant occupation groups included students (27%), private-sector employees (23%), and public-sector employees (18%). In terms of income level, forty six respondents, or 23%, made RMB 50,000-100,000 (approximately US \$8,000-16,000) last year, 21% of the respondents made RMB 100,000-200,000, 8% of them made less than RMB 10,000, and 3% of them made more than RMB 500,000 last year. As for their living condition, sixty one respondents (31%) still lived with their parents and 47 lived alone.

Descriptive Statistics: Demographics

Online shopping activities. In the past year, the male respondents have used 2.96 websites (s.d.=2.07), on average, to shop online; whereas the female respondents have used 2.87 websites (s.d.=1.77), on average, to shop online. In terms of number of commodities purchased, there was also a difference between the male and female respondents (mean number of 4.37 (s.d.=2.66), and 4.95 (s.d.=3.01), respectively).

To examine the variety of websites consumers visited and types of commodities they purchased through online shopping, the following questions were asked: “what websites have you used to shop online and how frequently have you used them in the past year?” And “what kind of commodities have you purchased online and how frequently have you purchased them in the past year?” Figure 1 indicates that 26.5% of the respondents only have shopped on one website; whereas others shopped on two or more websites, among them 14.5% of the respondents have used five or more websites. With respect to the type of websites used, taobao.com and tmall.com are two of the mostly used websites, followed by www.jd.com. Also, some websites specialized in group purchase have gained popularity among consumers (Figure 2).

Figure 1: Number of online shopping websites used by the respondents

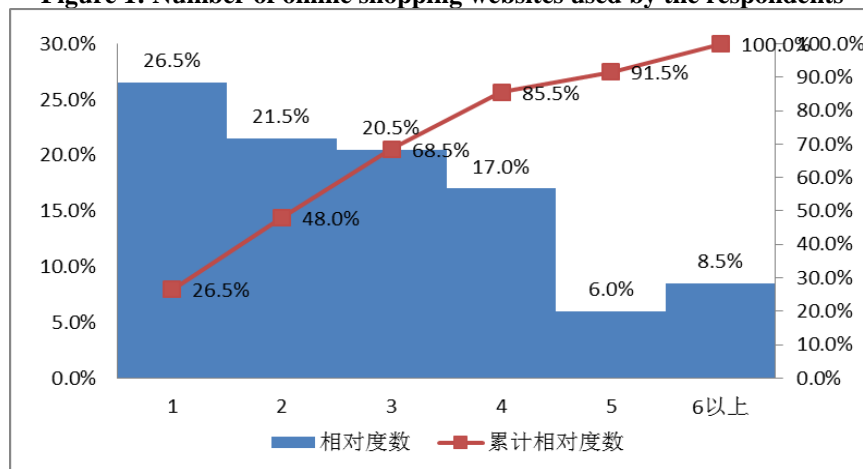
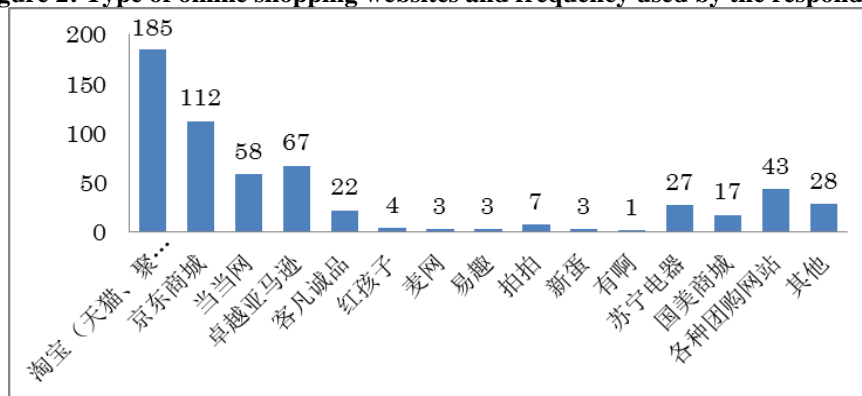


Figure 2: Type of online shopping websites and frequency used by the respondents



With regard to the type of commodities purchased by the respondents, Figure 3 indicates that 14.5% of them have purchased only one type of commodity. The majority of the respondents have purchased two or more types of commodities, among them 16% of the respondents have purchased more than eight types of commodities. Specifically, 159 of the respondents have purchased clothing, 105 of them have purchased books, and very few of the respondents have purchased medical products or antiques (Figure 4). The analysis also shows a positive correlation between the frequency of respondents' online shopping and the number of website used ($r = .37$), and a strongly positive correlation between the frequency of their online shopping and the type of commodities purchased ($r = .62$).

Figure 3: Type of commodities purchased in the past year.

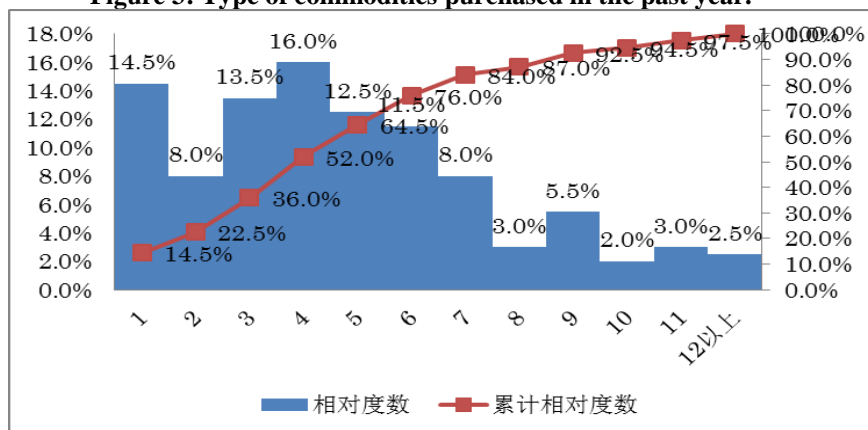
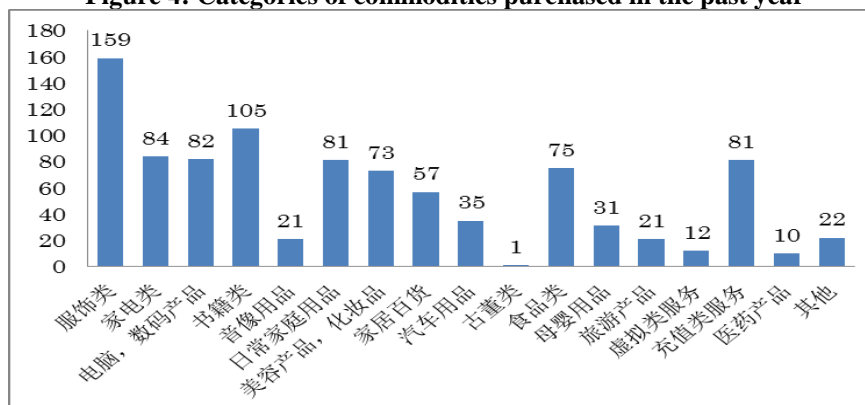


Figure 4: Categories of commodities purchased in the past year

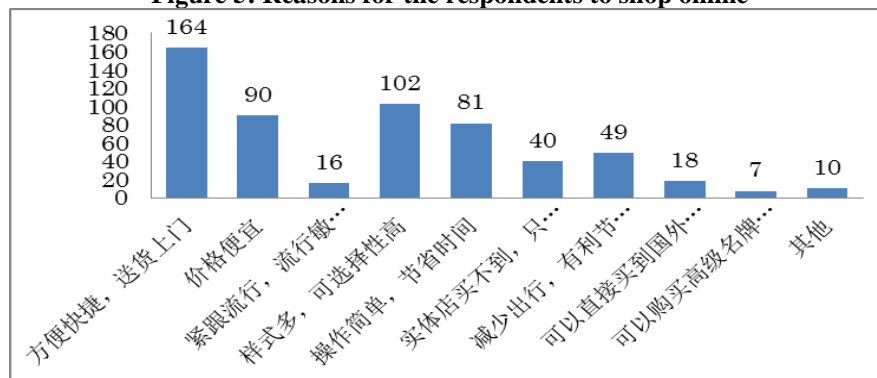


4. Relationship between Consumers' Life Environment and Online Shopping

The eight hypotheses regarding the impact of the consumers' life environment and online behaviors on their use of online shopping were tested using a simple correlation analysis. H2, H7, and H8 were rejected. Specifically, there was a negative correlation between the respondents' income and the types of commodities they have purchased in the past year ($r = -.12$). There was a negative correlation between the amount of information online shoppers gather routinely and the number of online shopping sites they visit ($r = -.15$). There was a negative correlation between the amount of online shoppers' social interactions and the amount of information online shoppers gather routinely ($r = -.18$).

Furthermore, the reasons for the respondents to shop online were examined. According to Figure 5, most of the respondents used online shopping because it was convenient (chosen by 160 respondents) and less expensive than the physical stores (chosen by 90 respondents). Indeed, those are two most advantages characteristics perceived by the Chinese online shoppers, who are usually young with relatively lower income.

Figure 5: Reasons for the respondents to shop online



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