Lifestyle orientations and the adoption of Internet-related technologies in Taiwan

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ABSTRACT

Using Rogers' diffusion of innovation model as the theoretical framework, this study examined the relationships between lifestyle orientations and the adoption of nine Internet-related technologies in Taiwan including IPTV, digital cable, emails, Internet instant messages, Facebook, scanners, notebooks, printers and personal computers. A telephone survey was conducted to collect data, and 506 valid questionnaires were obtained, representing a response rate of 58.6%. The results showed that lifestyle orientations were a powerful predictor for the adoption of information-oriented and entertainment-oriented technologies, but not for the adoption of interpersonally oriented technologies. Furthermore, this study found that while demographics were the most powerful variable that distinguished the adopters from the non-adopters, mass media use was not.

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1. Introduction

Past studies have shown that people adopted new technologies not only for their practical functions, but also for the social rewards they confer. The possession of certain technologies allows people to communicate social differentiation and identity. Rogers' diffusion of innovation model also identifies social rewards as one motive that drives people to adopt new technologies. Lifestyles measure people's attitudes, interests, and activities to reflect their psychological preferences. The unique feature of lifestyles lies in their visibility because individuals express parts of themselves by developing different types of lifestyles, and thus lifestyles become a key indicator for understanding the psychological world of consumers. Lifestyles have been heavily researched by marketing scholars, because past studies have consistently found a strong link between them and particular brands consumed (Chan & Leung, 2005; Li, 2004a). One of the motives for consuming new technologies is for social identity (Rogers, 2003), and thus lifestyles should be a powerful predictor for technology adoption; however, only a few studies have investigated the relationship between lifestyles and the process of adopting new technologies. These few studies have found that lifestyles are able to predict the adoption of new technologies (Chan & Leung, 2005; Leung, 1998; Li, 2004a; Mazzoni, Castaldia, & Addeob, 2007). According to the latest survey, 47% of the Taiwanese are classified as frequent users of the Internet (FIND, 2011). This study examined the relationship between lifestyles and the adoption of nine Internet-related technologies in Taiwan including IPTV, digital cable, emails, Internet instant messages, Facebook, scanners, notebooks, printer and personal computers. According to the latest studies in Taiwan, in 2011, the penetration rate for Facebook was 45.9%, the rate for PC was 98%, the rate for notebooks was 36%, the rate for digital cable was 6.3%, the rate for emails was 67.4%, the rate for MSN was 35%, and the

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rate for IPTV was 9%. There are no data so far for the penetration rates of printers and scanners in Taiwan (FIND, 2011; NCC, 2011; Nielson, 2011)

This study selected the nine Internet-related technologies for investigation due to the following reasons: (1) past studies showed that people adopted certain technologies because the functions of the technologies fulfilled their needs, and that different types of technologies fulfilled different needs (Dupagne & Driscoll, 2010; Lin, 2006). Based on Atkins' (1995) classification, the nine technologies can be classified into three types: entertainment-oriented technologies such as digital cable and IPTV, interpersonally oriented technologies such as email, MSN, and Facebook, and information-oriented technologies such as PCs, printers, notebooks, and scanners; and (2) the nine Internet-related technologies were relatively popular or were regarded as the technologies of the future in Taiwan.

Rogers' model has been criticized by scholars for its failure to take full account of the psychological dynamics that drive people to adopt technologies (Atkin, Neuendorf, Jeffres, & Skalski, 2003; Rogers, 2003). Recent studies have tried to account for this deficiency by examining adopters' personalities, and innovativeness has been one of the personality variables that were found to be critical in predicting technology adoption (Li, 2004b; Lin, 2004). Therefore, by adopting Rogers' model of diffusion of innovation, this study also examines the effect of people's innovativeness on the adoption of nine Internet-related technologies.

In addition to Rogers' model, Davis' technology acceptance model (TAM) is another theoretical model that is often used to predict technology adoption. The main notion in the TAM is that people's attitudes toward a technology are shaped by their beliefs about the attributes of this technology, which in turn influence people's intentions to adopt this technology. Empirical studies on TAM show that when TAM was used to examine technology adoption under the circumstances that adopters were voluntary, then individual differences such as demographics needed to be included in the model. This study investigated the adoption of nine Internet related technologies when adopters are voluntary, and thus this study considered that Rogers' model is more suitable (Davis, 1989; Lin, 2009; Shin, 2009; Venkatesh & Davis, 2000; Venkatesh & Bala, 2008).

2. Literature review

Rogers (1995, p. 10) defines the diffusion of innovations as "the process by which an innovation is communicated through certain channels over time among the members of a social system." Based on this model, three elements—innovation attributes, mass media use, and demographics—are critical predictors for technology adoption (Rogers, 1995, 2003).

Among the three elements mentioned above, innovation attributes are the most powerful predictor for technology adoption. This variable includes the social rewards of having a relative technological advantage that belong to one of the perceived innovation attributes—relative advantage (Rogers, 1995, 2003).When people's adoption of a given technology is motivated by social rewards, then lifestyles become an important predictor because lifestyles measure people's psychological preferences in terms of their attitudes and values. Consequently, people are able to express their psychological preferences and show their social status by adopting a given technology. Furthermore, it is rare that people adopt a technology merely for its practical functions. More often than not, people are concerned about social rewards when adopting a technology (Mazzoni et al., 2007).

2.1. Lifestyles

Lifestyles are often a way for people to express their conceptions of themselves. Therefore, lifestyles have been regarded as chief markers of identity because people wear or use certain images and symbols connected with specific lifestyles to actively express and communicate their identity. Compared with the traditional marketing methods that only reveal consumers' demographic information, lifestyles provide an understanding of consumers' needs and desires that are associated with their consumption patterns and purchase behaviors. Therefore, lifestyles have been considered by marketing researchers as one of the most effective methods for niche marketing (Lekakos, 2009; Lorenzo-Dus, 2006).

The measurement of lifestyles relies heavily on psychological studies of consumers' values and attitudes, and several different approaches have been developed by scholars to measure consumers' lifestyles. The most widely adopted approach for lifestyles is the A.I.O., which assesses consumers' activities, interests, and opinions to classify consumers into different lifestyles. Activities are the actual behaviors of consumers, interests refer to the degree to which consumers pay attention to certain matters, and opinions are the views and expectations consumers have toward an issue (Chan & Leung, 2005; Hawkins, Best, & Coney, 1998; Lekakos, 2009; Li, 2004a; Schwartz, 1992). Using A.I.O inventories, researchers have identified different behavioral patterns that are the bases of lifestyles. For example, Mazzoni et al. (2007) found that three lifestyles were associated with different motivations for using cell phones in Italy. More specifically, their study discovered that people with a connected lifestyle used cell phones mainly for entertainment, people of a committed lifestyle purchased cell phones for efficient communication and time organization, and people with a traditional lifestyle utilized cell phones just for maintaining relationships. Li's (2004a) study showed that the lifestyle defined by having a preference for foreign products was associated with a proclivity for Internet shopping, while a fashionable lifestyle correlated to cable television shopping. Leung's (1998) study, which examined the adoption of seven technologies in China, found that lifestyles had a significant effect on differentiating adopters from non-adopters. In particular, his study found that four