

THE IMPACT OF SELF-MONITORING ON THEORY OF PLANNED BEHAVIOR: STUDY OF WEB PORTAL USAGE

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Abstract

With the prosperity of the Internet and WWW, lots of web sites have been raised. The eBusinessWeekly 2000 reported that "web portal" was with highly proportion (46.1%) among all kind of the websites; this reveals that web portal would be the place where Internet users visit most often. Since the Internet is widely popular, user's perception to use such WWW technology was easy to understand. In this research, we study the personality trait of self-monitoring on the Internet web portal usage behavior. Thus, we focused on the concept of self-monitoring in exploring the attitude, web self-efficacy, intention and web portal usage to see the variation in this concept. The combined dataset shows that attitude toward web portal and web self-efficacy are significant impacted on intention, and actual web portal usage is significant influenced by both intention and web self-efficacy. Further, the differences between high self-monitoring (HSM) group and low self-monitoring (LSM) group are observed and have significant distinct in our research model, therefore two moderating hypotheses are both supported. Based on the research findings, conclusions and implications are discussed.

Keywords: Self-Monitoring, Theory of Planned Behavior, Web Self-Efficacy, Web portal, PLS

Introduction

According to the "World Internet Users and Population Stats" by Internet World Stats¹, the number of Internet users at the end of 2006 is 1,093 millions. The large amount of Internet population has shown that Internet (especially the WWW) has impacted every facet of our lives, such as communication, entertainment, social activities, shopping, etc. The eBusiness Weekly (2000) reported that among the top five hundred favorite web sites, they are classified into several categories: web portal (46.1%), community (9.8%), news/media (7.8%), etc. Every of these categories has different disposition and owns its specific target appealing. Among all, web portal was with highly proportion (46.1%) of all the other investigated sites. In order to get creative and innovative on attracting their Internet users, company often provides many services (such as free email, blog, online photo album, searching, content providing, etc.) and realizes users' tastes, needs, and purchasing habits to grip the attention of the users. Therefore, how to keep people continuing to visit the web portal site would be the most important issue in the information age.

Research into the intention-behavior literature and information technology use has drawn considerable interest in the 1990s. Previous studies have investigated influences on IT users' intention-behavior from a variety of perspectives.

¹ <http://www.internetworldstats.com/emarketing.htm>

Some have assessed personal characteristics, such as age, gender, or personal value, and among other factors. From the social-psychological perspectives, the self-components were seen as the stable personal inner values that are in the consciousness and can be viewed as the link between thoughts and action (Locke, 1991), which makes each person a unique individual and guides his or her actual choices and actions. Among the self components, the self-monitoring is a central concept in the analysis of social interaction (Anderson, 1987; Furnham and Capon, 1983). The self-monitoring, which is a selective process in that self-beliefs influence which aspects of one's performance, are given most attention how they are perceived, and how the performance information is organized (Bandura, 1986). Applying in the behavioral consistency domain, the self-monitoring can be used to demonstrate that whether one do enforce and display substantial consistency between their inner attitudes, intentions and their public behaviors and actions (Lutsky, et al., 1980; Snyder and Kendzierski, 1982; Zanna, et al., 1980). However, there appears to be a paucity of research into the impact of self-monitoring ability upon Internet user behavior. In this study, we primary focused on the concept of self-monitoring in exploring the attitude, web self-efficacy, intention and browsing behavior to see the variation in this concept.

Theoretical Background

Basic Theoretical Model – Theory of Planned Behavior

Previous study about attitude-behavior consistency and intention-behavior consistency has been the focus on much research (Dawes and Smith, 1985). The first generation of the research investigated the degree that attitudes are related to behavior would be noted by Zanna and Fazio (1982). However, the relation did not prove to be straightforward from attitude to behavior, the focus then changed to the investigation of possible moderating factors – intention (Ajzen and Fishbein, 1973; Borgida and Campbell, 1982; Davidson and Jaccard, 1979; Wicker, 1969). After that, more research has focused on how intentions are implemented in behavior or intention-behavior consistency (Karoly, 1993; Brandstatter and Gollwitzer, 1994). And the theory of reasoned action (TRA) and theory of planned behavior (TPB) were exactly the well known models have over the years received strong empirical support that attitude and subjective norm are the two salient variables to intention (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1977, 1980; Ajzen 1985; Sheppard, et al., 1988).

While applying the TRA and TPB to practical situations, it often involves factors which do not fit comfortably within its framework. Specifically, Fishbein and Ajzen (1985) specify some boundary factors that can influence the magnitude of the relationship between intention and behavior. Among these boundary factors, the degree to which carrying out the intention is under the person's volition would in particular limits the application of the model, as even very mundane activities, which can usually be undertaken at will, are sometimes influenced by factors beyond an individuals control. Thus, Ajzen (1988) adds a construct of perceived behavior control (PBC) to capture the factors beyond the individuals' control, which represents "the possible effects of perceived behavioral control on achievement of behavioral goals" (Ajzen 1988, p. 133). More recently, Ajzen (2002) has incorporated the concept of self-efficacy for representing the PBC construct in the TPB model. The perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action to manage prospective situations (Bandura 1986, 1997). In sum, while attempting to assess the immediate determinants of web portal usage behavior, this study therefore takes the variables of attitudes, self-efficacy, and intention toward that particular behavior into concern.

Self-Efficacy Theory

Bandura (1982) proposed a crucial concept of "self-efficacy" which defines as people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances (Bandura, 1986). This definition indicates that the focus is not on the skills possessed by the individual, but rather the person's assessment of his or her ability to accomplish the task. Actually, it is a measure of an individual's perception of his or her control over factors necessary to carry out the behavior (Madden, et. al., 1992). That is, the individual will decide if he or she is capable of engaging in information privacy invasion before he or she really does so.

The importance of self-efficacy as a predictor of behavior is greater in activities where the person has only variable or limited control over the behavior (Ajzen, 1985). The robustness of self-efficacy has been established through many applications and replications across a broad range of behavioral domains including information systems (Bandura, 1997; Compeau and Higgins, 1995; Latham and Frayne, 1989; Marakas, et al., 1998). For example, several researchers in IS-related studies have focused their attention on how computer self-efficacy expectation may

impact decisions concerning technology acceptance and usage (Compeau and Higgins, 1995; Gist and Mitchell, 1992; Hill, et al, 1987; Henry and Stone, 1997). Therefore, the inclusion of self-efficacy in this study is an attempt to extend the expectancy-value theories to behaviors where volition or autonomous control is limited. For the reasons given above, this research relies on the Bandura's self-efficacy theory to address the question of whether strengthen of web self-efficacy will increase Internet users' intention and actual web portal usage.

The Concept of Self-Monitoring

Self-Monitoring refers that individuals differ "in the extent to which they can and do observe and control their expressive behavior and self-presentation" (Snyder and Gangestad, 1986, p.125). In operating the self-monitoring constructs, Snyder (1974) categorized the self-monitoring into low and high self-monitoring groups. Previous research on personal relationships has suggested that high and low self-monitoring individuals adopt different relationship orientations; in their behavioral domain, these two distinct groups have their idiosyncrasy. First, the pragmatic selves of high self-monitoring (HSM) individuals manifest marked situation-to-situation shifts. They literally ought to act like different persons in different situations and with different people. They are tending to be the "situational specificity" – individuals were keenly attentive and sensitive to the differences between the situations in which the discussions occurred. In social contexts, these individuals appear to have translated their pragmatic conceptions of self into patterns of behavioral self-presentation that were molded and tailored pragmatically to their social surroundings (Snyder and Monson, 1975; Rarick, et al., 1976). Consider, for example, the HSM individual who thinks that use the web portal "Yahoo" is a good idea; he/she is likely to have similar intentions about actual use of it. However, it's very possible that when he/she found another interesting web portal, the HSM individual would possibly change his/her mind and finally use the other web portal.

On the contrast, the principled selves of low self-monitoring (LSM) individuals are accurate and meaningful expressions of their own enduring attitudes, traits, and dispositions. They literally ought to manifest the behavioral consistency that they claim to value so dearly. They have the distinction of "behavioral consistency" – individuals typically do enforce and display substantial consistency between their inner attitudes and intentions and their public behaviors and actions (Lutsky, et al., 1980; Snyder and Kendzierski, 1982; Zanna, et al., 1980).

Previous studies has explored the personality trait of self-monitoring and demonstrated the moderating effect on individuals' attitudes, beliefs, and feelings to their behavior (Ajzen, et al., 1982; Snyder and Kendzierski, 1982; Bozionelos and Bennett, 1999). Thus, in the Internet context, it is also expected that the HSM individual who might have strong attitude-intention toward certain behavior at first but might not remain and transform an implementation into intention-behavior consistency since they might manifest his/her situation-to-situation variability in their social behavior (Snyer and Monson, 1975). In contrast, those LSM individual who forms a strong attitude-intention consistency can then remains and transforms an implementation into intention-behavior consistency since they typically do enforce and display substantial consistency between their inner attitudes and intentions and their public behaviors and actions (Snyder and Tanke, 1976).

Methodology

Research Model

Based upon the above discussions, this study posits that in applying the theory of planned behavior to study web portal usage, we first propose that Internet user's attitude, and web self-efficacy will impact on intention, which is further influence on actual usage behavior. Therefore four hypotheses are formulated:

- H1. The attitude of Internet users toward web portal is positively associated with their intention.
- H2. The perceived web self-efficacy of Internet users is positively associated with their intention.
- H3. The intention of Internet users is positively associated with their web portal usage.
- H4. The perceived web self-efficacy of Internet users is positively associated with their actual web portal usage.

Further, to examine the appropriateness of self-monitoring in exploring the consistency of the Internet user's attitude, intention, and actual usage behavior. While LSM individuals typically do enforce and display substantial consistency between their inner attitudes and intentions and their public behaviors/actions. This study posits that the LSM individuals should perform more consistent than HSM ones in their relationship between attitude and intention,

intention and web portal usage. Therefore, two moderating hypotheses are formulated, and the research model is shown in figure 1.

H5: Compared to HSM individuals, LSM individuals will demonstrate stronger relationship between attitude and intention toward using the web portal.

H6: Compared to HSM individuals, LSM individuals will demonstrate stronger relationship between intention and actual web portal usage.

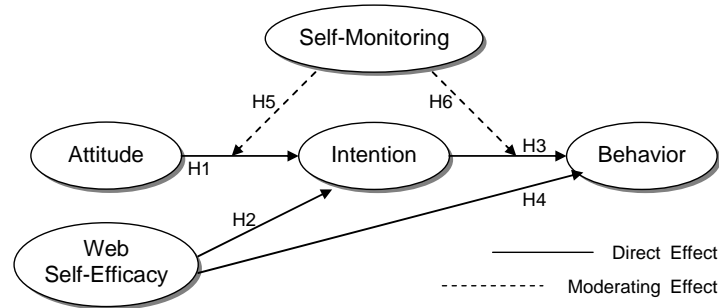


Figure 1. Research model

Research Design

Questionnaires were administered to senior level undergraduate students selected classes in three universities in Taiwan. A total of 300 students were voluntary for participation. The questionnaires both verbally and in writing that their responses would be kept confidential and that only summary information would be presented. Incomplete questionnaires were discarded, leaving 254 usable questionnaires. Table 1 showed the Descriptive statistics of respondents' characteristics.

Table 1: Descriptive statistics of respondents' characteristics (N=254)

Measure	Items	Frequency	Percent (%)
Gender	Female	157	61.8
	Male	97	38.2
Self-Monitoring	High Self-Monitoring	100	39.37
	Low Self-Monitoring	154	60.63
Primary use web portal site	Yahoo Taiwan (tw.yahoo.com)	229	90.2
	Sina (www.sina.com.tw)	6	2.4
	Pchome (www.pchome.com.tw)	5	2
	Yam (www.yam.com.tw)	12	4.7
	Other	2	0.8
Time of Use his/her primary web portal site (everyday)	<1 hour	146	57.5
	1~3 hours	99	39
	>3 hours	9	3.6

Reliability and Validity

Table 2 shows the values of Cronbach's α , composite reliability (CR), and average variance extracted (AVE). Also, to ensure discriminant validity, Fornell and Larcker (1981) suggest that the AVE for each construct should exceed the squared correlation between that and any other construct. The data in this study indicated that the squared correlations between any pair of constructs are less than the AVE among the combined data and four distinct vignettes. Hence, the test of discriminant validity was also met.

Table 2. Reliability and Validity among Research Constructs

Research Constructs	All Samples			HSM group			LSM group		
	α	CR	AVE	α	CR	AVE	α	CR	AVE
Attitude	0.92	0.94	0.76	0.92	0.94	0.77	0.92	0.94	0.75
Intention	0.78	0.86	0.61	0.81	0.87	0.63	0.77	0.85	0.59
Web Portal Usage	0.80	0.91	0.83	0.71	0.86	0.76	0.83	0.92	0.85
Web Self-Efficacy ¹	n/a			n/a			n/a		
Self-Monitoring ²	n/a			n/a			n/a		

Cronbach's α recommended value (Nunnally 1976) > 0.70
 CR: Composite Reliability recommended value (Fornell 1982) > 0.60
 AVE: Average Variance Extracted recommended value (Fornell and Larcker 1981) > 0.50
¹ Web Self-Efficacy in this model is a formative constructs, no reliability and validity is calculated.
² The self-monitoring measure consisted of 18-items with a bipolar "true" or "false" answer to each statement, no reliability and validity is calculated.

Data Analysis and Results

In this research, we have assessed our hypotheses using structural equation modeling (SEM) because of its ability to validate casual relationships between the four antecedent constructs and the dependent variable. We have chosen Smart PLS 2.0.M3 for the reason that in our model, both reflective and formative constructs are involved (Wold, 1966). As recommended by Chin (1998), bootstrapping with 500 sub-samples was performed to test the statistical significance of each path coefficient using the t-test. Figure 1 show that the structural model is statistically significant and explains 0.55 of the variation of ethical intention and 0.31 of the variation of browsing behavior. Furthermore, the structural model results for both HSM and LSM group are shown in figure 3a and 3b, respectively.

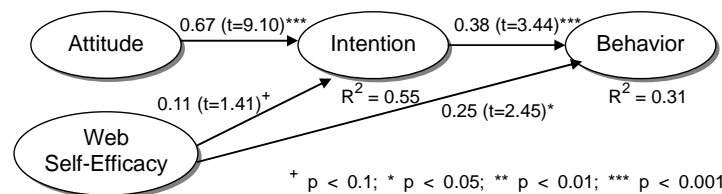


Figure 2. Structural Models Results for Combined Data

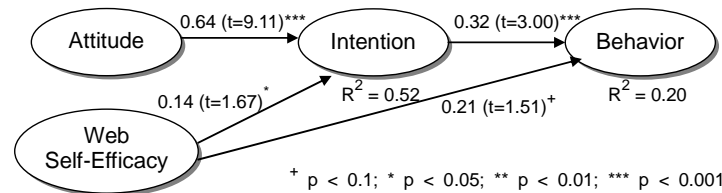


Figure 3a. Structural Models Results for High Self-Monitoring (HSM) Group

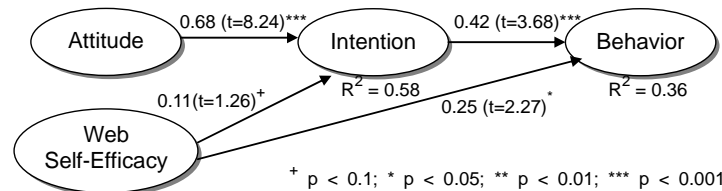


Figure 3b. Structural Models Results for Low Self-Monitoring (LSM) Group

Moderator Analysis

A moderator analysis was employed to test the validity of the two moderation hypotheses (H5 and H6). In this study, the data was split into subgroups according to the self-monitoring scale by Briggs and Cheek (1988). Responses who belong to the high self-monitoring were put into the first split sample (HSM), while the other responses who belong to the low self-monitoring were put into the second group (LSM). The moderating effect can be tested by using the equation proposed by Chin (2004).

Table 3. The Results of the Moderating Effect of Self-Monitoring

Moderator Variables		Self-Monitoring	
		HSM group	LSM group
[H5] ATT→INTEN	Path Coefficient	0.64***	0.68***
	Std. Error	0.06	0.08
	t-value	6.45 *** (Support H5)	
[H6] INTEN→BEH	Path Coefficient	0.32***	0.42***
	Std. Error	0.09	0.11
	t-value	11.62 *** (Support H6)	
*** p < 0.001; ** p < 0.01; * < 0.05 ATT: attitude toward web portal; INTEN: intention; BEH: web portal usage			

Table 3 shows that for both the HSM and the LSM groups, the statistical comparison t-test shows that the moderating effect of self-monitoring exists in the two relationships: (1) attitude toward web portal and intention ($t = 6.45$, $p < 0.001$), and (2) intention and web portal usage ($t = 11.62$, $p < 0.001$). This result points to the importance of self-monitoring in Internet web portal usage, therefore supports hypotheses H5 and H6.

Discussions & Conclusions

The major theoretical implications of this study would be an exploring of the theory of planned behavior to acknowledge the personality role of self-monitoring. In line with the literature of self-monitoring, the HSM individual might change his/her behavior to response to the social worlds, such as curiosity to browse new web sites, and so on. As for those LSM individual, once he/she is used to visit a given web portal, it is very possible form him/her to keep loyalty staying in the web portal.

The implications of the study for Internet enterprise practices suggest grounds for refining our understanding of how Internet users use the web, when linked the attitude, web self-efficacy, and intention to actual usage. Hence, web sites strategies need to recognize that not all visitors are equally susceptible to social cues and this could have important implications for segmentation, targeting, and promotional strategies. While the self-monitoring scale demonstrated that there are two distinct groups to consider it is necessary for web sites in their design and promotional strategies. To Internet enterprises, they always desire to grip the users with high loyalty and keep visiting their site, this might reveals that the LSM group would be more stable users, as for that of HSM group; enterprises might need to keep creative and enchanting on their web pages periodic to grip their attractions.

The self-monitoring would appear to offer some scope for understanding the determinants of Internet user's web intention and behavior. In the future, there is of necessary discussing the influences of other self-components in the Internet environment. Moreover, replicating this survey at a later date or in different cultures may yield different results to enhance the generalizability of the study.

References

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