Chapter-II

RESEARCH GAPS, OBJECTIVES, MODEL AND HYPOTHESIS

2.1 Problem Identification and Research Gaps

Researchers have widely applied the above models and theories for exploring internet shopping. The three different approaches taken by researchers in applying these models and theories are: Checking the applicability of the models and theories for understanding user acceptance of innovations, applying the models and theories as they are proposed for exploring the internet shopping acceptance and applying modified (either simplified or expanded versions of) models and theories.

Researchers have also explored individual constructs for their relevance to exploring acceptance of innovations and for proper operationalization. For example, the relative advantage construct in IDT is often viewed as the equivalent of PU construct in TAM and the complexity construct in IDT is very similar to PEOU construct in TAM (Moore and Benbasat, 1991). As has been shown in Appendix B, behavioral researches have integrated constructs from the four theories with each other for improving the empirical predictive and explanatory power of models. Empirical studies have also suggested that TAM should be integrated with other acceptance and diffusion theories to improve its predictive and explanatory power (eg. Hu et al., 1999).

As mentioned at the end of the previous chapter, even after so much research has already undergone in exploring the models and theories and the internet shopping phenomenon, the fact remains that not all the limitations (specified in a prior section) of these models and theories are seriously looked into for solutions making the models robust. In spite of the fact that the models and theories have been modified and
improved for studying the impact of social influence, perceived playfulness, security concerns, compatibility, perceived service quality, perceived trust, product offering, usability, information richness, product and company attributes, perceived risk, customer experience, etc., following critical observations draw serious research gaps insisting on a strong need of further exploration in this research domain.

First of all, there is a dearth of research in Indian context exploring the acceptance of internet shopping in India. Only one study was found among accessible Indian publications. The study by Ramayah et al. (2005), published in E-Business (The ICFAI University Press), aimed at exploring the determinants of intention to use an internet bill payment system. Even if published in India, the study was carried out in Malaysia. Apart from this, there was no other published research found in Indian context. Internet penetration in India was around 1.7% in 2004, which has exponentially increased in last few years. Looking at this, it is obvious that internet shopping would diffuse at an accelerated pace (may be for selected products only) during next ten-fifteen years. Therefore, a serious effort aimed at exploring various facets of actual internet shopping behavior in India is foremost important.

Personality is not taken into consideration by the above models and theories. Evidence from earlier research shows that compatibility has a positive impact on Perceived Usefulness (PU) (eg. Chen et al., 2003) and on Attitude Towards Using (A) (Chen at al., 2003 and Chen et al., 2002). Chen et al. (2003) included the compatibility construct of IDT in the TAM model for addressing the individual’s personality and his or her social context in which internet shopping takes place. Compatibility was evaluated by assessing the innovation’s compatibility with existing values and beliefs, previously introduced ideas and potential adopters’ needs as proposed by Rogers (1995).
Therefore, as proposed by Chen et al. (2002), if a customer finds using a virtual store compatible with his or her needs and lifestyle, he or she will consider the virtual store useful. In these studies the measurement scale adapted from Moore and Benbasat (1991) for compatibility (Which is a three-item scale) asks the respondents to indicate the degree to which using a virtual store is compatible with most aspects of their shopping and product information seeking, their lifestyles and their shopping preferences. This seems to be quite an ordinary approach towards evaluating compatibility. For precisely evaluating compatibility, with the most aspects of shopping and product information seeking, lifestyles and shopping preferences, an elaborated shopping oriented scale, which can also identify various shopping orientations is necessary. Once the shopping orientations of respondents are identified, based on their shopping behavior, respondents can be classified according to shopping orientation and then impact of each shopping orientation on Perceived Usefulness (PU) and Attitude Towards Using (A) should be evaluated, which would enable the researcher to better evaluate the compatibility construct for acceptance and diffusion of internet shopping.

In all, about 27 per cent of users in India said they have not purchased goods or services online because they think it is too difficult and lack of Knowledge on such aggravates the situation and hence, it is safer buying goods or services in a store. This compares with a global average across all countries covered by the report, of 30 per cent abstainers and 28 per cent who are not willing to shop online due to security reasons. Earlier research has found Knowledge to have an impact on Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) and Security/privacy concerns to have an impact on Actual Behavior (B) (Timmermann H., 2009). Therefore, it is important to evaluate the impact of Knowledge of internet shopping on PU and PEOU. In the same way security/privacy concerns may abstain Behavioral Intention to Use (B) intention of internet shopping from
being converted into Actual Behavior (B). Therefore, impact of Security/privacy (S) concerns on Actual Behavior (B) must be evaluated.

2.2 Research Objectives

- Testing the causal relationships among the constructs proposed in TAM
- Identifying various shopping orientations among potential internet shoppers
- Evaluating the effect of a consumer’s shopping orientation on his/her Perceived Usefulness (PU) for and Attitude Towards Using (A) internet shopping
- Evaluating the effect of a consumer’s Knowledge about internet shopping on his/her Perceived Usefulness and Perceived Ease of Use of internet shopping
- Evaluating the effect of a consumer’s Security/Privacy (S) concerns on his/her Actual Behavior (B).
2.3 Proposed Model

Shopping Orientations
- Home
- Mall
- Economic
- Socializing
- Personalizing

Perceived Usefulness (PU)

Attitude Towards Using (A)

Behavioral Intention to Use (BI)

Actual Behavior (B)

Knowledge (K)

Perceived Ease of Use (PEOU)

Security/Privacy (S)

FIGURE 4. Shopping Orientations and Technology Acceptance Model (TAM)
2.4 Hypotheses
The Technology Acceptance Model (TAM) (Davis, 1989), derived from the Theory of Reasoned Action (TRA), established causal relationships among Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude Toward Using (A), Behavioral Intention to Use (BI) and Actual Behavior (B). Though TAM is specific to IS usage, it has been widely used as a theoretical framework in the recent studies to explain technology acceptance, including the internet and World Wide Web (WWW) (Chen, Gillenson and Sherrell, 2001; Moon and Kim, 2001; Koufaris, 2002; McCloskey, 2004). The causal relations among the above attributes have been supported by the above studies. Based on this, the current study also adopts TAM’s belief-attitude-intention-behavior relationship and re-evaluates the same causalities within the context of the study.

H1 A consumer’s Behavioral Intention to use (B) internet shopping positively affects his or her Actual Behavior (B) of the internet shopping

H2 A consumer’s Attitude Towards Using (A) Internet shopping positively affects his or her Behavioral Intention to Use (B) internet shopping

H3 A consumer’s Perceived Usefulness (PU) of internet shopping
(a) Positively affects his or her Behavioral Intention to Use (BI) internet shopping
(b) Positively affects his or her Attitude Towards Using (A) internet shopping

H4 A consumer’s Perceived Ease of Use (PEOU) of internet shopping
(a) positively affects his or her perceived usefulness (PU) of internet shopping
(b) positively affects his or her attitude towards using (A) internet shopping

As mentioned in the literature review, evidence from earlier research shows that compatibility has a positive impact on PU (eg. Chen et al., 2003) and on A (Chen et al., 2003 and Chen et al., 2002). The compatibility scale used in the earlier research needs
further extension. For precisely evaluating compatibility, with the most aspects of shopping and product information seeking, lifestyles and shopping preferences, an elaborated shopping oriented scale, which can also identify various shopping orientations is necessary. Once the shopping orientations of respondents are identified, based on their shopping behavior, respondents can be classified according to shopping orientation and then impact of each shopping orientation on PU and A should be evaluated, which would enable the researcher to better evaluate the compatibility construct for Actual Behavior (B) of internet shopping. In an experiment to profile online shoppers based on their profiles, Vijayasarathy (2001) collected data from students. The results showed that in-home shopping orientation was a significant predictor of both perceived usefulness and attitude towards using online shopping. Based on this, to bridge the research gap in terms of stringent evaluation of compatibility, the study explores the shopping orientations proposed by Vijayasarathy (2001) and proposes the following based on each shopping orientation's characteristics mentioned in earlier research.

**H5** A consumer’s socializing shopping orientation

(a) Negatively affects his or her attitude towards using internet shopping

(b) Negatively affects his or her perceived usefulness towards internet shopping

**H6** A consumer’s home shopping orientation

(a) Positively affects his or her attitude towards using internet shopping

(b) Positively affects his or her perceived usefulness towards internet shopping

**H7** A consumer’s mall shopping orientation

(a) Negatively affects his or her attitude towards using internet shopping
(b) Negatively affects his or her perceived usefulness towards internet shopping

**H8** A consumer’s economic shopping orientation

(a) Positively affects his or her attitude towards using internet shopping

(b) Positively affects his or her perceived usefulness towards internet shopping

**H9** A consumer’s personalizing shopping orientation

(a) Negatively affects his or her attitude towards using internet shopping

(b) Negatively affects his or her perceived usefulness towards internet shopping

Prior product knowledge can influence consumers search for information (Bei and Widdows, 1999). Customers with high product knowledge have often passed the interpretation phase of the buying process. Thus, their judgement criteria are likely to be established (Bettman and Sujan, 1987). Furthermore, customers with high product knowledge are more likely to know where to look for relevant information (Selnes and Troye, 1989). It is also revealed by Brucks (1985) that prior product knowledge increase search efficiency. This indicates that consumers with internet shopping knowledge will have relatively high Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) for internet shopping.

**H10** A consumer’s knowledge (K) about internet shopping

(a) Positively affects his or her perceived usefulness of internet shopping

(b) Positively affects his or her perceived ease of use of internet shopping

Previous studies have shown that consumers’ Security/Privacy (S) concerns have a negative influence on actual behaviour (B) of online shopping (Gauzente, C., 2004;
Timmermann, H., 2009). Interestingly, Timmermann, H. (2009) found that the experienced online-users (59%) had more concerns of their personal data being misused than the newcomers. As per the study, 79% of the respondents said that they consider an online-shop safe when the adequacy of data protection is clearly communicated in the shop. In the same way, Rege (2007) found that an increase in consumer trust was found to be associated with a reduction in perceived risk in B2C E-commerce transactions. Therefore, this study considers Security/Privacy (S) concerns as an important attribute of Actual Behavior (B) of online shopping and proposes the causal relationship with Actual Behavior (B).

**H11** A consumer’s Security/Privacy (S) concerns negatively affects his/her actual behavior (B) of online shopping.