Exploration of the Influence of Online Reviews on Consumers' Purchase Intention

Hsiang-Chun Huang [1]
Department of Information
Management
I-Shou University
Kaohsiung, Taiwan
audrey0118@hotmail.com

Lisa Y. Chen[2*]
Department of Information
Management
I-Shou University
Kaohsiung, Taiwan
lisachen@isu.edu.tw

Yu-Ting Su[3]
Department of Information
Management
I-Shou University
Kaohsiung, Taiwan
isu10622317g@cloud.isu.edu.tw

Abstract—**With the progress and development in information technology, the Internet has become the main channel for consumers to receive information and share opinions. Review websites are the most popular platform for consumers to browse information and search. However, nowadays, consumers are accustomed to reading online reviews before they have purchase intention. In addition, most of the writings on the review websites originate from the personal experience of other consumers. Moreover, there are mixed positive and negative opinions and viewpoints. Consumers can look over the online reviews of the product to understand its characteristics and other consumers' opinions about the purchase. Based on the theory of reasoned action, this research explores the influence of online reviews, attitudes and subjective norms on consumers purchase intention. Questionnaires were collected through the Internet to gather data. In total, 395 valid samples were collected and all hypotheses tests were performed using SPSS. The results of the research show that online reviews, attitudes and subjective norms have positive effects on consumers' purchase intention. The results of this research show that consumers will refer to online reviews when making purchase decisions. Therefore, enterprises should make good use of this marketing tool for strategic planning of product marketing.**

Keywords-online reviews; theory of reasoned action; attitudes; subjective norms; purchase intention

I. INTRODUCTION

Taiwanese online shopping sites have been getting increasingly popular in recent years; these include Yahoo, Ruten and Shopee. These sites have a high penetration rate into modern society and all of them have a reviewing function. And due to the fact that the online shoppers' ability to search for information has improved, they tend to check other consumers' reviews on the product to get more product information and reference for shopping decisions. Online reviews have a significant impact on online shopping. Since the perceived risk of online shopping is great, reading of product reviews carefully can effectively reduce the uncertainty about the products [1]. Inboundmarketing [2] shows that media and blog marketing use specific media or influential people in the community to stimulate the purchase intention of potential consumers, for example, well-known bloggers commenting on the Internet. This can be regarded as a part of word of mouth marketing, and the reason why the media and bloggers can occupy an important position in online marketing is because consumers are exposed to a large number of online advertising sales every day, which makes them no longer easily trust the advertising. For it, it is more reliable to share the experience of bloggers, Internet celebrities or others after personal use.

Herr et al [3] believes that word of mouth is a very important factor when consumers purchase household and edible products. Word of mouth is more convincing than advertising, since advertising can only increase the visibility of products or services. The main reason is that consumers can't simultaneously process all the useful information to make purchase decisions. They tend to use simple methods to simplify the process of information collection and decision-making, and word of mouth can reduce the amount of information needed for decision-making [4]. Word of mouth can be divided into positive and negative ones. Positive word of mouth has a positive correlation with consumer satisfaction experience, and it can build a good image for enterprises and improve business performance. Negative word of mouth is regarded as a type of customer complaints, which will damage the corporate image and cause harm to the enterprise [5]. Positive word of mouth propagation refers to the positive evaluation or satisfaction produced by consumers. They tell the people that they interact about a certain company or store. Negative word of mouth refers to a situation when consumers encounter a dissatisfying product, service or user experience. They tell their relatives and friends about this dissatisfying experience, and advise others not to buy or use the same product [6] [7].

According to Fullerton [8], nearly 60% of consumers browse online product reviews at least every week, and 93% of consumers say that online reviews will affect their shopping choices [9]. At the same time, the report indicates that the content of reviews is extremely important, and 82% of consumers believe that the content of reviews induces them to make their shopping decisions. Consumers will not only pay attention to the number of reviews or the overall rating of the product, they will carefully check the details of the reviews, and judge the convincingness of their arguments in order to deduce consumer experience of the product [10].

The Internet provides a platform for marketing communication. It is not only possible to comment on products on one's own website, but also interact with consumers to provide consultation and opinions. With the establishment of an interactive area with consumers, consumers can learn about the experience of the others through the interactive area before purchasing them. As Tanimto and Fujii [11] said, in a computer-mediated environment, reviews provide the potential consumers a source of reference of experience to reduce risks and uncertainties, online reviews have thus become an important source of information for consumers. So Money [12] points out that there are two types of communication in the field of marketing that can lead to customer's decision-making, and these are advertising and word of mouth respectively.

Online reviews are one of the most important forms of online word of mouth. Online reviews are a kind of evaluation that is given by consumers to their purchased goods or services on the online shopping platform. They can be positive or negative, subjective or objective. It is essentially a textual evaluation made by consumers on the basis of product experience, which can provide a reference for later potential consumers. Therefore, online reviews play a more important role in today's consumer behavior in comparison with corporate advertising. Unlike other studies that mostly use the technology acceptance model (TAM) model, which is used to explain the adoption of information systems in organizational contexts, this study uses theory of reasoned action to investigate consumers' intentions to take certain actions for online reviews.

For the above reasons, this research intends to examine the impact of consumer information obtained from the Internet on consumers' purchasing decisions from a consumer's perspective, and to further explore whether online reviews, attitudes, and subjective norms have an impact on consumers' intentions to purchase. This research process mainly includes an introduction including research motivation and background, related literature review and discussion, research methods include establishing research framework and hypotheses, research methods include samples, data collection and statistical data analysis, and conclusions including implications and contributions, limitations and future research recommendations.

II. LITERATURE REVIEW

A. Online Reviews

Following the rapid development of technology networks, word of mouth is no longer limited to the spreading of reviews among consumers. Consumers can comment on products through different channels like community websites, forums and other diversified platforms in order to publish their own reviews on a product, brand and service. Hennig-Thurau et al. [13] defined online word of mouth as a platform for real customers to use the Internet to write positive or negative reviews on products or services. Online reviews are the content that consumers publish on the Internet through experience, and are the most important way to present word of mouth propagation. They think that the main reason why more and more consumers are willing to provide online word of mouth is that consumers can increase social interaction, self-value and potential income by sharing ideas.

Goldsmith [14] indicates that online word of mouth can be obtained through numerous platforms, such as forums, virtual communities, review websites, etc. Consumers can obtain information about the products through the Internet platforms, and can simultaneously refer to the experience and opinions of other consumers. The forms of transmission are also very diverse. Consumer reviews are platforms for consumers to express their opinions. These examples include websites or personal web pages; sending information to the others through personal email addresses; the discussion area includes electronic bulletin boards, news groups, etc. They can provide specific topics for consumers to discuss. On the other hand, chatrooms are for members of groups to discuss.

Chatterjee [15] defined online reviews as the consumer's reviews on the use experience, product quality and performance. It consists of review content, reviewer information, review time and other review grades [16]. Online reviews are consumer websites, personal homepage websites, commercial product sales platforms, etc. expressing personal opinions or complaints about commodities, and these reviews last relatively long on the Internet. At the same time, consumers can quickly search for relevant commodity information.

In addition, Dhanasobhon [17] believes that online reviews are based on personal experience. Users publish reviews on the product on the website, such as product performance, quality and extent of convenience. These reviews can help ease the concerns on online shopping.

Consumers can obtain information about the products through the Internet platforms, and can simultaneously refer to the experience and opinions of other consumers [18]. The forms of communication are also very diverse. Consumer reviews are platforms for consumers to express their views, such as product websites or personal web pages. Personal e-mail is used to send information to others. Discussion areas include electronic bulletin boards, news groups, etc., which provide a platform for consumers to discuss specific issues. Chat rooms are used for online member group discussion [14].

B. Theory of Reasoned Action

The theory of reasoned action was developed by Fishbein and Ajzen [19]. It was based on the standpoint of social psychology. It was mainly used to predict and understand people's intention and behavior. The theory of reasoned action has been widely used in various fields [20]. There are two basic hypotheses in the theory of reasoned action: (1) most of the actions can be controlled by one's own will and are rational. (2) The intention of an individual to engage in an act is the decisive factor for the occurrence of the act [21]. The main hypothesis of this theory is that the actual behavior of an individual is determined by his/her intention to act. It is rational, and the intention to act is affected by his/her attitude and subjective norms, as shown in Figure 1 of the theory of reasoned action.
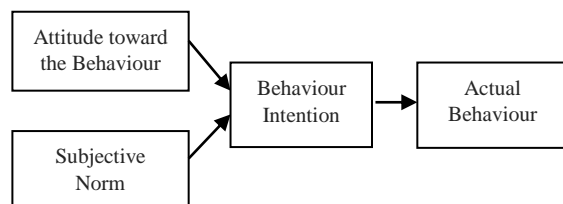

Figure 1. Theory of reasoned action (Fishbein & Ajzen, 1975)

The theory of reasoned action is not only a systematic theoretical framework, Becker and Gibson [22] think that this theory has six characteristics: (1) The theory of rational behavior explains decision-making and sociological factors. (2) The influencing factors of the theory of reasoned action include individual and social levels. (3) The theory of reasoned action can be tested many times in different situations and different groups. (4) The framework of the theory of reasoned action is concise and has clear analysis methods. (5) The theory of reasoned action can be used to test the influence of underlying beliefs on certain actions and participation. (6) The research results of the theory of reasoned action can be widely used.

The theory of reasoned action is mainly composed of attitudes, subjective norms and behavioral intentions. Fishbein and Ajzen [19] believed that attitude is the result of personal past learning experience, resulting in consistent preference or aversion to an object, and also the overall evaluation of a specific person, thing or idea. Attitude refers to a kind of continuous evaluation of likes or dislikes, emotional feelings and behavioral intentions of an individual to a specific object. In the theory of social psychology, attitude is regarded as a complex system, which contains customers' beliefs, attitudes and intentions towards the object [23]. In other words, an attitude is a positive or negative evaluation of a particular behavior. When an individual's attitude toward behavior tends to be positive, his desire will be higher; if it tends to be negative, his desire will be lower.

Fishbein and Ajzen [21] believe that behavioral intention refers to the decision-making process of an individual, reflecting the subjective probability that the individual wants to engage in a specific behavior; while continuous use of intention refers to the individual's tendency to engage in a certain behavior. Although the intention may not be consistent with the final behavior, the future behavior of consumers can be predicted by evaluating the intention. The stronger an individual's intention to hold an action, the greater the probability of the action since there is a strong relationship between actual action and action intention. Therefore, it can be seen that the more positive an individual's attitude towards the action is, the more intensely the act will be executed. The tendency and degree of action that the individual wants to engage in a specific behavior. That is, whether the individual has the mental intensity to act in the decision process of behavior selection; in measurement, it can be translated into the question of whether the individual is willing to try or how much effort to give. This item can be used to explain and predict the actual behavior of individuals. There is a high correlation between attitude and behavioral performance. At the same time, it can predict the possible action by the performance of attitude, which means if attitude is a negative or positive review of an action. Therefore, there is a strong correlation between attitude and intention. Subjective norms belong to external influences.

Fishbein and Ajzen [21] believe that subjective norms refer to the opinions of influential individuals or groups on specific actions, such as family members, teachers, friends, etc. Subjective norms can reflect the extent to which individuals are influenced by important persons concerned. Karahanna and Chervany [24] believe that subjective norms are a kind of social influence process, which has two types: (1) Information impact: that means that when individuals think that this group is trustworthy,

the information provided by this group will be regarded as part of the facts. For example, when all the friends around say that the ratio of a product's performance to its price is very high or it is easy to use, then they may get interested in the product, triggering the intention to buy afterwards. (2) Specification impact: there may be a kind of social norms among trustworthy groups. Individuals will comply with group norms or expectations, and then change their behavior and perception. For example, if a product is purchased and used by all of your peers, and you are called for personal purchase, you may purchase this product because it meets the expectations of your peers. Therefore, the higher the degree of subjective norms, the higher the behavioral intention. On the contrary, the lower the subjective norms, the lower the behavioral intention.

Dodds et al. [25] believe that purchase intention refers to the possibility that consumers intend to purchase specific goods. Intention refers to the probability of willing to perform a certain action, so purchase intention refers to the subjective probability of consumers willing to participate in the purchase behavior. Since it is very difficult to measure consumers' purchase behavior, many researches often judge consumers' actual purchase behavior by their purchase intention. According to the research of Zeithaml, et al. [26], customers' behavior intention can be divided into two categories: like and dislike. If the customer is willing to like the action, it will improve the customer's ability to consume and produce constant profits. If not, they will leave and reduce consumption. Therefore, it can be seen from the discussion of scholars that the customer's going and staying represents the basic foundation of consumption ability. However, Oliver [27] believes that the purchase behavior and purchase intention are mainly affected by customer satisfaction. Therefore, consumers' satisfaction when purchasing goods will become the key factor of whether they are willing to buy. Taylor and Baker [28] also found in their service industry research that service quality and customers' purchase intention have significant positive influence on service industry. The purchase intention is to measure the possibility of consumers to buy a certain product. The higher the purchase intention is, the higher the purchase probability is. The consumers who represent positive purchase intention will form positive commitment. In the past, there have been many studies on the relationship between online reviews and purchase intention [29].

Cheung [30] believes that many consumers will search the Internet for relevant product information before shopping and refer to the internet word of mouth. It will let consumers easily share their shopping experience with other consumers. Positive online reviews have a positive impact on purchase intention. The quantity and quality of online reviews do affect consumers' purchase intention [31]. However, low involvement is more susceptible to quantity, while high involvement is more susceptible to quantity under the condition of high quality. Chen [32] believes that consumers will respond to both positive and negative signals and it will influence their purchase intention. Review propagation makes people pay attention to its key influence no matter whether it's brand switch or attitude change, or even shaping of loyal customers. Advertising can only increase the awareness of products. The critical role of reviews is more influential than other marketing tools when customers make the final purchase decision [3]. Day [33] probed into the effectiveness of consumers' attitude change, and found that the effect of word of mouth is nine times that of advertising. The research results of Bone [34] show that reviews not only do affect consumers' judgments on products in the short term, but also have long-term effects.

III. METHODALOGY

A. Research Framework and Hypothesis

This research uses the theory of reasoned action as the theoretical basis to explore the impact of online reviews on consumers' purchase intention. Based on the above research incentives and purpose, through the review and discussion of related literature, research hypotheses and the research framework (as shown in Figure 2) are proposed as follows:

H1：Online reviews have a positive impact on attitudes.

H2：Online reviews have a positive impact on subjective norms.

H3：Attitudes of online reviews have a positive impact on purchase intention.

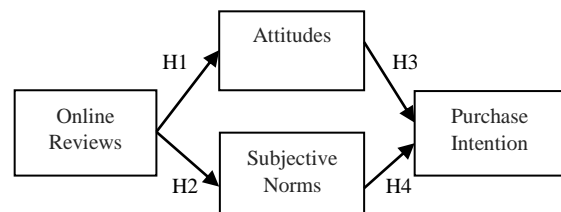H4：Subjective norms of online reviews have a positive impact on purchase intention.

Figure 2. The research model

Operational definitions of each variable are discussed as below:

Online reviews: according to the view of Ohanian [35], the operational definition of online review in this research

defines that an online review as a source of information that has three factors, namely, professionalism, reliability and attractiveness, which can distinguish whether the reliability of the source be high or low. Attitude: according to Fishbein and Ajzen [19], the operational definition of attitude in this research is defined as the evaluation of a person's advantageous or ineffective action, which is determined by the strength of belief that the action will lead to a specific result and the evaluation of the result. This part is mainly to measure consumers' attitude towards online reviews on purchase intention. Subjective norms: according to the standpoint of Fishbein and Ajzen [21], this research defines subjective norms as consumers' online shopping. It is a decision whether or not to take a particular action because of an important person or environment around him. Purchase intention: according to Haskett et al. [36], this research defines purchase intention as customer retention rate, repurchase rate and recommendation rate.

B. Sample and Data Collection

This research uses online questionnaire survey method to collect sample data and the Google Forms use to create the formal network questionnaire, and through Facebook and Line, in the form of snowball sampling, The data collected from questionnaires were statistically analyzed, questionnaire scale uses the Likert five-point scale, in accordance with the "Strongly Agree", "Agree", "Neutral", "Disagree" and "Strongly Disagree", respectively, to give 5 to 1 points.

The subjects of the questionnaire were users who had used an Internet platform for shopping. An online questionnaire was used in this research due to the strong relationship between online shopping products and the Internet. 425 samples were received, 395 were valid questionnaires, 30 were invalid questionnaires, and the recovery rate was 93%.

Among the 395 samples of this research (as shown in Table I), the number of male samples was 176, accounting for 44.6% of the total sample ratio, and the number of female samples was 219, accounting for 55.4% of the total sample ratio. The number of samples collected in this research shows that more women prefer network consumption than men, among the samples of the age groups using the Internet platform for consumption, most of the samples were distributed to the 126 people who are aged from 21-30, accounting for 31.9% of the total sample ratio, followed by 87 people aged from 41 to 50, accounting for 22% of the total sample. The least number of samples came from 34 people under the age of 20 (inclusive).

TABLE I. THE BACKGROUND CHARACTERISTICS OF SAMPLES

Distribution of Demographic Variables		Frequency	Percent (%)
Gender	Male	176	44.6%
	Female	219	55.4%
Age	Under 20	34	8.6%
	21~30	126	31.9%
	31~40	73	18.5%
	41~50	87	22%
	Above 50	75	19%
Occupation	Industry	60	15.2%
	Business	69	17.5%
	Freelance	81	20.5%
	Military Education	107	27.1%
	Student	29	7.3%
	Other	49	12.4%
Education	High school	178	45.1%
	Undergraduate	195	49.4%
	Master degree	22	5.6%
Monthly Income	Under 15,000	50	12.7%
	15001~30000	91	23%
	30001~45000	145	36.7%
	45001~60000	63	15.9%
	Above 60001	46	11.6%

The samples with the most educational level was a Bachelor Degree, with 195 people, accounting for 49.4% of the total sample rate, followed by 178 people with high school education, accounting for 45.1% of the total sample rate. The least number of samples was 22 people with a graduate degree or less, accounting for 5.6% of the total sample. Therefore, the number of samples showed that the majority of the people who could use the network platform for consumption were people with a bachelor's degree.

In this research, the sample number of the subjects with the largest occupation was 107 in the military public education, accounting for 27.1% of the total sample, followed by 81 in the free occupation, accounting for 20.5% of the total sample. The least number of samples belonged to students; there were only 29, which accounted for 7.3% of the total sample. In the sample of this study, people with a monthly income of NT$30001-45,000 account for the most in the total sample, with 145 people accounting for 36.7 of the sample ratio, followed by NT$15001-30,000, with 91 people accounting for 23% of the total sample ratio.

IV. RESULT OF ANALYSIS

A. Measures

In this research, the SPSS statistical software was used to analyse the reliability and the standards of Nunnally [37] was used to judge the reliability of the variable. The results of reliability analysis show that the Cronbach's α value of each variable in this research is higher than 0.7, which means that the questions of each variable in this research are highly credible and consistent, so the questions of each variable were retained. According to Kaiser [38], the KMO value must be greater than 0.7 to be suitable for factor analysis in this research. Therefore, whether the KMO value meets the criterion of 0.7 should be judged before factor analysis. The KMO value of this sample is 0.964, indicating that the sample data is appropriate, as shown in Table 1. In this research, the KMO value must be greater than 0.7 to be suitable for factor analysis. Therefore, before factor analysis, it was determined whether the KMO value meets the standard of 0.7. And the KMO value of this sample is 0.964, which shows that sample data is adequate, as shown in Table II.

TABLE II. FACTOR LOADINGS and KMO VALUE

Variable	Average	SD	Online Review (OR)	Attitude (A)	Subjective Norm (SN)	Purchase Intention (PI)
OR	20.39	3.421	1			
A	15.22	3.187	.795**	1		
OR	16.14	2.853	.849**	.841**	1	
PI	15.23	3.143	.809**	.847**	.839**	1
** significant at the 0.01 level (two-tailed)						

B. Correlation Coefficient Analysis

Through correlation analysis, the variables reached significant levels (p < 0.01), the correlation coefficient between 0.788 and 0.801, the correlation coefficient is greater than 0.3 and less than 0.7; was significantly moderate positive correlation, if greater than or equal to 0.7 for the height of the significant positive correlation, subjective norms and attitudes for purchase intention were 0.801, 0.799, so the height of the significant positive correlation. The analysis results are shown in Table III.

C. Regression Analysis

In this research, regression analysis was used to test the hypothesis as follows:
The analysis results of the hypothesis H1 in this research showed that the coefficient is 0.788, Adj-R^2 is 0.620, t value is 25.334 and the regression model of the two variables of online reviews and attitudes reached the significant level (p <0.001). The value of D-W is 1.584, which is between 1.5 and 2.5, indicating that the online

TABLE III.PEARSON CORRELATION COEFFICIENT ANALYSIS

Variable	Item	Factor Loadings	Cumulative explanatory variance (%)	KMO	Bartltett's Sphericity Test
Online Reviews	SQ1	0.850	68.658%	0.853	0.000
	SQ2	0.839			
	SQ3	0.837			
	SQ4	0.827			
	SQ5	0.789			
Attitudes	CSE1	0.947	85.447%	0.844	0.000
	CSE2	0.928			
	CSE3	0.917			
	CSE4	0.906			
Subjective Norms	ISU1	0.886	74.909%	0.806	0.000
	ISU2	0.881			
	ISU3	0.866			
	ISU4	0.827			
Purchase Intention	SERQ1	0.945	85.788%	0.863	0.000
	SERQ2	0.937			
	SERQ3	0.928			
	SERQ4	0.894			

reviews have a positive impact on attitudes, and the H1 is confirmed.

The analysis results of the hypothesis H2 in this study showed that β coefficient is 0.788, Adj-R^2 is 0.654, t value is 27.332, the regression model of the two variables of Internet review and subjective norm is significant (P < 0.001), while D-W value is 1.520, which is between 1.5 and 2.5, indicating that Internet comment has a positive impact on subjective norm, and the H2 is confirmed.

The analysis results of the hypothesis H3 in this study showed that β coefficient is 0.733, Adj-R^2 is 0.536, and t value is 21.355. The regression model of the two variables of online review attitude and purchase intention reaches a significant level (P < 0.001), while D-W value is 1.53, which is between 1.5 and 2.5, indicating that online comment attitude has a positive impact on purchase intention, and the H3 is confirmed.

The analysis results of the hypothesis H4 in this study showed that β coefficient is 0.847, Adj-R^2 is 0.716 and t value is 31.542, the regression model of the two variables of subjective norms and purchase intention is significant (P < 0.001), while D-W value is 2.042, which is between 1.5 and 2.5, indicating that subjective norms of online reviews have a positive impact on purchase intention, and the H4 is confirmed.

V. CONCLUSION

With the popularization of the Internet, consumers are increasingly fond of publishing their experience and opinions of online shopping and their reviews on enterprises. Moreover, the issue of online reviews is

attracting more and more attention of enterprises and Internet platform operators. Based on the practical experience of consumers in using the product, and published their reviews and suggestions on the product or business and recommendation intention on the Internet, and past research also found that online comments are more influential than general advertising. By means of the practical experience of consumers in using the product, and by publishing their reviews and opinions on the product or business and recommendation intentions on the Internet, the previous research also found that online reviews are more influential than general advertising.

This research uses the theory of reasoned action as the theoretical basis proposed by Fishbein and Ajzen [19] and the research model includes attitude, subjective norms, online reviews and purchase intention. The results of this research show that the better online reviews are, the more consumers will be able to increase their purchase intention. In other words, the quality of online reviews will significantly affect consumers' willingness to use online shopping products for consumption. Therefore, online shopping reviews are also an important part of online shopping. If an online shopping enterprise wants to increase the use of online shopping products for consumers, its primary goal will be to improve the legibility of products provided by online shopping reviews and the applicability of consumer information requirements. In addition, the willingness of the consumers to buy will greatly increase because of the reviews of important people around them.

The results of this research show that the better the online review attitude is, the more likely it is to increase the willingness to buy product or services. This result is the same as that of Doll and Torkzadeh [39], who think that online review attitude is the most influential factor on the willingness to buy. Therefore, this research suggests that online shopping enterprise should pay close attention to the attitude of online reviews, since the standard of the information generated by online shopping will significantly impact the willingness of consumers to use online shopping for purchase. It will greatly increase the purchase intention of consumers if the presentation, inbound pacing and accuracy of the information generated by the products of the online shopping dealer can give consumers a good feeling. Summing up the above, high number of reviews designates popularity of the product. The larger is the number, the more chances that consumers will find it out among numerous similar products. However, consumers may no longer trust it if the content of the reviews is of high homogeneity and the words are stereotyped. Therefore, the seller should encourage consumers to send objective reviews of high quality and expressing their own views. The influence

impacts the purchase intention, that is why the seller should timely respond to and deal with the online reviews, especially the negative reviews. The seller should deal with the negative reviews properly and timely to avoid expansion of the negative reviews and bad impact on the reputation of the enterprise.

A. Managerial Implications

In recent years, the Internet has become the main source of information for people due to its development and progress, and online reviews have gradually become an important basis for consumers to make purchase decisions. Since the operation mode of online shopping looks like numerous devices running in a systematic way, the operation of online shopping is more intelligent and automatic in comparison with the traditional system of the past. Therefore, online shopping itself can automatically transmit relevant information to consumers.

Consumers will inspect the services provided by online shopping products and make evaluation when using online shopping products for consumption. For example, when consumers use online shopping products for consumption, they will immediately make reviews on social websites after unpacking or make product evaluations. When there are commodity problems, either the seller or relevant personnel can help to handle these issues immediately, and this assistance can solve all the problems encountered. It can make consumers feel that the service quality is quite good, if it can effectively let consumers immediately process and solve problems. It will also improve consumers' satisfaction with using online shopping products and their willingness to use this product for consumption. Therefore, strengthening the services provided by online shopping products can increase satisfaction and willingness to consume.

And online shopping itself may produce a lot of information, which also includes marketing advertising information, information provided by the functions of online shopping products, relevant information about the surrounding environment, etc. And the receiver's perception will be negative if these large amounts of information let the online shopping users understand the relevant information clearly, and the information is of poor quality and uneven. Good information can let consumers understand the relevant content clearly. The consumers will be much more satisfied if the information is provided timely and in the right position. Therefore, the information produced by online shopping must be correct and easy to read in order to make the correct information visible to consumers.

Online shopping can enable consumers to use it anywhere and in a relatively easily. This will also increase satisfaction and consumers' willingness to consume. For

example, one can consume in an online environment with smart phones. And credit cards have been widely used to pay on the Internet. This also indicates the wide range and ease of use of online shopping products. It will improve consumers' willingness to use online shopping products for consumption. Therefore, the range and difficulty of using online shopping products of the online shopping dealers needs close attention and should be taken seriously.

B. Research Limitations and Future Suggestions

The samples of this research are users who have used online shopping products for consumption. However, the use time or condition of online shopping has not been discussed. Therefore, in the future research, it can add the time, condition or experience of consumers' online shopping to the characteristics of consumers to conduct data collection and analysis. After cross-over analysis and comparison, it can explore whether there are significant differences in the use of online shopping by consumers of different identities and ages. This result can also probe into different factors and results caused by different types of consumers. Moreover, the framework of this research is based on the theory of reasoned action recognized by most scholars. This model is mainly used to explore the impact of online reviews, attitudes, and subjective norms on consumers' purchase intention. Since there are many factors that affect consumers' purchase intention, researchers in the future will be able to use different theoretical bases to discuss various aspects of online shopping or add different factors.

ACKNOWLEDGMENT

REFERENCES

[1] F. A. Alaqahtani and K. S. Alatawy, "The influence of online product reviews on the saudi customers' purchase intention," International Journal of Economics, Commerce and Management, vol. VII, no. 1, pp. 297-311, 2019.

[2] Inboundmarketing, 2020, How to operate online marketing in 2020? 5 Raiders for Internet Marketing Channels. [Online] Available: https://inboundmarketing.com.tw/digital-marketing-strategy/%E7%B6%B2%E8%B7%AF%E8%A1%8C%E9%8A%B7%E6%98%AF%E4%BB%80%E9%BA%BC.html (April 10, 2020).

[3] P. Herr, F. Kardes and J. Kim, "Effects of word-of-mouth and product-attribute information on persuasion: an accessibility-diagnosticity perspective," Journal of Consumer Research, vol. 17, no. 4, pp. 454-462, 1991.

[4] D. F. Duhan, S. D. Johnson, J. B. Wilcox and G. D. Harrell, "Influences on consumer use of word of-mouth recommendation sources," Journal of the Academy of Marketing Science, vol. 25, no. 4, pp. 283-295, 1997.

[5] Y. Zhao. L. Wang, H. Tang and Y. Zhang, "Electronic word-of-mouth and consumer purchase intentions in social e-commerce, Electronic Commerce Research and Applications, vol. 41, no. 1, 2020.

[6] J. Singh, "Consumer Complaint Intentions and Behavior: Definitional and Taxonomical Issues," Journal of Marketing, vol. 52, no. 1, pp. 93-107, 1988.

[7] A. N. Sulthana and DS.Vasantha, "Influence of electronic word of mouth ewom on purchase intention," International Journal of Scientific & Technology Research, vol. 8, no. 10, pp. 1-5, 2019.

[8] L. Fullerton, 2017, Online reviews impact purchasing decisions for over 93% of consumers, report. [Online] Available: https://www.thedrum.com/news/2017/03/27/online-reviews-impact-purchasing-decisions-over-93-consumers-report-suggests (March, 20, 2020).

[9] Podium, 2017, Consumers get "buy" with little help from their friends. [Online] Available: http://learn.podium.com/rs/841-BRM-380/images/2017-SOOR-Infographic.jpg (March 20, 2020).

[10] S. M. Mudambi and D. Schuff, "What Makes a Helpful Online Review? A study of customer reviews on Amazon.com," MIS Quarterly, vol.34, no. 1, pp. 185-200, 2010.

[11] J. Tanimoto and H. Fujii, "A study on diffusion characteristics of information on a human network analyzed by a multi-agent simulator," Social Science Journal, vol. 7, no. 3, pp. 479-485, 2003.

[12] R. B. Money, "Word-of-mouth promotion and switching behavior in Japanese and American business-to-business service clients," Journal of Business Research, vol. 57, no. 1, pp. 297-305, 2004.

[13] T. Hennig-Thurau, K. P. Gwinner, G. Walsh and D. D. Gremler, "Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the Internet?," Journal of Interactive Marketing, vol. 18, no. 1, pp. 38-52, 2004.

[14] R. E. Goldsmith, R. A. Clark and E. B. Goldsmith, "Extending the psychological profile of market mavenism," Journal of Consumer Behavior, vol. 5, no. 5, pp. 411-419, 2006.

[15] P. Chatterjee, "Online reviews: Do consumers use them?," Advances in Consumer Research, vol. 28, no. 1, pp. 129-133, 2001.

[16] J. Zhang, W. Zheng and S. Wang, "The study of the effect of online review on purchase behavior: Comparing the two research methods," International Journal of Crowd Science, vol. 4 no. 1, pp. 73-86, 2020.

[17] S. Dhanasobhon, P. Y. Chen, M. Smith and p. y. Chen, "An analysis of the differential impact of reviews and reviewers at Amazon.com," ICIS 2007 Proceedings.

[18] Ur. S. Rehman, T. Bano and A. Bhatti, "Factors Influencing online purchase intention with the mediating role of customer satisfaction," International Journal of Economics, Management and Accounting, vol. 27, no. 1, pp. 235-252, 2019.

[19] M. Fishbein and I. Ajzen, Belief, Attitude, intention, and behavior: an introduction to theory and research reading, MA: Addison-Wesley, 1975.

[20] B. H. Sheppard, J. Hartwick and P. R. Warshaw, "The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research," Journal of consumer research, vol. 15, no. 3, pp. 325-343, 1988.

[21] I. Ajzen and M. Fishbein, Understanding attitudes and predicting social behavior, Englewood-Cliffs, NJ: Prentice Hall,1980.

[22] E. A. Becker and C. C. Gibson, "Fishbein and Ajzen's theory of reasoned action: Accurate prediction of behavioral intentions for enrolling in distance education courses," Adult Education Quarterly, vol. 49, no. 1, pp. 43-55, 1998.

[23] S. Breckler, "Empirical validation of affect of affect, behavior, and cognition as distinct, components of attitude," Journal of

Personality and Social Psychology, vol. 47, no. 6, pp. 1191-1205, 1984.

[24] E. Karahanna, D. W. Straub and N. L. Chervany, "Information technology adoption across time: a cross-sectional comparison of pre-adoption and post-adoption beliefs," MIS Quarterly, vol. 23, no. 2, pp. 183-213, 1999.

[25] W. B. Dodds, K. B. Monroe and D. Grewal, "Effects of price, brand, and store information on buyers' product evaluation," Journal of Marketing Research, vol. 28. No. 3, pp. 307-319, 1991.

[26] V. Zeithaml, L. Berry and A. Parasuraman, "The Behavioral Consequences of Service Quality," Journal of Marketing, vol. 60, no. 2, pp. 31-46, 1996.

[27] R. L. Oliver, Satisfaction: a behavior perspective on the consumer, Boston, MA: Irwin, McGrew-Hill, 1997.

[28] S. A. Taylor and T. L. Baker, "An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions," Journal of Retailing, vol. 70, no. 2, pp. 163–178, 1994.

[29] A. R. Aditya and Y. Alversia, "The influence of online review on consumers' purchaseintention," Journal of Management Marketing Review, vol. 4, no. 3, pp. 194-201, 2019.

[30] Cheung, C. M. K. Cheung, M. K. O. Lee and N. Rabjohn, "The impact of electronic word‐of‐mouth: The adoption of online opinions in online customer communities," Internet Research, vol.18, no. 3, pp. 229-247, 2008.

[31] Z. Liu, S. Lei and Y. Guo, "The interaction effect of online review language style and product type on consumers' purchase intentions," Palgrave Macmillan, vol. 6, no. 11, pp. 1-8, 2020.

[32] P. T. Chen and H. H. Hu, "How determinant attributes of service quality influence customer perceived value: An empirical investigation of the Australian coffee outlet industry," International Journal of Contemporary Hospitality Management, vol. 22, no. 4, pp. 535-551, 2010.

[33] G. S, Day, "Attitude change, media, and word of mouth," Journal of Advertising Research, vol. 11, no. 6, pp. 31-40, 1971.

[34] P. F. Bone, "Word-of-mouth Effects on Shorts-term and Long-term Product Judgment," Journal of Business Research, vol. 32, no. 3, pp. 213-223, 1995.

[35] R. Ohanian, "Construction and Validation of a Scale to Measure Celebrity Endorsers' perceived expertise, trustworthiness, and attractiveness," Journal of Advertising, vol. 19, no. 3, pp. 39-52, 1990.

[36] J. Heskett, T. Jones, G. Loveman, W. Jr. Sasser and L. Schlesinger, "Putting the service-profit chain to work," Harvard Business Review, vol. 72, no. 2, pp. 167-174, 1994.

[37] J. C. Nunnally, Psychometric theory, New York: McGraw-Hill, 1978.

[38] H. F. Kaiser, "An index of factorial simplicity. Psychometrika," vol. 39, no. 1, pp. 31-36, 1974.

[39] W. J. Doll and G. Torkzadeh, "The measurement of end-user computing satisfaction," MIS Quarterly, vol.12, no. 2, pp. 259-274, 1988.