PATH ANALYSIS OF PERCEIVED VALUE INFLUENCE ON SHOPPING SATISFACTION OF ONLINE CUSTOMERS IN THE VIEW OF MENTAL ACCOUNTING

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Abstract

As a kind of psychological activity in the individuals, families or organizations, mental accounting focuses on economic activity, coding and evaluation. It is of practical significance to explore customer behavior patterns and psychological changes, and improve customer satisfaction through reasonable marketing. Online enterprises need to pay attention to the perceived value of consumers and enhance overall consumer satisfaction so as to achieve long-term and stable development under the background of economic globalization. Enterprises and organizations obtain complete and accurate personalized demand information of consumers in order to achieve a win-win situation for both consumers and enterprises. This study focuses on the influencing factors of online shopping satisfaction of consumers in the new environment of online and offline integration, and explores the path dependence and influence of online consumer perceived value and the website features of consumer satisfaction. Based on the theory of mental accounting and consumer behavior, this study combines the Howard-Sheth model with the consumer perception value theory to construct a theoretical framework. This study h extends prior work by using structural equation model to test the effect of perceived value on website features, trust and customer satisfaction from the perspective of mental accounting. It is hoped that this study can provide data reference and theoretical guidance for online enterprises in marketing and knowledge management, in a bid to develop accurate marketing strategies, customer segmentation and differentiated services, improve the operation mechanism of network market and promote online services.

Key words: Customer Perceived Value, Mental Accounting, Customer Shopping Satisfaction, Path Analysis.

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INTRODUCTION

The rapid development of the Internet has changed global business practices and shopping patterns, especially in China. According to the 6th World Internet Conference, China's e-commerce transaction volume reached RMB3.16 billion, accounting for more than 35% of GDP in 2018. This also provides the basis for increasing personalized requirements and online shopping demand of consumers. This study intends to use the consumer's mental accounting to study consumers' online consumption behaviors.

Dissatisfaction usually leads to lose customers and income. Compared with American customers, Chinese customers have several characteristics: their sense of security is lower; they think they take more risks because of fake goods and false advertising, so they are more sensitive to price, and they are more cautious in making purchase decision. Therefore, it is of great significance to explore the factors that affect online customer satisfaction. Parasuraman & Grewal (2000) argued that perceived value was the most important predictor of repeated purchase intention.

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Business studies and surveys have also indicated that online consumers are now looking for functional value and that 93% of online consumers seek for freshness, innovation and discovery to satisfy their intrinsic needs. Recent studies have begun to focus on the role of perceived value in explaining repeated purchase behaviors in the online shopping context (Wang, 2008; Kim & Gupta, 2009; Fang, Ye, Kucukusta et al., 2016).

In this study, based on a survey, we empirically develop four key dimensions of a particular websites that affect consumers' shopping experience and satisfaction. Further, this study investigates the main features that consumers are looking for when calculating their mental accounting, identifies potential dimensions, and evaluates their relative importance. Thus, this study attempts to find the factors for improving service quality, and also provides new references for other scholars in this field.

JD (http://www.jd.com/) is the specific shopping website selected in this study. In recent years, it has developed stably and rapidly, and has a relatively fixed customer base. Its sales, logistics and after-sales models are quite representative and serve as an important support for this research.

THEORETICAL FRAMEWORK

The new retail model on the Internet not only brings convenience to consumers, but also has an impact on consumers' mental accounting and perceived usefulness. It is a hot research topic in academic circle to bring the theory of mental accounting into consumers' purchase decision-making.

Some researchers have started to investigate how the attributes of a website will influence customers' satisfaction. These studies have presented various characteristics as important factors for an effective B2C e-commerce website (Schaupp & Belanger, 2005). There have been several other attempts to build an evaluation framework or identify dominant factors concerning customer satisfaction with online shopping from the perspective of website quality (Ranganathan & Ganapathy, 2002), purchasing behavior (Park & Kim, 2003), consumer attitude (Elliott & Speck, 2005), customer value (Cai & Xu, 2006), service quality (Chong, Yang, & Wong, 2003) and mental accounting (Thaler, 2008)

This study analyzes the impact of shopping patterns on consumers' mental accounting under all-channel retailing, in order to provide recommendations for consumers and retailers in reality.

In the following section, we will attempt to reorganize mental accounting, perceived customer value, features of website and trust as main factors affecting customer satisfaction.

Mental accounting

Mental accounting was first put forward by Thaler (1980), who summarized and prospected the theory and research of mental accounting in 1999 and 2008. The theory holds that consumers will treat different expenditures and benefits with different attitudes. By establishing a mixed model of cognitive psychology and microeconomics, this study explores the value function and concludes the coding rules of gains and losses.

The basic characteristics of mental accounts include hedonic coding, non-substitution, flexibility, and a combination of short-term and long-term orientation (Grinblatt, & Han, 2019). For the classification of mental accounting, Thaler (1999) divided mental accounting into daily consumer spending and luxury spending. Li, Ling, Fang et al. (2007) found that the mental accounting system of Chinese people has a relatively stable "3-4-2" classification structure, in which the "affective maintenance accounting" has Chinese characteristics and is widely used in subsequent studies.

Consumers often follow an implicit mechanism of value evaluation when measuring their mental accounting, and their perceived value is often inconsistent with their real value, with obvious individual differences.

Mental accounting will affect consumers' cognitive system and perceived value function. Conversely, consumers' personalized characteristics and the network environment will make mental accounting change. Therefore, this study intends to collect data and build a model from the perspective of mental accounting so as to explore the factors influencing consumer shopping satisfaction and path changes.

Customer value and perceived value

Value is considered to be an important constituent of relationship between marketing and the ability of a company to provide superior

value to its customers, which is regarded as one of the most successful competitive strategies (Treacy & Wiersema, 1993). Customer value is conceptualized as tradeoff between benefits and sacrifices with a focus on the concrete performance characteristics of the products/services (Zeithaml, 1988; Gale, Gale, & Wood, 1994).

Perceived value is a consumer's overall assessment of the utility of a product (or service) based on perceptions of what is received and what is given (Zeithaml, 1988). By adding more value to their products or services, companies try to improve customer satisfaction so that the bonds are strengthened and customer loyalty is thereby achieved.

For e-commerce customers, perceived value is one of the main reasons to engage in online transactions. The purchase decision is determined by both monetary (price) and non-monetary (risk, convenience and happiness) factors. Gupta & Kim (2010) pointed out in the online purchase model that consumers will measure the purchase intention in their mental accounting and then change to the actual purchase behavior.

Website features

The key characteristics of a B2C website could be categorized along the lines of its content and design (Huizingh, 2000). Content refers to the information, features or services offered in the website, while design is the way by which the contents are presented to consumers.

A B2C website will not be effective if it fails to meet customer expectations. Moreover, it is very important to understand consumer perceptions of an effective B2C website, as online consumers tend to have very different profiles compared to traditional retail shoppers (Donthu & Garcia, 1999). Hence, we look at B2C e-commerce companies from the consumer-oriented approach, and try to put forward suggestions that consumers think value-added (Jarvenpaa & Todd, 1997).

Before purchasing a product, consumers look for information on website: brands, variety, price and quality. But different consumers have different information needs. In this study, we use privacy security, ratings and comments, reputation, and customer experience as the main factors that influence the features of the website.

Privacy security remains a key issue in e-commerce industry since personal and financial information can be intercepted and used for fraudulent purposes (Carlos Roca, José García, & José de la Vega, 2009). Perceived security is defined as "the subjective probability with which consumers believe that their personal information will not be viewed, stored, and manipulated during transferring and storage by inappropriate parties in a manner consistent with their confident expectations" (Flavián & Guinalíu, 2006).

In order to alleviate risks, online consumers based their decisions on rating and comments provided by others' shopping experiences (Luo & Zhong, 2015). Liu & Park (2015) distinguished between source reputation (i.e., perceived degree of honesty) and source expertise. They reported that online reviews posted by a source with a high reputation were more useful than reviews written by those who have a low reputation. An effective reputation system is useful for establishing a successful online comment community and Electronic word-of-mouth (eWOM) channel.

Kim, Park, & Jeong (2004) pointed out that the psychological feelings generated by customers in the process of browsing and shopping online, that's, the customer experience, were a comprehensive reflection of customer feelings, imagination and emotions. Further, Ahmed, Rizwan, Ahmad et al. (2014) verified the positive impact of customer experience on trust and customer satisfaction. Arikan, Kantur, Maden et al. (2016) pointed out that customers shared the shopping experience, opinions and related knowledge on the website, and consequently, online comments would affect the shopping decisions of other consumers.

Based on these views, this study uses these four main factors to construct a conceptual model.

Online trust and satisfaction

The concept of satisfaction originates from psychology and represents a positive emotion in which one's inner expectations are realized. Customer satisfaction refers to the emotional reflection of the gap between the customer's ultimate experience and the customer's own expectations. Customer experience mainly represents customer perception, which includes perceived quality and perceived value.

In a longitudinal study, trust is found to influence customer's purchase decision and

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satisfaction affects long-term loyalty (Kim, Ferrin, & Rao, 2009). Online consumer satisfaction significantly affects their willingness of repeated purchase intention and continuous use. Cheung & Lee (2005) showed that 80% of consumers with high satisfaction would purchase repeatedly, and 90% of them would recommend others to purchase. Online shopping has the disadvantages of security risks, privacy risks, etc., while avoiding the drawbacks of traditional shopping. Many scholars have analyzed the factors affecting consumers' shopping satisfaction from different angles and using different methods (Liu, He, Gao et al. 2008).

This study intends to measure the change of mental accounting by investigating and analyzing consumers' own perceived value, individual characteristics and shopping preferences, as well as the external characteristics of the website, and then analyze consumer behavior trends.

In short, this model takes consumers' online shopping environment and personal characteristics as input variables. Through the calculation, comparison and measurement of mental accounting, combined with their own online shopping experience and risk preferences, consumers will form trust and have different satisfaction and subsequent decision-making behavior.

RESEARCH MODEL

This study is based on the theory of mental accounting and the theory of online consumer behavior. Considering the research results of Howard-Sheth Model, this study selects the most influential factors, and then constructs the customer online shopping satisfaction model in a specific B2C transaction (Pei, Xue, Li et al., 2015; Zhao & Zhao, 2013).

The intrinsic variables in this model mainly refer to perceived value and perceived structure. Consumers' perception and experience determine their acceptance of stimuli and inputs. External factors are mainly related to the cultural background, financial level, values and other personalized comprehensive characteristics of consumers. Input variables, i.e. stimulus and input factors, include three levels: product stimulus, website sales strategy stimulus and online shopping environment stimulus. This model integrates external factors and input variables into "website features", which is also one of the innovations of this study. The result variables of this model mainly refer to the consumers' shopping satisfaction caused by trust, and the following possible word-of-mouth effect and repeated purchase intention.

The path diagram of the initial structural equation model is shown in Figure 1 below.

Figure 1. **Hypothesis model**
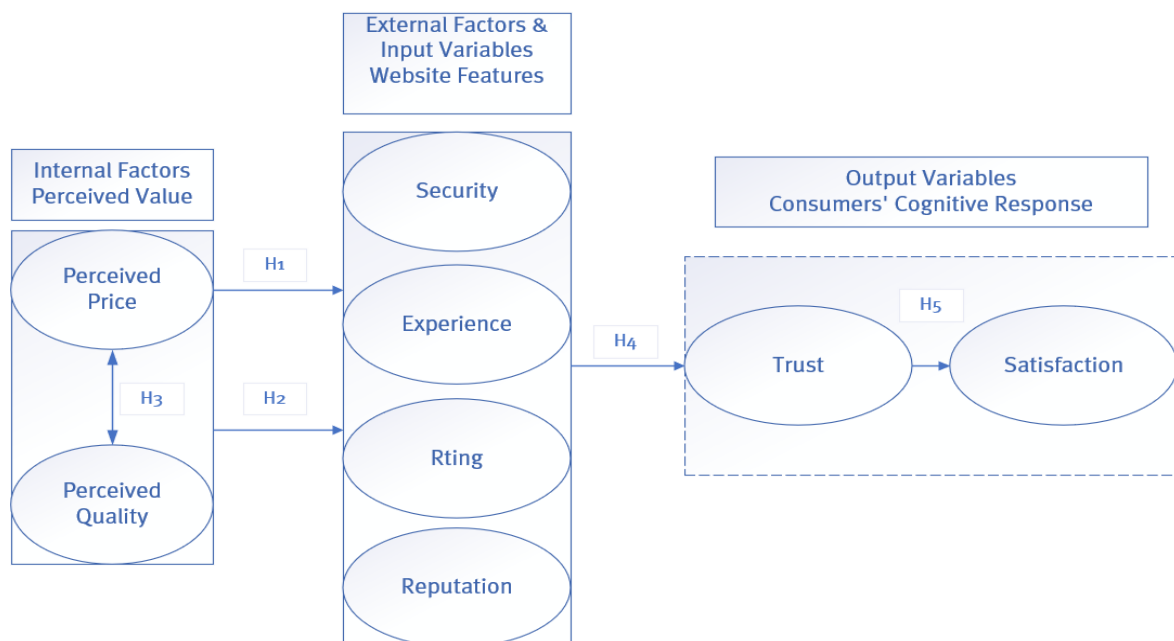
The impact of perceived value on website feature

According to Gale, Gale, & Wood (1994) in his book *Managing Customer Value,* perceived quality is an assessment of a customer's comparison of a product or service on a shopping site with a competitor's product or service and perceived value is a comprehensive psychological perception that consumers adjudge based on the relative perceived price of an online product or service. Therefore, whether buying a product or service in a traditional physical store or on a virtual website, consumers are most concerned with the value of the product, including the perceived quality and perceived price of the product. Therefore, we put forward the following hypothesis:

H1. Perceived price has a positive influence on website features

H2. Perceived quality has a positive influence on website features

The relationship between perceived price and perceived quality

Perceived quality is different from objective or actual quality, a higher-level abstraction rather than a specific attribute of a product, a global assessment, which in some cases resembles attitude, and a judgment usually made within a consumer's evoked set (Zeithaml, 1988). Many studies often discuss it from two parts: perceived service quality and perceived product quality.

From consumers' cognitive conception, perceived price is something that must be given up or sacrificed to obtain certain kinds of products or services (Zeithaml, 1988). Perceived price is more meaningful than monetary price in e-commerce transactions.

Improving the perceived quality of online customers is beneficial to increasing the price level that customers are willing to pay. Perceived quality and perceived price are mutually influential. For this reason, we develop the following hypothesis:

H3. There is a significant correlation between perceived price and perceived quality

The impact of website features on E-trust

Studies of website *features* are identified into two categories: hedonic features (those that contribute to attractiveness, pleasure or fun) and utilitarian features (those that contribute to usefulness or ease of use) (Chaudhuri & Holbrook,

2001). Mithas, Ramasubbu, Krishnan et al. (2006) explored the relationship between e-commerce websites and customer satisfaction and loyalty with three dimensions from functionality features (such as usefulness, convenience, and fulfillment of website information), procedural features (such as website design, personalized services, privacy and financial protection, and entertainment) and social features (such as reputation, virtual community and word-of-mouth).

This study combines the previous research to figure out website features from four perspectives, namely website security (such as payment security, privacy statement and protection), customer experience (such as ease of use and convenience, FAQ, logistics, and after-sales service), online comments and rating (such as product information, online reviews and support rates) and website reputation (website integrity, unique style, staff service level and quality).

Bilgihana & Bujisicb (2015) believed website features positively influence consumers' intention to engage in online activities, especially trust and satisfaction. For this reason, we develop the following hypothesis:

H4. Website features have a positive impact on E-trust

The impact of E-trust on consumer satisfaction

Trust is defined as "confidence in a person or thing because of the qualities one perceives" in New Webster's Dictionary. In the latter literature (Zhao, Zhao, & Liu, 2012), the definition has been further developed. In this study, E-trust refers to the willingness of a party believing another party in the uncertain (or risky) environment, including its ability, benevolence and integrity.

Higher trust results in lower transaction costs and lower transaction risk. Due to long-term trust relationships, consumers are likely to accept products of the website in a tolerant manner and then show satisfaction somehow. Online enterprises can also better promote their business philosophy, core values and products, so as to achieve a win-win situation. Therefore, we hypothesize that:

H5. Higher E-trust will lead to more customer satisfaction

Considering the four dimensions of website features, we divide the influences into different paths, forming the hypothesis (see table 1).

Table 1. **Path hypothesis of the theoretical model**

Hypothesis		Specific Content
	H1a	Perceived price has a positive influence on website security
H1: Perceived price has a positive influence on website features	H1b	Perceived price has a positive influence on customer experience
	H1c	Perceived price has a positive influence on online comments and rating
	H1d	Perceived price has a positive influence on website reputation
	H2a	Perceived quality has a positive influence on website security
H2: Perceived quality has a positive influence on website features	H2b	Perceived quality has a positive influence on customer experience
	H2c	Perceived quality has a positive influence on online comments and rating
	H2d	Perceived quality has a positive influence on website reputation
H3		There is a significant correlation between perceived price and perceived quality
	H4a	Website security helps build E-trust
H4: Website features have a positive impact on E-trust	H4b	The better customer experience can build more E-trust
	H4c	Positive online comments and rating helps build E-trust
	H4d	Website reputation has a positive influence on building E-trust
H5		Higher E-trust will lead to more customer satisfaction

DATA COLLECTION

Sample, questionnaire design and data collection

According to Nielsen's 2015 survey of global consumers, consumers aged 21-34 are the main force of online consumption, and they have the characteristics of technology and individuality and huge consumption potential. In China, the post-90s consumer groups, as "data aborigines", account for 16% of China's total population. From now until 2030, they will contribute more than 20% of China's total consumption growth, higher than any other population category.

Therefore, considering the popularity of some professional vocabulary (such as reputation and WOM), the sample group of this study mainly focuses on the 18-35-year-old consumer group with online shopping experience, relatively stable online shopping amount and frequency, and college education or above.

Each of the respondents is requested to complete a two-part questionnaire. The first one is the personal information. The second part consists of a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), and most of the questions in the second part are from related literature (Pei, Xue, Li et al., 2015; Zhao & Zhao, 2013).

In particular, we select Jingdong (https://www.joybuy.com/) as a typical representative of B2C transactions in the questionnaire. It is very popular among young people because of its complete range of goods and logistics services.

A self-administered questionnaire (SAQ) survey was carried out from July to September 2017, including pre-research and formal research.

We design the initial questionnaire for pre-research, and collect 78 valid questionnaires. The data and each latent variable are tested for reliability and validity. The results show that the hypothesis is established and the theoretical model is verified basically. Combining the problems in the pre-survey and the suggestions of respondents, we modify the original questions and options to form the final questionnaire. In the formal survey, we send out 200 questionnaires. A total of 151 available questionnaires are collected, taking into account non-response biases and data availability.

Descriptive analysis

We summarize and calculate the valid data, and get the basic information of the respondents, as shown in Table 2. By descriptive analysis, we get lifestyle statistics and purchasing habits of samples, including frequency of online shopping, online buying propensity, and attitude toward risk and so on.

As can be seen from Table 2, the younger group of 18-25 years old in the sample accounts for the majority, and the lower income accounts for more than 70%. In addition, more than 65% of the respondents have bachelor degree or above. On the whole, the sample is characterized by youthfulness, lower income, high level of education, and high frequency of online shopping, and so on.

Table 2. **Samples' descriptive statistics**

Gender	Frequency	Percentage
Male	55	36.4%
Female	96	63.6%
Age	Frequency	Percentage
<18	1	0.66%
18-25	142	94.03%
26-35	8	5.31%
>35	0	0
Education	Frequency	Percentage
Junior college	8	5.30%
College	44	29.14%
Bachelor	85	56.29%
Graduate	14	9.27%
Income	Frequency	Percentage
<1500	87	57.62%
1500-3000	38	25.17%
3000-5000	19	12.58%
>5000	7	4.63%

When the respondents are asked "What do you value most when shopping online in Jingdong?", the words with the highest frequency in the answer are "faster replacement speed", "electronic products", "global purchase" and "fast logistics", "complete types", etc. It can be seen that the online shopping characteristics of the samples are outstanding in individualized demand. They like to follow and purchase new products with high technology content, have higher requirements for logistics service quality and pursue higher quality of life.

When the respondents are asked "Do you easily trust others?", nearly 60% of them choose less than 3 points (3=Neither agree nor disagree); when asked "Are you a risk-averse person?", more than 70% of them choose more than 3 points, which indicates that most of the respondents are risk-neutral or risk-averse consumers. In summary, these basic attributes of the samples may affect the effects of subsequent model and data analysis results.

RESULTS AND DISCUSSION

This study uses data collected from surveys and analyzes with structural equation modeling. Each respondent is given a questionnaire containing information experience shopping in Jingdong, and the questions are measured on a Likert scale to meet the needs for analyzing continuous variables in structural equation model.

All latent factors used in this study and their detailed descriptions are shown in Table 3. Also, it presents the descriptive statistics for all data based on a 1 to 5 point Likert scale. The mean of

all variables is greater than 3, the standard deviation is less than 1, and the overall data quality is good.

Table 3 also presents the variables with higher mean are CE3 (The timely logistics and delivery services impress me. The products I purchased are always delivered within the time that I expected) and CR2 (I really care about other online customers' comments and support rates), and the variables with larger standard deviation are PP3 (This website's logistics and distribution costs are cheaper than others) and ST1 (I feel satisfied after spending money on this website). Therefore, the respondents are very concerned about the service quality of the logistics and word-of-mouth. This result may be related to the group characteristics of the samples. In the subsequent research, the age and income of samples should be reconsidered for supplementary research.

Scales are subject to factor analysis for validation. As shown in Table 4, the selected variables load on distinct latent factors.

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization

The **bold data** have relatively higher loadings and hence are selected for each latent factor.

It is worth noting that negative variables focus on "relative price advantage", "online payment security", and so on, which are potentially the most valuable information to online companies.

To further confirm the reliability of the scales, we also calculate and present the Cronbach alpha coefficients in Table 5. It is recommended that the acceptable reliability for the Cronbach alpha coefficient be 0.70 or greater (Peterson, 1994).

In our case, most coefficients are greater than 0.70 in additions to perceived price, perceived quality and website security factor, basically indicating the consistency and reliability of our variables and constructs. Let us move on these factors. Their Cronbach alpha coefficient is above 0.6 and below 0.7, indicating that there are some differences between the scale design elements and the views of respondents. This also reflects the gap between the experience and actual expectations of the respondents in Jingdong shopping, including price, quality and security. This result will not affect the stability of our subsequent analysis and results (Loewenthal & Lewis, 2018).

Table 3. **Variable definitions and descriptive statistics for all data**

Latent factor	Description (ID)	Mean	Std. deviation
Perceived Price (PP)	Products of this website have a price discount compared to another physical store. (PP1)	3.50	0.855
	Coupon and limited-time discount of this website would give me more benefits. (PP2)	3.35	0.881
	This website's logistics and distribution costs are cheaper than others. (PP3)	3.47	0.958
Perceived Quality (PQ)	The product category is complete on this website. (PQ1)	3.72	0.776
	The product information of this website is detailed and consistent with its actual situation, allowing me to understand its relevant information. (PQ2)	3.44	0.813
	This website is designed to be convenient, humanized and friendly, and I do not need to ask for help when I first shop online. (PQ3)	3.76	0.789
Website Security (WS)	The website's online payment system is safe relatively. (WS1)	3.70	0.739
	My personal information will not be illegally intercepted or leaked after the shopping on this website. (WS2)	3.32	0.743
	The website will protect the privacy of customers in accordance with the privacy statement. (WS3)	3.35	0.723
Customer Experience (CE)	This website provides customers with different feedback ways. (CE1)	3.46	0.885
	The online customer service is highly skilled and professional, and can help me solve emergency and unexpected problems. (CE2)	3.36	0.859
	The timely logistics and delivery services impress me. The products I purchased are always delivered within the time that I expected. (CE3)	3.99	0.796
	The after-sales communication channel is very effective and can timely solve the follow-up issues. (CE4)	3.31	0.850
Comment and Rating (CR)	I can often get products and related technical information from online customers' reviews and rating. (CR1)	3.65	0.850
	I really care about other online customers' comments and support rates. (CR2)	3.95	0.878
	This website's online comments do not have malicious marketing behavior of brush reputation, and can accurately reflect the real situation of the products. (CR3)	3.43	0.837
Corporate Image and Reputation (CI)	The website is concerned about its reputation. (CI1)	3.68	0.805
	The website has its own unique design style. (CI2)	3.42	0.760
	The service personnel show a good quality during the shopping and interactive process. (CI3)	3.55	0.806
Customer Trust (CT)	I believe the quality of the products and services of this website, which makes me satisfied. (CT1)	3.60	0.857
	The website will try its best to negotiate and resolve any problems in shopping. (CT2)	3.62	0.773
	I believe that the website will abide by its rules, commitments and privacy statements. (CT3)	3.68	0.725
	I believe in the integrity of the website. (CT4)	3.74	0.746
Customer Satisfaction (ST)	I feel satisfied after spending money on this website. (ST1)	3.45	0.936
	I did not encounter unpleasant things and I was not disappointed in shopping on this website. (ST2)	3.70	0.764
	I will come back to this website if I want to buy similar products next time. (ST3)	3.67	0.764
	The website's online customer service always responds promptly, and the service attitude makes me very satisfied. (ST4)	3.38	0.915

Figure 2 shows the calculation results for all data of the structural equation.

In the initial trial model, it should be noted that H1 (perceived price- website features) fails to pass the test, which means the direct impact from perceived price to website features does not exist. H4d (corporate reputation-trust) fails to pass the test either. In addition, fit index chi-square value (degrees of freedom) is 390.5 (195), which is slightly higher than the criterion. Therefore, the model needs to be modified according to the MI value. The modified results are shown in Figure 3.

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Table 4. **Variable definitions and rotated factor matrix for all data**

Latent Variable	ID	1	2	3	4	5	6	7	8
Perceived Price	PP1	0.442	-0.035	-0.113	-0.137	0.349	**0.545**	0.060	0.015
	PP2	0.524	0.153	0.064	0.036	0.033	**0.696**	-0.012	0.007
	PP3	0.470	0.010	0.139	0.645	-0.064	-0.073	-0.114	-0.083
Perceived Quality	PQ1	0.439	0.007	0.155	0.016	0.733	0.129	-0.055	0.027
	PQ2	**0.616**	0.188	0.093	-0.123	0.073	0.013	-0.082	0.570
	PQ3	**0.602**	0.021	-0.114	0.214	0.358	0.132	0.175	-0.028
Website Security	WS1	0.538	0.536	-0.085	-0.005	0.213	0.005	0.131	-0.130
	WS2	0.315	**0.781**	0.102	-0.093	-0.079	0.026	0.000	0.075
	WS3	0.562	**0.571**	-0.136	0.204	0.032	0.151	-0.101	0.056
Customer Experience	CE1	**0.597**	-0.067	0.597	0.009	0.144	0.044	-0.019	0.053
	CE2	**0.687**	0.085	0.468	0.062	0.149	-0.030	-0.022	0.092
	CE3	0.510	-0.012	-0.419	0.471	0.189	-0.090	-0.055	0.164
	CE4	**0.715**	0.106	0.187	0.278	-0.189	0.110	-0.093	-0.206
Corporate Image and Reputation	CI1	**0.605**	0.003	0.142	-0.074	-0.059	-0.012	0.564	-0.014
	CI2	**0.623**	0.242	-0.033	-0.233	0.054	0.085	0.398	0.028
	CI3	**0.598**	0.307	0.412	0.012	-0.069	-0.141	0.289	-0.045
Comments and Rating	CR1	**0.632**	0.023	-0.118	0.307	0.067	0.066	0.280	0.355
	CR2	0.510	-0.243	0.009	0.461	0.120	0.256	0.362	-0.047
	CR3	**0.734**	-0.013	-0.028	0.125	0.089	-0.057	0.091	0.215
Customer Trust	CT1	**0.767**	-0.163	-0.038	-0.201	-0.107	0.075	-0.127	-0.070
	CT2	**0.646**	0.110	0.163	0.153	-0.263	0.314	-0.225	-0.298
	CT3	**0.736**	0.062	-0.071	-0.061	0.191	0.004	-0.156	-0.382
	CT4	**0.865**	0.019	-0.172	-0.009	-0.065	-0.045	0.065	-0.121
Customer Satisfaction	ST1	**0.612**	-0.009	0.092	-0.045	-0.280	0.075	-0.187	0.315
	ST2	**0.821**	-0.122	-0.136	-0.154	-0.158	0.033	-0.062	0.137
	ST3	**0.763**	0.028	-0.093	-0.101	0.163	-0.302	-0.117	-0.108
	ST4	**0.645**	0.015	0.510	0.181	0.062	-0.018	0.091	0.055

Figure 2. **Preliminary calculation results for all data**

N=151
Chi-square=390.5
Deg of freedom=195
RMSEA=0.082

NFI=0.796
GFI=0.812(AGFI=0.756)
RFI= 0.758
CFI=0.884

Significance
0.05=*
0.01=**
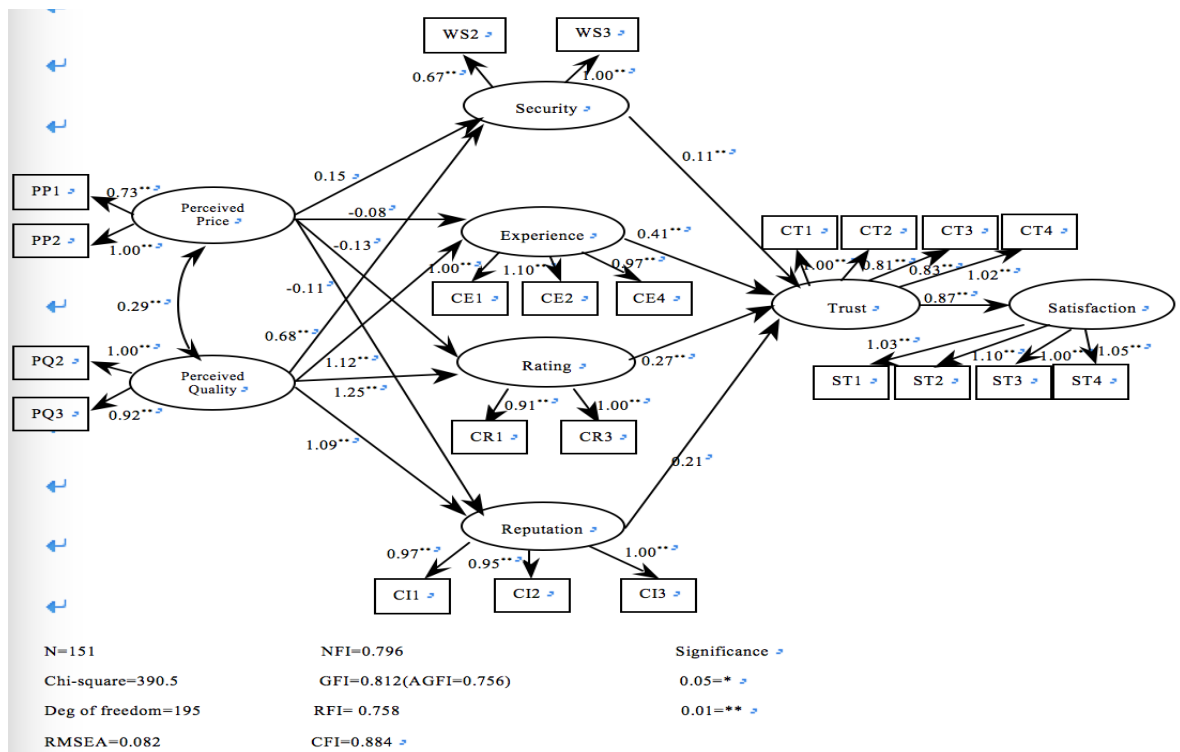
Figure 3. **Modified results for all data**

N=151

Chi-square=323.537

Deg of freedom=196

RMSEA=0.080

NFI=0.831

GFI=0.840(AGFI=0.794)

RFI= 0.801

CFI=0.924

Significance

0.05=*

0.01=**
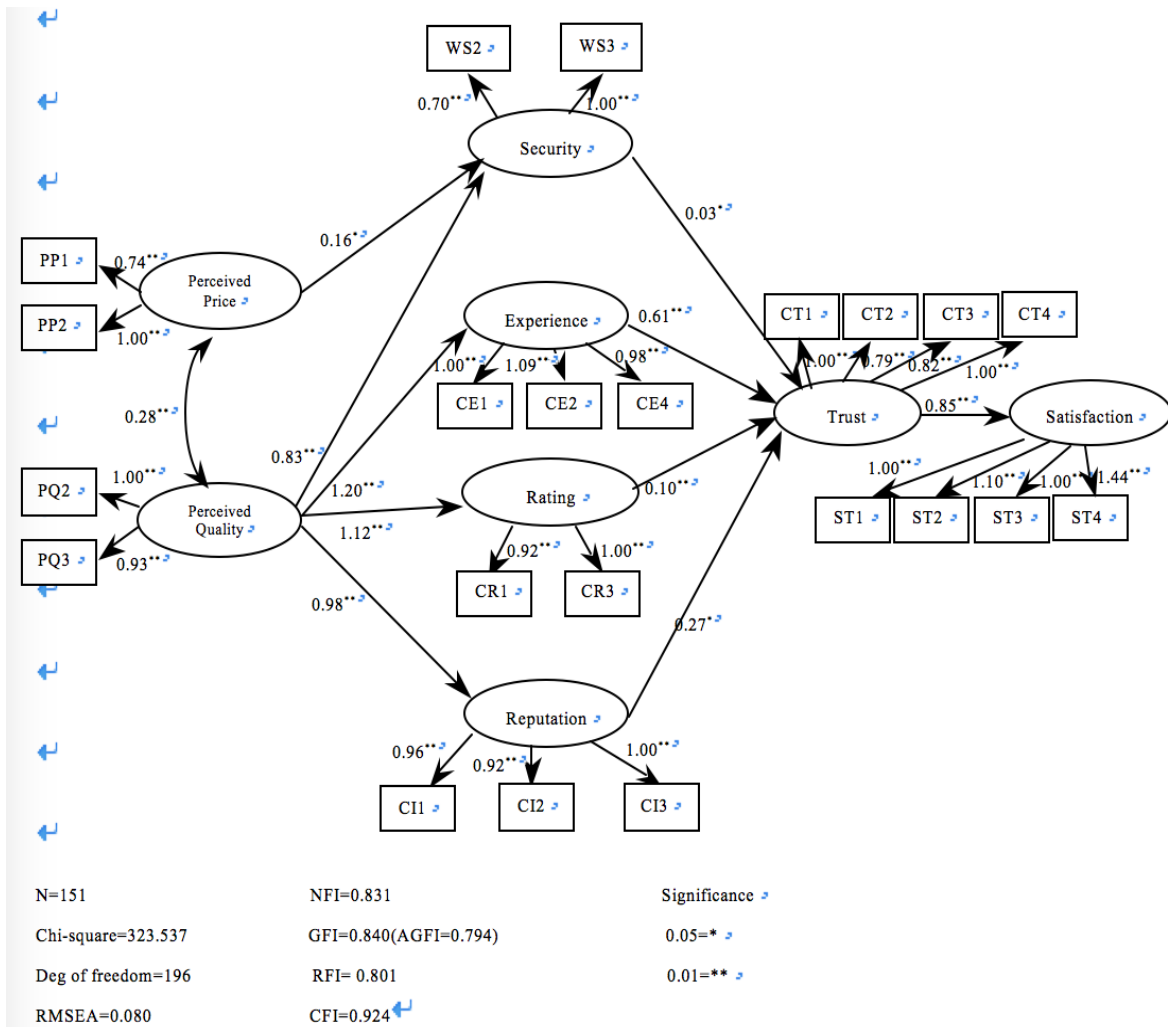
Table 5. **Cronbach alpha coefficient**

Construct	Variables	Cronbach's α
Perceived Price	PP1, PP2	0.668
Perceived Quality	PQ2, PQ3	0.630
Website Security	WS2, WS3	0.654
Customer Experience	CE1, CE2, CE4	0.798
Corporate Image and Reputation	CI1, CI2, CI3	0.740
Comment and Rating	CR1, CR3	0.748
Customer Trust	CT1, CT2, CT3, CT4	0.841
Customer Satisfaction	ST1, ST2, ST3, ST4	0.780
Total		0.931

Figure 3 shows that $\chi^2/df<2$, GFI>0.8, CFI>0.9, and the retained parameters all pass the significance test of p=0.05, and then whole model is optimal. However, it is interesting that the relationship between perceived price and the three variables of the website features is not significant, which may be related to the small sample size and high data concentration of this survey.

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Table 6. **Summary of hypothesis results**

Hypothesis	Effect	Support
H1: Perceived Price on Website Features	-	-
H1a: Perceived Price on Website Security	0.16	Yes
H1b: Perceived Price on Customer Experience	-	-
H1c: Perceived Price on Comment and Rating	-	-
H1d: Perceived Price on Corporate Image and Reputation	-	-
H2: Perceived Quality on Website Features	4.13	Yes
H2a: Perceived Quality on Website Security	0.83	Yes
H2b: Perceived Quality on Customer Experience	1.20	Yes
H2c: Perceived Quality on Comment and Rating	1.12	Yes
H2d: Perceived Quality on Corporate Image and Reputation	0.98	Yes
H3: Correlation between Perceived Price and Perceived Quality	0.28	Yes
H4: Website Features on Trust	1.01	Yes
H4a: Website Security on Trust	0.03	Yes
H4b: Customer Experience on Trust	0.61	Yes
H4c: Comment and Rating on Trust	0.10	Yes
H4d: Corporate Image and Reputation on Trust	0.27	Yes
H5: Trust benefit on Satisfaction	0.85	Yes
Total effect for H1= sum of component effects; "-" represents that results are not significant.		

The analysis of all data in Table 6 shows that all hypotheses have almost been verified except H1 (about perceived price). In other words, the direct effect of perceived price is not significant and must pass perceived quality to have a positive impact on website features, even trust and satisfaction. This result shows that the era of "low price priority" has ended in China's B2C e-commerce market basically, and the psychological calculation and measurement process in the consumer's mental accounting has also become more complicated and objective.

Using structural equation modeling, perceived value is found to increase trust and satisfaction through website features, but such direct effect is not significant for perceived price. The small sample size and narrow sampling range are important factors affecting the results.

CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

This study explores the ways and extents of perceived value affecting consumer behaviors from the perspective of consumers' mental accounting. It is important for organizations to improve customer satisfaction and build knowledge management system.

Although it is very difficult to generalize from a sample of only 151 young people, these results suggest that organizations need to pay attention to the external performance of the website (such as ease of use and entertainment), but also need to pay attention to the intrinsic perceived value of consumers. Cultivating a positive core value experience will help build a win-win situation.

The survey found that more than 80% of respondents frequently shop online and use mobile payment, indicating that consumers have a considerable level and scale in the market awareness of online shopping. Perceived price plays a role in website features and trust via perceived quality mainly. These demonstrate that China's online shopping group has entered a relatively mature, rational and stable stage, therefore enterprises should strive to build a brand image, increase the psychological reference price of consumers, and focus on guiding consumers to establish a value system consistent with the company and improve the perceived utility of consumers.

In addition, most of the respondents in this study are younger groups. They are more able to accept new technologies, and have a relatively high-risk tolerance, distinct personality requirements and group characteristics, so they are the main target groups of online shopping and mobile payment in the next 5-10 years. Enterprises should focus on exploring their behavioral characteristics and satisfaction factors, which help to develop differentiated marketing strategies. Further, enterprises should pay special attention to accurately grasp the psychology of all kinds of consumers, promote experiential marketing in a timely and appropriate manner, and launch different marketing strategies for practical products and hedonic products to stimulate their purchasing power, reduce complaints, and increase loyalty.

This study has some limitations that need be addressed through future research. First, the sample data are all from young consumers, which may reduce the accuracy and universality of the results. In the future, we can consider consumers with different "comprehensive backgrounds" (such as different working and education backgrounds, different ages, different incomes and consumption levels) as data research objects. Secondly, the choice for e-commerce websites is very time-sensitive. Over time, some companies may no longer be liked by consumers or even disappeared. Later we will select a number of typical websites (such as fresh food e-commerce platform, cross-border e-commerce companies, and maternal and child supplies e-commerce companies) for comparative research. Third, "mental accounting" and "perceived value" are relatively new concepts in the e-commerce field. Many consumers and organizations don't know much about their connotation. There are also some drawbacks in the design and investigation of questionnaire. In the future, scenario design studies for mental accounting should be added.

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