An Empirical Investigation of the Impact of Internet Word of Mouth (IWOM) on Consumers' Purchase Intentions—With Consumer Perceived Value as the Mediating Variable

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ABSTRACT. With the rise and development of online shopping, it has become increasingly common for consumers to make purchases through online channels, but due to the virtual and untouchable nature of the Internet, it is not possible to try any product before purchasing it, so Internet Word of Mouth (IWOM) has become an important reference for consumers when making online purchases. In this paper, we develop a research model called "IWOM-Purchase Intentions" and use consumer perceived value as a mediating variable to empirically investigate the impact of IWOM on purchase intentions in an e-commerce environment. The data was collected by questionnaire survey and analysed by SPSS25.0. The results show that all the hypotheses are valid, that Internet Word of Mouth (IWOM) has a significant positive impact on consumers' willingness to purchase through consumers' perceived value, and that consumers' perceived value acts as a complete mediator between the two; on this basis, recommendations are made for relevant entities to implement Internet Word of Mouth (IWOM) marketing strategies.

KEYWORDS: Internet Word of Mouth (IWOM), functional value, emotional value, social value, willingness to purchase

1. Introduction

The development of the Internet has led to a number of new features in consumer behaviour, changing the way consumers traditionally search for and communicate with each other, and providing a new interactive platform for them to obtain and exchange product information. One of the most important sources of information, through which consumers can interact socially, exchange product-related

information and make informed purchases, is playing an increasingly important role in their purchasing decisions.

In the online shopping environment, consumers' perceived value is an important intermediate variable in their shopping decisions and an important antecedent that influences their purchasing decisions. However, most scholars at home and abroad regard customer perceived value as unidimensional and use it as a starting point to explore the relationship between customer perceived value, customer satisfaction, customer loyalty and customer willingness to purchase. The three dimensions of social value are used as mediating variables to investigate the relationship between IWOM, functional value, emotional value, social value and consumer willingness to purchase.

2. Theoretical foundations and research assumptions

2.1 Related concepts

2.1.1 Internet Word of Mouth

Initially defined as a form of informal group influence, word of mouth is a non-commercial verbal communication between two or more people about a brand, product or service [1], Engel J F et al. proposed that communication and exchange of information via the Internet is a form of word of mouth communication, or 'online word of mouth', which enables traditional word of mouth to be heard. Hanson defines computer-mediated word-of-mouth communication as Internet word-of-mouth (IWOM), which refers to the use of the Internet as a medium for word-of-mouth communication in the form of e-mails, user groups, online forums and discussion forums on portals [3].

2.1.2 Perceived value

Zhang Xiaodong believes that consumer perceived value is the overall evaluation of the utility of a product or service after weighing the benefits perceived by the consumer against the costs incurred in obtaining the product or service. Functional value (FV), emotional value (EV) and social value (SV)[5], where FV refers to the amount of economic value received by the consumer compared to the monetary cost paid by the consumer, and EV refers to the emotional response of the consumer to the service provider. SV refers to the extent to which the consumer's own social image has been enhanced.

2.1.3 Consumer willingness to buy

It is still in the subjective consciousness stage and has not yet reached the stage of specific purchasing behaviour, which is the first stage of the actual purchasing

behaviour and has a positive influence on the purchasing behaviour[7]. Whether or not this is the case has an impact not only on consumer behaviour but also on the sales of the business.

2.2 Research hypothesis

2.2.1 Internet Word of Mouth and consumer willingness to buy

Herr et al. argue that interesting word-of-mouth (WOM) content has a stronger impact on consumer behavioural intentions than a straightforward language style [8]; Research suggests that IWOM has an impact on consumers' willingness to buy, as they want to get feedback from other consumers on the quality and price of products, etc., and weigh the pros and cons of a purchase transaction [9]. The relationship model mainly includes individual differences and customer perceptions, and the empirical results show that individual differences and the variables under the customer perception structure do have a positive or negative impact on purchase intentions [10]. Based on this, it is hypothesised that.

H1: Internet Word of Mouth has a positive impact on consumers' willingness to purchase

2.2.2 Internet Word of Mouth and Perceived Value

Wang Jianjun et al. found that a high degree of product evaluation by unfamiliar word-of-mouth can promote a high degree of consumer evaluation of product quality and usefulness, thereby increasing product recognition and resulting in a higher perceived value of the product [4]; Zhang Xiaodong mentioned in his paper that communicative communication via the Internet can reduce consumer perceived uncertainty and enhance the customer's sense of self-status and controllability and enhancing their perceived value [5]. Research on viral marketing also argues that an emotional approach stimulates word-of-mouth (WOM) spread by customers, but also by WOM recipients, thereby triggering a snowball effect. Based on this, the following hypothesis is proposed.

H2: Internet Word of Mouth has a positive impact on consumer perceived value

H2a: Internet Word of Mouth has a positive impact on consumer functional value

H2b: Internet Word of Mouth has a positive impact on consumers' emotional value

H2c: Internet Word of Mouth has a positive impact on consumer social value

2.2.3 Perceived value and consumer willingness to buy

In the field of marketing, perceived value is often seen as an important prerequisite for influencing consumer purchasing behaviour [11], and when consumers are about to purchase a product or service, the perceived value is significantly increased when they perceive a greater benefit to be gained from the product or service they are about to purchase, and this higher perceived value increases their willingness to purchase [12]; DoddsWB. proposed that whether or not a consumer will ultimately purchase a product or service depends largely on the trade-off between the perceived value of the product or service and the price to be paid [13];when the perceived value received is higher than the price to be paid, this will lead to a high degree of product recognition and a greater willingness to purchase [4]. For this reason, Hypothesis proposed.

H3: Consumers' perceived value has a positive influence on their willingness to purchase

H3a: The emotional value of consumers has a positive influence on their willingness to buy.

H3b: The value of a consumer's function has a positive influence on the consumer's willingness to buy.

H3c: The social values of consumers have a positive influence on their willingness to buy.

3. Research design

3.1 Questionnaire design

In this paper, a questionnaire survey is conducted to find out whether consumers have the experience of online shopping through Internet Word of Mouth (IWOM). The questionnaire is anonymously administered and randomly distributed through two methods, i.e. questionnaire star and WeChat diffusion, to ensure the reliability and randomness of the data. The questionnaire is divided into three parts: the first part asks the respondents whether they have made online purchases through Internet Word of Mouth (IWOM), if not, the questionnaire is considered invalid; The second part is the basic information of the respondents, including gender, age, education and occupation; the third part is the main part, which is designed to measure IWOM, functional value, emotional value, social value and consumers' willingness to purchase; The third part is the main body of the questionnaire, which is mainly designed to measure the five aspects of IWOM, functional value, emotional value, social value and consumers' willingness to purchase. For the question items of variables, the measurement scales are based on the well-established scales of their predecessors and the measurement items are in the form of Likert 5-point scales, with 1 representing complete disagreement and 5 representing complete agreement.

3.2 Measurement of variables

There are five variables in this study, including Internet Word of Mouth (IWOM), functional value, emotional value, social value and consumer willingness to buy. The measurement scales were all based on the mature scales of previous researchers. For IWOM, three questions were set: "When buying a product, I would first search the Internet for reviews of a product" , "I would care a lot about online reviews of products and brands" and so on [5]; For functional value, four questions were set, such as "I feel that this product is good value for money through Internet word of mouth" ,"I feel that this product is a good product for the price through Internet word of mouth" and so on[14]; For the emotional value, four questions were set, such as "I feel that the product makes me feel relaxed when I use it through IWOM" ,"I feel that the product makes me feel good through IWOM" and so on [14]; For social value, four questions were set, including "I feel that using this product will make me acceptable to others through IWOM" , "I feel that using this product will improve others' perceptions of me through IWOM" and so on [14];For consumer willingness to purchase, the final measurement scale is based on three items: "Word-of-mouth information has changed my thoughts and attitudes when buying the product" ,"I would recommend this product to my friends and family" and so on [15]. Based on this, a final measurement scale was developed.

4. Data analysis

4.1 Sample characteristics

Table 1 Sample basic information

item	Sub item	Number	proportion
Gender	male	97	45.1%
	female	118	54.9%
Age	20 years old and below	22	10.2%
	21-30 years old	126	58.6%
	31-40 years old	37	17.2%
	41 years old and above	30	14.0%
Education level	Junior high school and below	14	6.5%
	Senior high school (technical secondary school)	46	21.4%
	junior college	26	12.1%
	undergraduate college	80	37.2%
	Master degree or above	49	22.8%
occupation	student	48	22.3%
	clerk	79	36.7%
	Staff of public institutions	28	13.0%
	Freelancer	31	14.4%
	other	29	13.5%

In this study, questionnaires were distributed randomly through the two methods of questionnaire star and WeChat diffusion, and the returned questionnaires were

rejected as invalid according to the following criteria: (1) no experience of online shopping with reference to Internet Word of Mouth (IWOM); (2) obvious regularity of answers; (3) one answer for all questions. A total of 215 valid questionnaires were obtained, and the number of valid questionnaires was greater than 10 times the number of items (215>180), which proved that the sample size was sufficient. According to the purpose of the study and the need for hypothesis testing, the study used SPSS25.0 software to enter the survey data analysis, sample statistical results are shown in Table 1.

4.2 Confidence validity test

The internal consistency of each variable was tested using SPSS25.0 and Cronbach's alpha coefficient was found to be greater than 0.7, indicating that the scale items have high internal consistency. A factor analysis was carried out on 18 items in the questionnaire using principal component analysis (principal component analysis (PCA)). 5 factors were identified, which matched the variables studied, with a cumulative variance contribution of 70.537%.

The test of validity generally consists of two parts: the test of convergent validity and the test of discriminant validity. The test of convergent validity is used to measure whether the latent variable can be measured simultaneously by different observables and is generally reflected by the average extracted variance (AVE) of the latent variable. The convergent validity test measures whether there is a significant difference between different variables, which is generally measured by comparing the AVE root value with the Pearson correlation coefficient between the variables, and the square root of the AVE for all variables is greater than the Pearson correlation coefficient between the variables. (see Table 2), indicating that this scale has good discriminant validity.

4.3 Relevant analysis

Table 2 Reliability and validity of the scale and correlation analysis of variables

dimension	reliability	convergent validity		discriminant validity			
	Cronbach's a	AVE	IWOM	FV	EV	SV	PI
IWOM	0.734	0.614	**0.784**				
FV	0.807	0.503	0.346**	**0.709**			
EV	0.841	0.523	0.304**	0.612**	**0.723**		
SV	0.907	0.656	0.269**	0.533**	0.605**	**0.810**	
PI	0.799	0.605	0.261**	0.499**	0.501**	0.456**	**0.778**

The diagonal bold characters are the open root value of AVE, and the lower triangle is Pearson correlation (* *.The correlation is significant at 0.01 level (double tail)

In this paper, SPSS 25.0 is used to analyse the correlation between the model variables and to standardise all variables. From the Pearson's correlation coefficients shown in Table 2, it can be seen that the correlation coefficients between IWOM, functional value, emotional value, social value and consumer willingness to buy reached a significant level of 0.01, all of which have a significant correlation, indicating that further regression analysis can be done.

4.4 Regression analysis and hypothesis testing

Pearson's correlation analysis can be used as a preliminary test of the model's assumptions, but does not fully explain the relationship between IWOM, perceived value and willingness to purchase. The hypothesis was verified to be valid; in addition, tolerance and VIF were used as references in order to avoid a co-linear relationship between the variables. The regression results are shown in Table 3, which shows that all the variables passed the significance test, which means that all the hypothesised paths proposed in this study are supported by the empirical results, which means that IWOM has a significant positive effect on perceived value, IWOM on consumer purchase intention and perceived value on consumer purchase intention; it can also be found through Table 3 that IWOM has a significant positive effect on consumer purchase Table 3 also shows that the significant effect of IWOM on consumers' purchase intention becomes less significant after the introduction of perceived value, therefore, it is necessary to further explore the mediating effect of consumers' perceived value. In addition, the variance inflation factor (VIF value) is less than 2, indicating that there is no co-collinearity problem.

Table 3 Regression and significance analysis

Dependent Variable	Independent Variable	Unstandardized Coefficients		t	p	Collinearity Statistics	
		B	se			Tolerance	VIF
PI	constant	2.464	0.348	7.081	0.000		
	IWOM	0.324	0.082	3.949	0.000	1.000	1.000
FV	constant	2.245	0.304	7.396	0.000		
	IWOM	0.385	0.072	5.388	0.000	1.000	1.000
EV	constant	2.301	0.333	6.906	0.000		
	IWOM	0.366	0.079	4.661	0.000	1.000	1.000
SV	constant	1.931	0.412	4.681	0.000		
	IWOM	0.396	0.097	4.073	0.000	1.000	1.000
PI	constant	1.026	0.340	3.022	0.003		
	FV	0.277	0.084	3.309	0.001	0.562	1.778
	EV	0.235	0.081	2.889	0.004	0.513	1.949
	SV	0.143	0.062	2.309	0.022	0.590	1.696
	IWOM	0.075	0.075	0.990	0.323	0.863	1.158

4.5 Intermediary effects test

The results are shown in Table 4, which shows that the overall effect and indirect effect of IWOM on willingness to buy are significant, but the direct effect of IWOM on willingness to buy does not pass the significance test, which means that IWOM influences consumers' willingness to buy entirely through their perceived value. Perceived value acts as a complete intermediary in the relationship between IWOM and the consumer's willingness to buy.

Table 4 Mediating effect test

		Effect	SE	LLCI	ULCI
Total effect of X on Y		0.324	0.082	0.162	0.485
Direct effect of X on Y		0.075	0.075	-0.074	0.223
Indirect effect of X of Y	TOTAL	0.249	0.055	0.154	0.374
	FV	0.107	0.043	0.037	0.203
	EV	0.086	0.039	0.021	0.174
	SV	0.057	0.030	0.006	0.128

5. Research findings and recommendations

5.1 Findings

This paper constructs a model of IWOM influencing consumers' purchase intention from the perspective of consumers' perceptions, and investigates the influence of IWOM on consumers' purchase intention with consumers' perceived value as a mediating variable. The results show that: (1) IWOM has a significant positive impact on consumers' perceived value, and consumers' perceived value also has a significant positive impact on their purchase intentions. (2) The significant effect of IWOM on consumer purchase intentions becomes less significant after the introduction of perceived value, which means that consumer perceived value playing a fully mediating role between IWOM and consumers' purchase intentions; (3) among the three dimensions of consumer perceived value, functional value has the strongest mediating effect, followed by emotional value and social value.

5.2 Countermeasures and recommendations

Based on the above research findings, we propose corresponding countermeasures and recommendations to provide relevant entities with ideas for implementing Internet word-of-mouth marketing.

5.2.1 Build a good reputation online

IWOM has a significant positive effect on consumer willingness to buy, and good word of mouth strengthens a company's image and encourages more consumers to make purchase transactions, thereby creating greater profits for the company. In addition, IWOM also acts as a market judge and market cleanser, as companies with a good reputation tend to stay in business, while a negative reputation can lead to or accelerate the withdrawal of undesirable companies and their products from the market. Therefore, in addition to quality products and perfect service, it is important for companies to build and maintain a good network reputation.

5.2.2 Enhancing customer perceived value

IWOM influences consumers' willingness to buy through their perceived value, but research has shown that the importance of the three dimensions of functional value, emotional value and social value are different, with functional value having the strongest mediating effect, followed by emotional value and social value. This means that whether a product is cost effective, of reliable quality and low price is more important than whether the product is desirable and preferred by consumers and whether it can enhance their social status.

5.2.3 Proactively directing and retaining consumers with low perceived value

Generally, consumers with low perceived value exert more negative influence (complaints, regrets, accusations, etc.) and this negative word-of-mouth often has a greater impact on consumers' willingness to buy than positive word-of-mouth, which not only discourages purchases but also leads to more and more negative word-of-mouth. It is therefore important to avoid price and service strategies that lead to low perceived value, and to take timely measures to recover consumers with low perceived value and reduce the likelihood of them posting malicious or negative reviews.

6. Conclusion

This paper constructs a research model of "Internet Word of Mouth - Purchase Intention" from the perspective of consumers' perceptions. Through designing questionnaires, building theoretical models and empirical analysis, we finally find that Internet Word of Mouth has an impact on consumers' purchase intention through consumers' perceived value, And on this basis, the corresponding suggestions are put forward, namely that enterprises should not only focus on the establishment and maintenance of good word-of-mouth, but also on enhancing the perceived value of consumers, which is believed to have certain significance for the implementation of Internet word-of-mouth marketing by relevant subjects.

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