

The Factors of Online Comment on Commodity for the Purchase Intention

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Abstract: Since consumer behavior transforms into online shopping, it is important to see how the purchasing intention is affected by the Internet. Apart from the basic information of product, online shoppers especially care about the online comment from the others. This study devotes to clarifying the context of online observation, which is the most influential information. In the paper, the online comment is separated into two types: **positive and negative comment**. The former contains more positive words and evaluations to describe the product elements; the latter is conversational. Besides, considering intrinsic variable, the paper also analyzes the personal traits (*internal control* and *external control*) of the browser. Through the correlation between online comment and personal traits, the purchase intention has led to different results. In summary, both positive and negative comment can induce purchase intention. The intention differs when positive/negative words are used to describe the product elements. Especially external control people are not affected by online comment but only the product elements. Applying the results, web managers who administer the online selling can better understand their online consumers. They can anticipate the selling trend, advance their web using, or attract potential customers through using this effective message.

Key words: *Locus of Control, Online comment, electronic word-of-mouth, online shopping, purchase intention*

1. Introduction

As the popularity of online shopping, cyber-industry thinks up how to distinguish it from the immense online information without space-time constraints. Different from the tangible store, consumers only decides through the pictures and texts. The factors influencing purchase such as the attitude of service, the ambiance of shop environment or the popularity of the market are all unnecessary. The best marketing strategies are changed. Recent studies report that consumers care most about the others' online comment and discussions about their target product. Among the various goods, technical one holds the largest growth rate. Especially the Smartphone grows 51.8% of the online markets in Taiwan last year. On the other hand, in the past researches, many scholars take the factor of personality to investigate the person cognition, evaluate the workplace position, except the purchase willingness and analyze the consumer behavior (Punj and Staelin, 1983; Busseri, Lefcourt and Kerton, 1998; Hoffman, Novak and Schlosser, 2000). Staelin detected that the internal controller search online information more often than the external controller. Hoffman indicated that the Internet behavior is different from the external controller who do the social communication and the internal controller who prefer to be the lurker. Internal

controllers spend lots of time on searching but not interacting with on-liners. Personality is a unique and individual personality characteristic which consists with his/her external expression. The personality is inherent. Though the external expression would be influenced by exterior environment, personality would not (Core and Rotter, 2006). Through the above states, the interest of the study is the relationship between purchase intention, personality traits and online comment.

2. Literature Review

2.1 Personality Traits

Just as the trait is the personal external feature that is stable and consistent, so does the personal behavior rejects the unique personality characteristics. For instance, they can be affability, defensibility, identity, scalability etc. If the person continually exhibits those features, it's called these his/her *personality traits*. Therefore, the trait is a basic unit that composes personality and behavior. There are advantages to clarify those various traits. It can be used to forecast personal behavior efficiently. One of the studies is using lifestyles and traits to analyze purchase behavior (Ke, 2007). Purchase behavior is a passive process for the sake to satisfy the demand and desire which can be separated into subjective mental and objective matter. In terms of subjective mental, consumer need to produce the purchase intention that can spur the decision. Therefore, we regard personality trait as subjective mental part.

2.2 Locus of Control Theory

Locus of Control theory is first introduced by Rotter in Social Learning theory in 1954. Rotter (1966) considered that the past experience and present environment will make different effects on the same thing. When someone thinks that he can control the destiny with individual own way, he will often consider himself to be the major cause of events. The things can be controlled or prevented by one's ability or attributes. This kind of person is the classical internal controller. Comparatively, a person who attributes the occasion influencing his life to the irresistible environment, destiny or others' ability instead of his own behavior is the typical external controller. Punj and Staelin (1983) found that the internal controller does a more online search than the external controller. Potosky and Bobko (2001) indicated that the internal controller has a more positive attitude to the computer and the Internet. These are the expression that personality traits will affect personal perspective and behavior online.

2.3 Locus of Control Scale

Different scales have been developed to specifically investigative requirements for measuring internal/external control features, such as the IAR scale, the NSLS, the I-E scale and the LCS etc. This study used I-E scale (Rotter Internal-External Control Scale). It includes positive questions, negative questions and trap questions which is more accurate (Busseri, Lefcourt and Kerton, 1998).

2.4 Online Purchase Intention

Engel (1995) claimed that when there is a gap between reality and expectations, the demands appear. As the gap increases, the power of inspiring the requirements which called the drives is strengthened as well. The increased drivers will push people to do purchase in order to achieve their demands. Rohm and Swaminathan (2004) compared buying intentions on online retailer and tangible store. It can be clarified to four main motivations: convince, various searching ways, offering shopping information and the tangible-oriented.

Monsuwe, Dellaert and Ruyter (2004) explained that the attitude and intention of online shopping is not resulted from the interface operation and the interesting process but also the external factors, such as the traits of consumers, scenario, product features, past shopping experience and the trust of online shopping etc.

2.5 Word-of-mouth

World-of-mouth is defined as a verbal communication between sender and receiver, which is considered non-commercial by the receiver (Lin, 2010). The Internet becomes the community mediate through the prosperity of development. Since the fast spread information, it forms a platform that abstracts a large number consumers sharing or complaining. The discussing platform is called word-of-mouth or the electronic word-of-mouth. Due to the non-commercial nature, it is more reliable and authentic for a consumer who is willing to evaluate and decide through word-of-mouth. Therefore, it makes a great impact on purchasing decision (Brown, Broderick and Lee, 2007). Besides, the positive or negative manner of comment also exists the effects (Arndt, 1967).

3. Research Method

3.1 Product elements collection and classification

To understand the effects of product elements, it is primary to collect and classify those major keywords. In this part, the study randomly gathered 100 comments from Chinese websites where discussion about Smartphone is popular, such as sogi.com, DCFever.com, ePrice.com, mobil01.com, etc. Then deconstructed the sentence and sampled keywords for the elements. After picking out the top 20 influential elements, the experts used KJ method to classify according to their attributes. Four major elements classification, the price, the hardware efficacy (external part and internal part), and the software efficacy are shown in Table 1.

Table 1. Elements Classification

Price	Hardware efficacy (external part)	Hardware efficacy (internal part)	Software efficacy
Handset Price Only	Form	Operating System	App Download efficacy
	Material	Operating Style	Game
	Interchangeable shell	Central Processing Unit	
	Size	Storage Capacity	
	Screen resolution	Electric Energy Storage	
	Picture function	File Transfer efficacy	
	Video function		
	Extendable storage		
	Sound efficacy		
	Tenable shutter button		

3.2 Online comment

In order to simulate and control the scenario of reading online comment, we asked 5 experienced experts to write two commentaries which are needed including the stated elements for unstated Smartphone, positive and negative comment (P-N comment). It is important to choose the popular phrase and literal meaning words cause that can let subjects read naturally and respond instinctively. Therefore, the validity will be increased.

3.3 Questionnaire Survey

There are two parts for different purposes: subjects' traits and purchase intention influenced by online comment. In the first part, subjects will be asked to answer 23 alternative questions including 6 trap questions. According to the Rotter Internal-External Control Scale (I-E Scale), each question can get 0 (internal answer) or 1 (external answer) thus the total score is 0 to 23. The score 0 represents the extreme internal controller; contrarily, the score 23 represents the extreme external controller. This study referred to the method Hsieh and Dwyer (2009) used average score 11.46 as dividing point, lower than 11.46 is internal controller and the higher one is externally controlled. After finishing the I-E Scale, subjects will be asked to read the comment samples and answer with five-point like scale to respond the degrees of purchase intention.

4. Analysis

4.1 The purchase intention is interlocked by the internal-external control, the product elements and the positive-negative comment.

In this part, we use two-way ANOVA to analyze the rating of purchase intention which is interlocked by internal-external control, product elements and positive-negative comment. The statistic analysis results are as follows (see Table 2, Table 3). There are only the four types of product elements has significant effects on the purchase intention ($F=9.617$, $P=0.001<0.05$) and the interaction between I-E control traits and P-N comment has significant effects on the purchase intention ($F=9.617$, $P=0.001<0.05$).

Table 2. Result of the Independent variables

Independent variables	Dependent Variables								
	I-E control	ANOVA		Products elements	ANOVA		P-N comment	ANOVA	
		F	P		F	P		F	P
Purchase Intention	Internal control	.037	.850	Price	9.617	.001	Positive comment	1.256	.270
				Hardware efficacy (external part)					
	External control			Hardware efficacy (internal part)			Negative comment		
				Software efficacy					

Table 3. Result of the Independent variables

Independent variables	I-E control x	ANOVA		I-E control x	ANOVA		Elements x	ANOVA	
		F	P		F	P		F	P

	Elements			P-N comment			P-N comment		
Purchase Intention		.037	.850		9.617	.001		2.749	.075

4.2 The purchase intention is interlocked by the positive-negative comment and internal-external control

In this part, we use two-way ANOVA to analyze the rating of purchase intention which is interlocked by internal-external control and product elements, then discuss with internal controller and external controller separately.

4.2.1 Internal controller

The result shows that the internal controller will be influenced by the product elements ($F=26.496$, $P=0.000<0.05$) but not be affected by P-N comment ($F=0.78$, $P=0.604>0.05$). Furthermore, the mean of four type elements displays the degree: hardware efficacy (internal part) is the most influential one, and the followings are price, hardware efficacy and software efficacy (see Table 4).

Otherwise, in terms of interlock between P-N comment and product elements has significant effects on the internal controller ($F=45.213$, $P=0.000<0.05$). Furthermore, the mean of interworked display the effective degree for internal controller from high to low: price in negative comment (4.45), hardware efficacy (internal part) in negative comment (4.23), hardware efficacy (external part) in positive comment (4.13), hardware efficacy (internal part) in positive comment (4.07), price in positive comment (3.70), hardware efficacy (external part) in negative comment (3.38), software efficacy in positive comment (3.25), software efficacy in negative comment (3.25). (See Table 5).

Table 4. Result of Internal controller

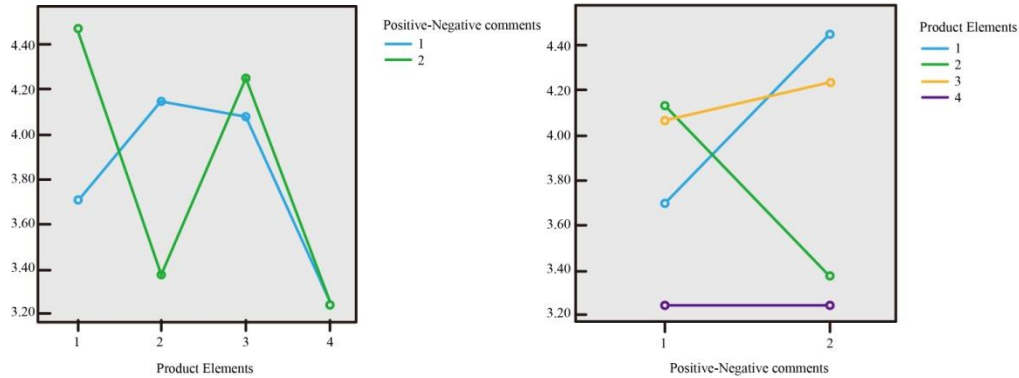
Independent variables	Dependent Variables						Mean
	Positive-negative comment	ANOVA		Products elements	ANOVA		
Internal control	Positive comment	F	P	Price	F	P	4.075
		.278	.604	Hardware efficacy (external part)	26.496	.000	3.757
	Hardware efficacy (internal part)			4.150			
	Software efficacy			3.250			
Negative comment							

Table 5. Result of Internal controller

Independent variables	Dependent Variables				Mean
	Positive-negative comment	Products elements	ANOVA		
Internal control	Positive comment	Price	F	P	3.7000
		Hardware efficacy	45.213	.000	4.1333
					4.0667

	Negative comment	(external part)			3.2500
		Hardware efficacy			4.4500
		(internal part)			3.3800
		Software efficacy			4.2333
					3.2500

Figure 1. Edge Estimation Average



4.2.2 External controller

The result shows that the internal controller will not be influenced by the product elements ($F=1.205$, $P=0.286>0.05$) and P-N comment ($F=2.561$, $P=0.089>0.05$). In terms of interlock between P-N comment and product elements, does not have significant effects on the external controller ($F=2.749$, $P=0.075>0.05$) (see Table 6).

Table 6. Result of External controller

Independent variables	Dependent Variables								
	Positive-negative comment	ANOVA		Products elements	ANOVA			ANOVA	
		F	P		F	P		F	P
External control	Positive comment	1.205	.286	Price	2.561	.089	Comments x Elements	2.749	.075
				Hardware efficacy (external part)					
	Negative comment			Hardware efficacy (internal part)					
				Software efficacy					

5. Conclusions

This paper addressed the role of exploring the online comment to figure out what exact factors will influence purchasing intention. Therefore online platform managers can use the online comment as the tool to anticipate and attract target consumer by increasing their purchase willingness. Through the overall result, it shows that the product element is the most influential factor. While product element interworks with P-N tone, the intention has little difference in the four types of product elements.

In terms of the effect of online comment, internal controller is easier to be affected than external controller. Four major elements in this study include price, hardware efficacy (external part and internal part), and the software efficacy. Furthermore, “hardware efficacy (internal part)” is the main factor for internal controller.

However, “price in negative tone” replaces it when interworking with P-N tone. The “software efficacy” has the least influence but has no difference when interworking with P-N tone. Negative tone is more influential than positive tone except “hardware efficacy (external part)” which can explain that consumer relatively carries the positive tone of Smartphone elements than negative.

Internal controllers who believe in themselves consider that they can conquer nature. This personality trait lets them prefer to use a computer in searching or collecting information and have positive feelings on a computer or the Internet. Contrast to external controllers who believe the gate, they think the events are depended on external forces. This personality trait lets them prefer to use a computer not only to communicate with others but also to do the social behavior online. This theory conforms to the experimental result. Since internal controllers like to browse the information but not to communicate, the online comment only affect to internal controllers. Therefore, it should be taken care on their target elements and variation of P-N tone. We presented a research to establish a view for attracting potential customers through using this influential message – online comment.

6. Reference

- [1] Arndt, J. (1967) *Role of product-related conversations in the diffusion of a new product*, Journal of Marketing Research, pp. 291-295
- [2] Brown, J., Broderick, A. J., And Lee, N. (2007) *Word of mouth communication within online communities: Conceptualizing the online social network*, Journal of interactive marketing, vol. 21, no. 3, pp. 2-20
- [3] Busseri, M. A., Lefcourt, H. M., And Kerton, R. R. (1998) *Locus of Control for Consumer Outcomes: Predicting Consumer Behavior*, Journal of Applied Social Psychology, pp. 1067-1087
- [4] Core, P. M., And Rotter, J. B. (2006) *A personality correlate of social action I*, Journal of Personality, vol. 31, no. 1, pp. 58-64
- [5] Chen, P. N. (2009) *Using flow theory to investigate the impact of Locus-of-Control personality trait on the online games indulgence*, National Pingtung University of Science and Technology
- [6] Engel, J. F., Blackwell, R. D., And Miniard, P. W. (1995) *Consumer Behaviour*, 8th Ed., Dryden Press, TX.
- [7] Hoffman, D. L., Novak, T. P., And Schlosser, A. (2000) *Consumer Control in Online Environments*, 5th Ed., Holt, McGraw-Hill, New York.
- [8] Hsieh, P. And Dwyer, F. (2009) *The instructional effect of online reading strategies and learning styles on student academic achievement*, Educational Technology & Society, vol. 12, no. 2, pp. 36-50
- [9] Ke, C. I. (2007) *The research of the relation among achievement motivation, internal-external control, job characteristics and job burnout-take the public senior high school teacher in Taipei county for example*, Ming Chuan University
- [10] Lin, J. H. (2007) *A study of customer purchase marketing and purchase behavior in internet shopping*, Asia University
- [11] Lin, E. P. (2010) *The impact of product type and review valence on consumers' acceptance of e-WOM: The moderating effect of brand commitment*, National Taiwan Normal University
- [12] Monsuwe, T. P., Dellaert, B. G., And De Ruyter, K. (2004) *What drives consumers to shop online? A literature review*, Journal of Service Industry Management, vol. 15, no. 1, pp. 102-121

- [13] Potosky, D., And Bobko, P. (2001) *A model for predicting computer experience from attitudes toward computers*, Journal of Business and Psychology, vol. 15, no. 3, pp. 391-404
- [14] Rotter, J. B. (1966) *Generalized expectancies for internal versus external control of reinforcement*, Psychological monographs: General and applied, vol. 80, no.1
- [15] Rohm, A. J., And Swaminathan, V. (2004) *A typology of online shoppers based on shopping motivations*, Journal of Business research, vol. 57, no. 7, pp. 748-757
- [16] Robinson, J. P., Shaver, P. R., And Wrightsman, L. S. (2010) *Measures of personality and social psychological attitudes*, 1st Ed., Academic Press
- [17] Punj, G. N., And Staelin, R. (1983) *Model of Consumer Information Search Behavior for New Automobiles*, Journal of Consumer Research, vol. 9, no. 4, pp. 366-380