

Research on the Online Shopping and Influencing Factors: Samples from Undergraduate Students in Zhengzhou City

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Abstract: In recent years, the B2C and C2C mode of e-commerce has brought great benefits to the consumer and merchant. While the undergraduate are the prosperous and potential consumers, it is significant to study their consumption behavior. In this paper, the theory of reasoned action (TRA) developed by Martin Fishbein and the theory of planned behavior (TPB) proposed by Icek Ajzen, a widely survey are conducted base on the sample of undergraduate students in Zhengzhou city. The research results indicate that the main influenced factors include convenience and experience, personal information and finical security etc. Therefore, the online retailers should insist that cheaper commodity pricing attract college student consumer, set up the products and retailer's prestige of network, and eliminate the doubts and worries about security of online shopping.

Keywords: online shopping behavior; TRA; TPB; undergraduate survey

I Introduction

Since the 1990s, the Internet had entered gradually into the business environment and the e-commerce had become more and more populous in people's life. Comparing to the traditional trading mode, the e-commerce or online- business has many benefits and characteristics. The popularization of the personal computer makes e-commerce expand to the online retail business and personal service field, for instance online shopping, network advertisement, online database information service, online financial stock exchange transaction, online medical consultation, tel- education etc.. With the swift and violent development of the market of online shopping, the competition between the online trade companies is fiercer and fiercer in the recent years. As to online retailer, it becomes very important to be familiar with the online shopping behavioral characteristic of their costumers in order to make profits and take the high position in competition,

2. Related Work and Model Description

In the middle 1980s, the theoretical research about consumer's psychology and consumer behavior was just introduced to our country. With the rapid development of market economy, the fundamental changes of the market situation and buyer's market formation have become the exterminating factors for the operation of the market.

2.1 Theory of Reasoned Action (TRA)

Derived from the social psychology setting, the theory of reasoned action (TRA) was proposed by Ajzen and Fishbein (1975 & 1980). The components of TRA are three general constructs: behavioral intention (BI), attitude (A),

and subjective norm (SN). TRA suggests that a person's behavioral intention depends on the person's attitude about the behavior and subjective norms ($BI = A + SN$). If a person intends to do a behavior then it is likely that the person will do it. Furthermore a person's intentions are themselves guided by two things: the person's attitude towards the behavior and the subjective norm. Behavioral intention measures a person's relative strength of intention to perform a behavior. Attitude consists of beliefs about the consequences of performing the behavior multiplied by his or her valuation of these consequences. Subjective norm is seen as a combination of perceived expectations from relevant individuals or groups along with intentions to comply with these expectations. In other words, "the person's perception that most people who are important to him or her think he should or should not perform the behavior in question".

Attitudes: the sum of beliefs about a particular behavior weighted by evaluations of these beliefs You might have the beliefs that exercise is good for your health, that exercise makes you look good, that exercise takes too much time, and that exercise is uncomfortable. Each of these beliefs can be weighted (e.g., health issues might be more important to you than issues of time and comfort).

Subjective norms: looking at the influence of people in one's social environment on his/her behavioral intentions; the beliefs of people, weighted by the importance one attributes to each of their opinions, will influence one's behavioral intention.

Behavioral intention: a function of both attitudes toward a behavior and subjective norms toward that behavior, which has been found to predict actual behavior.

In its simplest form, the TRA can be expressed as the following mathematical problems:

$$BI = (AB) W1 + (SN) W2$$

BI = behavioral intention

(AB) = one's attitude toward performing the behavior

W = empirically derived weights

SN = one's subjective norm related to performing the behavior

2.2 Theory of Planned Behavior (TPB)

In psychology, the theory of planned behavior is a theory about the link between attitudes and behavior. It was proposed by Icek Ajzen (last name sometimes spelled 'Aizen') as an extension of the theory of reasoned action. It is one of the most predictive persuasion theories. It has been applied to studies of the relations among beliefs, attitudes, behavioral intentions and behaviors in various fields such as advertising, public relations, advertising campaigns, healthcare, etc.[3]

Previous investigations have shown that peoples' behavior is strongly influenced by their confidence in their ability to perform that behavior (Bandura, Adams, Hardy, & Howells, 1980). As the Self Efficacy Theory contributes to explaining various relationships between beliefs, attitudes, intentions, and behavior, the SET has been widely applied to health-related fields such as physical activity and mental health in preadolescents [4] and exercise.[5]

Behavioral Beliefs & Attitude Toward Behavior

- **Behavioral belief:** an individual's belief about consequences of particular behavior. The concept is based on the subjective probability that the behavior will produce a given outcome.

- **Attitude toward behavior:** an individual's positive or negative evaluation of self-performance of the particular behavior. The concept is the degree to which performance of the behavior is positively or negatively valued. It is determined by the total set of accessible behavioral beliefs linking the behavior to various outcomes and other attributes.

3 Empirical Study

3.1 Samples Description

Table 1 the online time and percentage

| Project | category | This survey | | China Internet Network Information center(CINIC) |
|----------------------|-----------------|-------------|----------------|--|
| | | People | Percentage (%) | Internet usage (%) |
| Gender | Male | 107 | 59.4 | 57.2 |
| | Female | 73 | 40.6 | 42.8 |
| Time per week online | Less than 1 hr | 10 | 5.6 | 5.1 |
| | 1-10 hr | 84 | 46.7 | 45.1 |
| | 10-20 hr | 32 | 17.8 | 18.3 |
| | 20-40 hr | 34 | 18.8 | 19.4 |
| | More than 40 hr | 20 | 11.1 | 12.1 |

In light of validity of the data and acquirement, the research carried on among university student in Zhengzhou city in Henan province. Due to the main content that this text involves relates to network, the correspondence students have the experience of surfing on net. Questionnaire amount to 200, effective questionnaire 180 that regain, questionnaire 90%.

As Table 1 shows, through to surveying and studying the target's description statistics and relatively revealing with the finding of the information centre of China Internet, the goal crowd this time has contained the information centre of China Internet and surveyed and studied most crowds of our country indicated who surfs the Net in the colony at present, and, the results of the proportion surveyed and studied on proportions of men and women and time this time and information centre of China Internet are basically identical.

3.2 Data Analysis

(1) As shown in Fig. 3 among the respondents, 89.4% of the university students think the online shopping more convenient, it is obvious, convenience is to cause them to carry on the main factor of online shopping, 78.9% of the university students think the goods sold on the net are cheaper, thus the price factor is still the important factor influencing them to do shopping on the net. 85.6% of the university students think the online shopping can save more time, find in the investigation, only 25% of the girls like carrying on the online shopping, they like doing shopping and bringing their fun on the spot even more, market do shopping, can provide first a platform exchanging each other for them at the same time. 63.9% of the university students think that can grasp the knowledge of online shopping very fast, learn to browse through various goods on the network within relatively short time. 80.5% of the university students think the influence on facilitating them to carry on the online shopping certainly of pace of development of network.

(2) As shown in Fig.4, 70% of the university students think the shopping experience of the classmates or friends around has caused their shopping interest, can find, most students have not carried on the online shopping voluntarily in the investigation, mainly adopt the activity of doing shopping through introduction of the friend or classmate. 61.6% of the university students think that inquire the product information bought is very easy, the product information that the page expresses is easy to carry on the online shopping. There are 82.8% of the university students to influencing the overall feeling of purpose factor behavioral in online shopping to be relatively high. In general, university students wish eagerly online shopping is in relatively spirits.

3.3 Correlation Analysis

In order to understand whether factor and their online

shopping behaviors influencing each other of the university students to do shopping on the net are relevant, SPSS 11.5 statistical analysis software are used for the correlation analysis in influencing five factors among them. With

Pehrson's formula (Pearson) Say:
$$r = \frac{\sum_i \sum_j (X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_i \sum_j (X_i - \bar{X})(Y_i - \bar{Y})}}$$

The resulting result is as follows.

Table 2. The influence factors and purchase decision

| | Convenience | Cheap | Time saving | Shopping experience | Payment | Purchase |
|---------------------|-------------|----------|-------------|---------------------|---------|----------|
| Convenience | 1 | | | | | |
| Cheap | .988(**) | 1 | | | | |
| Time saving | .985(**) | .964(**) | 1 | | | |
| Shopping experience | .954(*) | .949(*) | .890(*) | 1 | | |
| Payment | -.136 | -.178 | -.156 | -.024 | 1 | |
| Purchase | .999(**) | .991(**) | .986(**) | .947(*) | -.566 | 1 |

As shown in Table 3, the convenience factor and buying the behavior and presenting high-level positive correlation on the net of online shopping ($r = 0.999, p < 0.01$), On the net products factor cheaply bought and buy behavior the high-level positive correlation on the net ($r = 0.991, p < 0.01$), Can save the time factor and buy the behavior and present high-level positive correlation on the net in online shopping ($r = 0.986, p < 0.01$), Experience factor and buying the behavior and presenting high-level positive correlation on the net of online shopping ($r = 0.947, p < 0.05$), The security factor and buying the behavior on the net of the terms of payment of online shopping is that prominent defeats are correlated with ($r = -0.566$).

Analyze that can know, the convenience factor of online shopping is the main factor of influencing online shopping according to two the above-mentioned forms, online shopping is cheap and saving factors such as time and experience etc. to be to influence university students to carry on the factor of online shopping, however, most university students think the terms of payment of online shopping are safer, they can pay through the third party to finish the trade.

4 Conclusions and Suggestion

4.1 Conclusions

4.1.1 Convenience and Shopping Experience

The data analysis indicate, it is university student's degree of attention to convenience and university students' experience of shopping at network to influence university students to carry on the main factor of online shopping, the more university students pay attention to the convenience factor, the higher the experience level of the network is, the higher its possibility to participate in online shopping is.

Convenience is the main reason that university students participate in online shopping, and once university students participate in the online shopping, the convenience factor no longer exerts an influence on its intensity participated in, this proves, the convenience factor is university student's

minimum exigency of participating in online shopping, once the online retailer can't reach this minimum exigency, only one their choice is planted, that is to withdraw.

At present, the online shopping is still new things to most university students, they are still at trying to use stage, are obtaining experience of shopping at network from classmate or friend around constantly, the experience will influence them to participate in the activity of online shopping to a great extent.

4.1.2 Privacy and Security

Security and personal secrets influence two key factors of development of online shopping, the university students without experience of online shopping demonstrate greater distrust inclination in the ability of these two respects to the online retailer, especially the college girl takes the great majority, so will influence them to participate in the online shopping.

And to the university students with experience of online shopping, though its cognitive level at the security of the online trade is not very high, but because there is experience of doing shopping, has already set up basic trust with the ability that the online retailer protects the individual privacy to the network environment.

4.2 Suggestion

The network retailer's basic goal is to meet consumer's demands through offering the products or service, thus survived and developed, and university students are regarded as the special consuming groups, retailer should fill and assign developing and is suitable for students the network, and the goods within its range of consuming capacity.

(1) Insist on facing university student's consuming groups at the cheap commodity price. Still influencing university students to do shopping on the net as to the price factor, the behavior, the network retailer must offer the service of lower price, completion to strive for more university students and participate in the online shopping.

(2) Set up the products and retailer's prestige of network.

In network market undeveloped China, who can buy one-self never hear or quality reliable product on the net? How to confirm the authenticity of university student's demand is a difficult problem faced at the present stage in network marketing too, this can be come down to the prestige question.

(3) Dispel consumer's doubts and worries about security of online shopping. The security of online shopping includes relevant law, policy, technical specification and online security, accelerate the construction of the anti-counterfeit network system engineering of the goods and improve the prestige intensity of the marketing website of network, it is a key to the online trade.

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