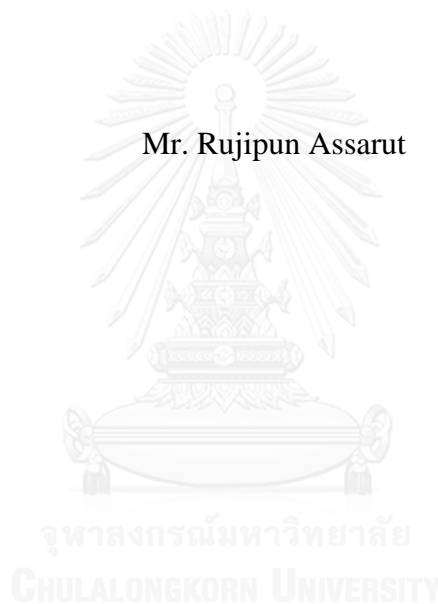


RELATIONSHIPS BETWEEN CONSUMPTION VALUES, PERSONAL  
CHARACTERISTICS AND BEHAVIORAL INTENTIONS IN MOBILE  
SHOPPING ADOPTION AMONG DIFFERENT PRODUCT AND SERVICE  
TYPES

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ความสัมพันธ์ระหว่างคุณค่าการบริโภค คุณลักษณะส่วนบุคคลและความตั้งใจเชิงพฤติกรรม ใน  
การยอมรับการจ่ายผ่านอุปกรณ์เคลื่อนที่ระหว่างประเภทผลิตภัณฑ์และบริการที่ต่างกัน



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาบริหารธุรกิจดุษฎีบัณฑิต

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By	Mr. Rujipun Assarut
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รุจิพันธ์ อัสสระรัตน์ : ความสัมพันธ์ระหว่างคุณค่าการบริโภค คุณลักษณะส่วนบุคคลและความตั้งใจเชิงพฤติกรรม ในการยอมรับการจับจ่ายผ่านอุปกรณ์เคลื่อนที่ระหว่างประเภทผลิตภัณฑ์และการบริการที่ต่างกัน (RELATIONSHIPS BETWEEN CONSUMPTION VALUES, PERSONAL CHARACTERISTICS AND BEHAVIORAL INTENTIONS IN MOBILE SHOPPING ADOPTION AMONG DIFFERENT PRODUCT AND SERVICE TYPES) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: รศ. ดร.สมเกียรติ เอี่ยมกาญจนาลัย, 103 หน้า.

งานวิจัยในอดีตบ่งชี้ว่า คุณค่าการบริโภคเป็นปัจจัยสำคัญสำหรับผู้บริโภคในการตัดสินใจยอมรับการจับจ่ายแบบออนไลน์ อย่างไรก็ตาม งานวิจัยส่วนใหญ่มุ่งศึกษาบนผลิตภัณฑ์หรือบริการเพียงประเภทเดียว ส่งผลให้เกิดข้อจำกัดในการสรุปผลการวิจัย นอกจากนี้ งานวิจัยในอดีตที่เกี่ยวกับการศึกษาผลกระทบทางอ้อมของคุณลักษณะส่วนบุคคลต่อการยอมรับการจับจ่ายแบบออนไลน์ ได้มุ่งเน้นศึกษาเพียงผลกระทบที่ส่งผ่านทางคุณค่าด้านประโยชน์ใช้สอย ยังคงไม่มีงานวิจัยในอดีตที่ศึกษาผลกระทบทางอ้อมดังกล่าวผ่านทางคุณค่าการบริโภค ซึ่งรวมแง่มุมทั้งด้านประโยชน์ใช้สอยและอารมณ์ความรู้สึก งานวิจัยครั้งนี้จึงมุ่งเน้นศึกษาความสัมพันธ์ระหว่างคุณค่าการบริโภค คุณลักษณะส่วนบุคคล และความตั้งใจเชิงพฤติกรรมในการยอมรับการจับจ่ายผ่านอุปกรณ์เคลื่อนที่จากมุมมองของประเภทผลิตภัณฑ์และการบริการที่ต่างกัน ผลการวิจัยเผยว่าคุณค่าด้านความสะดวกสบาย ด้านความปลอดภัย และด้านอารมณ์นั้น เป็นคุณค่าร่วมที่ผู้บริโภคสินค้าแฟชั่นและผู้ให้บริการที่พักรวมใช้พิจารณาเมื่อต้องตัดสินใจจับจ่ายผ่านอุปกรณ์เคลื่อนที่ นอกเหนือจากคุณค่าร่วมดังกล่าว นักเดินทางยังพิจารณาคุณค่าด้านเงื่อนไขและด้านประสบการณ์ที่แปลกใหม่ร่วมด้วย เพื่อประเมินการตัดสินใจของผู้พักรวมผ่านอุปกรณ์เคลื่อนที่ นอกจากนี้ ผลการวิจัยยังแสดงให้เห็นว่า คุณลักษณะส่วนบุคคลของผู้นิยมนวัตกรรมและการรับรู้ความสามารถของตนเองได้ส่งผลทางอ้อมอย่างมีนัยสำคัญผ่านทางคุณค่าการบริโภค ไปยังความตั้งใจในการยอมรับการจับจ่ายผ่านอุปกรณ์เคลื่อนที่ ท้ายนี้ งานวิจัยครั้งนี้ยังได้สรุปนัยด้านบริหารจัดการและข้อเสนอแนะด้านการตลาดที่ได้จากผลการศึกษาดังกล่าวเช่นกัน

ภาควิชา การตลาด

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KEYWORDS: MOBILE SHOPPING / CONSUMPTION VALUES / PERSONAL CHARACTERISTICS / PRODUCT AND SERVICE TYPES

RUJIPUN ASSARUT: RELATIONSHIPS BETWEEN CONSUMPTION VALUES, PERSONAL CHARACTERISTICS AND BEHAVIORAL INTENTIONS IN MOBILE SHOPPING ADOPTION AMONG DIFFERENT PRODUCT AND SERVICE TYPES. ADVISOR: ASSOC. PROF. DR.SOMKIAT EIAMKANCHANALAI, 103 pp.

Past literature indicated that consumption value is an important factor in consumer decision-making to adopt online shopping. However, most studies focused only on a single product or service type. Thus, the generalization of the results is limited. Moreover, previous studies of the indirect effects of personal characteristics on online shopping adoption emphasized solely through utilitarian values. None investigated the indirect effects through consumption values which include both utilitarian and hedonic aspects. This study is to examine the relationships between consumption values, personal characteristics and behavioral intentions in mobile shopping adoption from the perspectives of different product and service types. The results revealed that convenience, security, and emotional values are common values in which consumers of fashion goods and accommodations consider when deciding to purchase on mobile. Apart from common values, travelers also consider conditional and epistemic values when assessing whether to reserve accommodations on mobile. Moreover, innovativeness and self-efficacy were shown to exert the significant indirect effects via consumption values to the intentions to adopt mobile shopping. Managerial implications and suggestions are further discussed.

Department: Marketing

Student's Signature .....

Field of Study: Marketing

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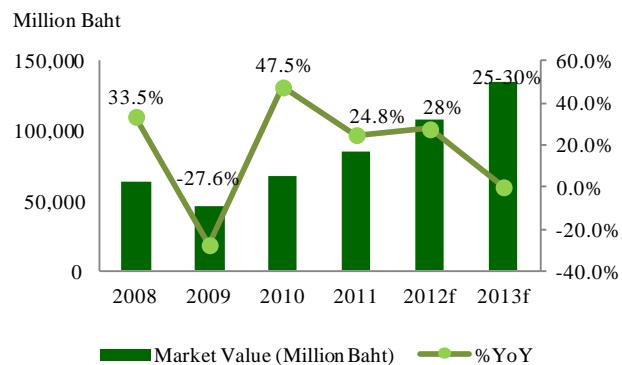


# CHAPTER 1

## INTRODUCTION

With the prevalence of the Internet in Thailand, electronic commerce (e-commerce) becomes an increasingly important business channel for retailers. Looking back over the last decade, e-commerce was something unknown to most consumers, and was certainly not popular in Thailand. In the past, Thai consumers preferred to shop at stores, where they could experience the look and feel of goods or services before making a decision. They also lacked confidence toward many aspects of e-commerce, including retailers' reputations, the quality of goods and services offered online, payment systems, data collection, and quite importantly, Internet accessibility. Because the Internet usage rate in Thailand, at that time, was still not high, thus it impeded the success of e-commerce here.

However, recently Thai consumers have changed their shopping behaviors dramatically. People now want to keep pace with others in their lifestyles, and gain greater convenience in a new shopping environment that the current technologies can offer. The rapid advancement of information technology, becoming ever more important to the daily lives of new generation consumers, has made retail e-commerce quite attractive to them over



Source: KResearch (2012)

Figure 1.1: Thailand's Online Retail Market Size

recent years. In Thailand, small retailers may remain the key contributors to e-commerce expansion, but department stores, discount stores and supermarkets are beginning to rely on e-commerce to boost their revenues. In addition, online marketing activities such as promotional campaigns and infomercials have gained more notice for these retailers in order to be more accessible to target customers, e.g., teenagers and career people.

Statistically, Thailand's e-commerce has expanded at a compound annual growth rate (CAGR) of 21.2 percent over the past five years, rising from roughly THB63.4 billion in 2008 to more than THB107.9 billion in 2012. Moreover, in 2013, it is estimated by KResearch (2012) to be worth in a forecast range of THB135-140 billion with growth in the range of 25-30% (YoY).

Apart from shopping via a desktop, recently, the retail sector has been starting to extend the online shopping services to mobile devices which will be the focus of study in this research. This trend is supported by the proliferation of smartphones and tablets, and the rapid growth of mobile data services due to the expansion of 3G network on the existing frequency nationwide since year 2012. Moreover, as the derivative of e-commerce, the mobile commerce or mobile shopping, which is a retail channel for consumers to shop on mobile devices through mobile applications provided on smartphones and tablets, is expected to grow even more after the launch of 3G 2.1 GHz in the year 2013. Comparing with surfing the net by a computer, people can get on the broadband Internet by 3G without the limitations of time and space, which lays a good foundation for mobile shopping to be promoted further.

Via mobile retail channel, consumer shopping behavior has evolved dramatically. No longer be restricted to a local shopping place, consumers are empowered by a world of unlimited choices and can access anytime and anywhere. Even though mobile shopping has several benefits, e.g. convenience to buy things, consumers may be reluctant to buy items offered on mobile through ‘virtual’ stores. One of the reasons is that they are unsure of the quality of products or services they will receive. They may at times become frustrated with mobile system glitches, thus resulting in potential losses of sales. Key to survival in this new climate is to understand the drivers underlying consumer decision-making on adopting mobile shopping and organize businesses around them.

As an emerging service, consumer decision-making behavior to adopt mobile shopping has attracted considerable attention from academics. Among the recent works, Lu and Rastrick (2014) investigated the influencing factors of website design on the adoption of mobile retail channel, and reported that navigation design is the most significant factor to affect consumers' perceived ease of use on mobile websites. Y. F. Chen and Lan (2014) utilized the technology acceptance model in their study, and found that the external factors, i.e. mobility, convenience, and information richness have effects on perceived ease of use, perceived usefulness, and trust in mobile shopping adoption. Furthermore, Yang (2012) extended the theory of planned behavior in the study, and found that perceived enjoyment has stronger effect on attitude toward adopting mobile shopping than perceived usefulness, and the perceived mobile shopping control also has a significant effect on mobile shopping adoption.

In consumer research, consumer value-driven decision-making research in innovation adoption has been one of major themes (Sheth et al., 1991). From the retailing perspective, Hartnett (1998, p. 21) stated that “when retail marketers satisfy customer-based needs, they are delivering values, which put them in a much stronger position in the long term”. Burden (1998, p. 2) also noted that “successful retail marketers increasingly target their offers toward two consumer categories, i.e. those with an emphasis on values and those for whom time pressure is the key.” Thus, retail customers are “value-driven” (Levy, 1999). Marketers should understand which values are significant, and where they should emphasize in order to attract their customers to purchase their products or services.

This study uses the theory of consumption values (Sheth et al., 1991) as a fundamental theory to explain consumers’ behavioral intentions to adopt the mobile shopping channel. Adoption here means a decision to accept and continue to use an innovation (Rogers, 2003, p. 21). Since so far no measurement items were reported to validate the value dimensions of the theory of consumption values in mobile retail context, other researchers’ work in several other contexts related to mobile services or digital services, e.g. location-based mobile services, and online shopping via fixed Internet will be used as support to define the value dimensions in details in this study.

This study also proposes to examine the willingness of users to provide positive word-of-mouth (WOM) about mobile shopping in addition to the behavioral usage intentions. Fundamentally, WOM can be positive or negative, however, marketers are normally interested in promoting positive WOM in order to expedite the diffusion of their products or services. Moreover, positive WOM can reduce risk perceived by consumers during their evaluation on the adoption of innovation (Aldas-

Manzano et al., 2009; Pihlstrom & Brush, 2008; Sweeney et al., 2008). Thus, positive WOM is another behavioral outcome to be studied in this research.

The combination of behavioral usage intentions and positive WOM intentions as the outcome constructs may better explain the adoption of mobile retail channel than usage intentions alone. There are two reasons for this. First, behavioral usage intentions are normally the major outcomes utilized as a proxy for actual usage behavior in the research of new technology adoption (Turel et al., 2010). Second, people who do not intend to adopt a new technology may still say positive things about it, and affect its acceptance among other people in general.

Apart from the consumption values, consumer researchers have widely accepted that personal characteristics, especially innovativeness and self-efficacy, also play an important role on the innovation adoption of consumers (e.g. O’Cass & Fenech, 2003; Rogers, 2003). In the context of online retailing, the study of Lian and Lin (2008) demonstrated that innovativeness and self-efficacy directly influence the intentions to adopt Web shopping. O’Cass and Fenech (2003) found that personal characteristics have indirect effects on Web retailing adoption through perceived usefulness and perceived ease of use. Furthermore, the study of Citrin et al. (2000) indicated that innovativeness has a direct influence on consumers' adoption of Web shopping. Accordingly, previous studies of online shopping adoption showed to focus the studies either on the direct or indirect effects of personal characteristics. Moreover, when studying indirect effects, they focused only on the utilitarian values, i.e. the perceptions of usefulness and ease of use. To gain more understanding of mobile shopping adoption, it would be useful to investigate the indirect effects of personal

characteristics through both utilitarian and hedonic values, and include both direct and indirect effects in the same research model.

Marketers have long tried to learn all they can about consumer innovators who are open to new ideas and to be among the first to try new products, services, or practices. Consumer innovativeness is an important personal characteristic or personality trait that has been useful in market segmentation to differentiate between innovators and non-innovators. Consumers with high innovativeness have tendency to seek for novelty and uniqueness of and buy a new product or service, as well as use a new practice or technology. Thus, consumer innovativeness is one of key factors influencing the innovation adoption.

Regarding online shopping, the studies of consumer innovativeness in the previous literature (Citrin et al., 2000; Goldsmith, 2002; Lian & Lin, 2008; Limayem et al., 2000) were on the domain of Web retail, which defined the construct of innovativeness in Web retail as the degree of individual's tendency to search information or know about a new retail website. However, this definition might be too specific because the way to measure people who search information or always know about a new retail website implies that those people already have intention to shop on Web retail sites. Hence, this study proposes a new construct of innovativeness for the shopping context as the "consumer innovativeness toward shopping" which indicates the degree of individual's tendency to try out new ways or channels of shopping such as mobile retail channel. From the perspective of this proposed innovativeness construct, it is expected that consumers with high innovativeness toward shopping may perceive values of mobile retail usage different from those with low

innovativeness. This is because they generally have more enthusiastic to search information and try new way of shopping.

Meanwhile, self-efficacy is defined by Bandura (1997) as “the personal beliefs or perception of individuals that they are capable of learning and performing specific behaviors.” Yi and Gong (2008) noted that “self-efficacy judgments are positively related to outcome expectations, thus the stronger individuals’ self-efficacy beliefs are, the more likely they are to achieve the desired outcome.” The study of O’Cass and Fenech (2003) found that consumers with high Internet self-efficacy are more comfortable shopping on the Internet. In other words, Web-based Internet users who have accumulated sufficient experience on surfing Internet, may create a belief in their efficacy for its extension into Web retail usage.

In mobile retail context, the shopping activity is mainly carried on mobile application which required different experiences and skills from those found in Web retail context. Thus, Internet self-efficacy which is created on Web retail context might not be suitable for applying in mobile retail context because the consumer’s judgment of efficacy is different between Web-based and Mobile-based retail shopping. In the same vein as the Internet self-efficacy, it could be expected that consumers who have accumulated sufficient experience on mobile usage will create a belief in their efficacy on using mobile, i.e. mobile self-efficacy, and may extend into mobile retail usage. Moreover, it is expected that consumers with high mobile self-efficacy may perceive values of mobile retail usage different from those with low mobile self-efficacy because they generally have more understanding or knowledge on using mobile.

Consequently, this study also proposes to explore the relationships of “consumer innovativeness toward shopping” and “mobile self-efficacy” with consumer perceived value and their effects toward the acceptance of mobile shopping.

Statistically, consumers choose to buy products or services online with different proportion depending on product and service types. According to the survey by ETDA (2013), fashion goods (i.e. clothes and shoes) account for 59% of the products and services purchased online, while service reservation such as travel accommodations (e.g. hotel and resort) account for 19.0%, and digital products such as e-books account for 9.9%, etc. This implies that product and service types may have effects on the consumer behaviors in online shopping context.

Peterson et al. (1997) indicated that due to the special characteristics of the Internet, the suitability of Internet for marketing depends on the characteristics of the products and services marketed in it. As such, considering the differences among product and service types is important to fully understand the influence of online retail shopping. So far, few researchers such as Lian and Lin (2008) studied the effects of product and service types on determinants of Web retailing adoption, but most of them have neglected it, especially in the context of mobile shopping. Most previous studies of online shopping (e.g. Limayem et al., 2000; H. H. Lin & Wang, 2005; Pihlstrom & Brush, 2008; Pura, 2005) have focused only on a single product or service type. Consequently, the generalization of the results is limited. Thus, this study also proposes to examine the effects of product and service types on the acceptance of mobile shopping.



The online retailing is the integration of online and offline consumption. Consumers can order online for a tangible product such as book and get it delivered to their place, or reserve a service online and then go to a certain place to get the service. Moreover, they can also order a digital product such as software and download it directly to their computer, or subscribe to be a member of online service such as online movie service and get the service online. Thus, the scheme used to categorize product and service types should reflect such characteristics of products or services available online. This study will use a categorization scheme called “fulfillment-product classification scheme” proposed by Francis and White (2004) which can categorize product and service types according to the mentioned characteristics of products or services provided online.

The present study therefore has three primary objectives: (1) to examine the influences of consumption values on the adoption of mobile shopping, (2) to investigate the direct influences of personal characteristics on the mobile shopping adoption, as well as the indirect effects through the perceptions of consumption values, and (3) to examine these relationships from the perspectives of different product and service types. The results of this study will contribute to understanding consumer decision-making behavior to adopt mobile shopping, and provide implications for developing effective marketing strategies aimed for particular customer segments according to consumers’ personal characteristics under the settings of different product and service types.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Information Technology Adoption and Consumer Choice**

To date, the most prominent model employed to explain the adoption of new technology by individuals is the Technology Acceptance Model (TAM) (Davis, 1989). Based on the Theory of Reasoned Action (Ajzen & Fishbein, 1980), TAM is a parsimonious model of which all influences of external variables, such as design features of technology, are mediated by usefulness and ease of use. TAM was originally developed to explain individuals' adoption of technology in organizational settings. However, the original TAM has its limitations in explaining the adoption of new technology in consumer settings (H. W. Kim et al., 2007). In organizational settings, the cost of adoption is borne by the organization, while in consumer settings, the adopters play not only the role of technology user but also the role of consumer, and the cost of adoption is borne by the individuals. Thus, the adopters of such a new technology are consumers rather than simply technology users, in other words it is a consumer choice. Therefore, the study of consumer technology acceptance should be considered from consumer perspective.

Consumer research has evolved from a focus on the cognitive aspects of decision making which are functional aspects, to include more intrinsic and emotional aspects. Consequently, the experiences on a product or service can be seen to be valued holistically. Consumer products and services can be considered as instrumental (utilitarian) or non-instrumental (hedonic). Consumer choices are driven by such

utilitarian and hedonic considerations (Dhar & Wertenbroch, 2000; Hirschman & Holbrook, 1982). For instance, consumers choosing a big bike from a wide variety of choices may care for both utilitarian features such as fuel consumption, and hedonic attributes such as cool design. Generally speaking, a hedonic product or service provides more experiential consumption such as fun, pleasure, and excitement, whereas the utilitarian one is mainly functional. Thus, consumers make choices between products or services with considerations on utilitarian and hedonic appeal, and then evaluate the values received in order to make a consumption decision that can balance those motivated values (H. W. Kim et al., 2007).

The consumption of consumers is described by Hirschman and Holbrook (1982) as either “problem solving” (utilitarian) or “seeking emotions such as fun, fantasy, and enjoyment” (hedonic). Several consumer researchers have utilized the dichotomy in the retail research by viewing shopping as work or as an enjoyable or fun activity (Childers et al., 2001). It is obvious that there are many motivations for shopping goals, but they are possibly classified as utilitarian and hedonic motivations to be a foundation for understanding consumer shopping behavior (Babin et al., 1994).

Regarding consumer decision-making, Howard (1977, p. 28) contended that it is important to distinguish between the attributes and consumers' perceptions of attributes because it is the perception that has influence on consumer behavior, not the attribute itself. Jacoby and Olson (1985) had the same opinions, and suggested marketers to focus on consumer perceptions. Thus, consumers make their choices based on their perceived utilitarian or hedonic values of products and services, or so called consumer perceived value.

This study considers using the concept of consumer perceived value to explain the adoption of mobile shopping. Consumers may have different motives to shop on mobile retail channel and perceive different values toward mobile shopping. Therefore, the study of consumer perceived value is important to understand which values consumers pay more attention to. Additionally, the concept of perceived value has been widely accepted as an influential factor toward buying behavior in such a way that it can increase consumers' willingness to buy and decrease their intentions to search for alternatives (Anderson & Srinivasan, 2003; Hellier et al., 2003; Pihlstrom & Brush, 2008; Pura, 2005). Thus, it is an essential concept for marketers to plan for the effective marketing strategies on promoting the mobile shopping usage.

## **2.2 Consumer Perceived Value**

In consumer research, the concept of consumer perceived value has long been studied and widely accepted by researchers as a key predictor of consumer decision-making behavior (e.g. Sheth et al., 1991; Zeithaml, 1988). Zeithaml (1988) defined consumer perceived value as a consumer's overall assessment of the utility of a product or service based on perceptions of what is received and what is given. Early interpretations of the 'get' and 'give' components were criticized to be too simplistic because they focused on perceived quality and monetary price, and ignored the multi-dimensionality of decision making (Sheth et al., 1991). Recently, a research approach which views perceived value as a multi-dimensional construct by considering both the utilitarian and the hedonic views of consumption values has been widely gaining acceptance.

Recently, a research approach which views perceived value as a multi-dimensional construct has been widely gaining acceptance (Pihlstrom & Brush, 2008; Pura, 2005; Sheth et al., 1991; Sweeney & Soutar, 2001). This approach allows researchers to overcome some issues of the traditional get-and-give approach, especially its concentration on economic utility. In particular, the multi-dimensional approach attempts to explain the perceived value concept by considering both the cognitive (utilitarian) and the affective (hedonic) views.

An extensive and widely accepted theoretical framework on multiple consumption value dimensions is offered by the theory of consumption values (Sheth et al., 1991). The theory provides the foundation for creating a comprehensive model of multiple consumption values, which were investigated and validated intensively through the variety of fields such as economics and social psychology. The framework contains both the utilitarian view of functional aspects and hedonic view of emotional aspects of consumption values. Moreover, the theory takes into account the context dependency, so measurement depends on application-specific. For example, the decision to use or not use a mobile shopping service involves a different set of considerations as compared with the decision to choose a service provider of mobile retail to buy a product from. Sheth et al. (1991) suggested five value dimensions in the theory of consumption values which are functional, social, emotional, epistemic and conditional value.

Sheth et al. (1991) claimed that the framework provided in theory of consumption values is both comprehensive and parsimonious. The framework is comprehensive in such a way that it provides an understanding of a wide range of market choice behaviors, such as product choices, brand choices, and product

category choices. Moreover, it integrates constructs used in theories contributed from several other disciplines. For instance, functional value represents the focus of utility theory in economics, social value is a focus in sociology, and emotional value is discussed in several branches of psychology.

### 2.2.1 Five Values in Theory of Consumption Values

Theory of consumption values identifies five consumption values influencing consumer choice behavior (Sheth et al., 1991). These are functional, social, emotional, epistemic and conditional value. A choice decision may be influenced by any or all of the five consumption values. There are several empirical studies to support these proposed five value dimensions of the theory of consumption values (e.g. Pihlstrom & Brush, 2008; Pura, 2005; Sheth et al., 1991; Sweeney & Soutar, 2001). Sheth et al. (1991) described the definition of each value as follows:

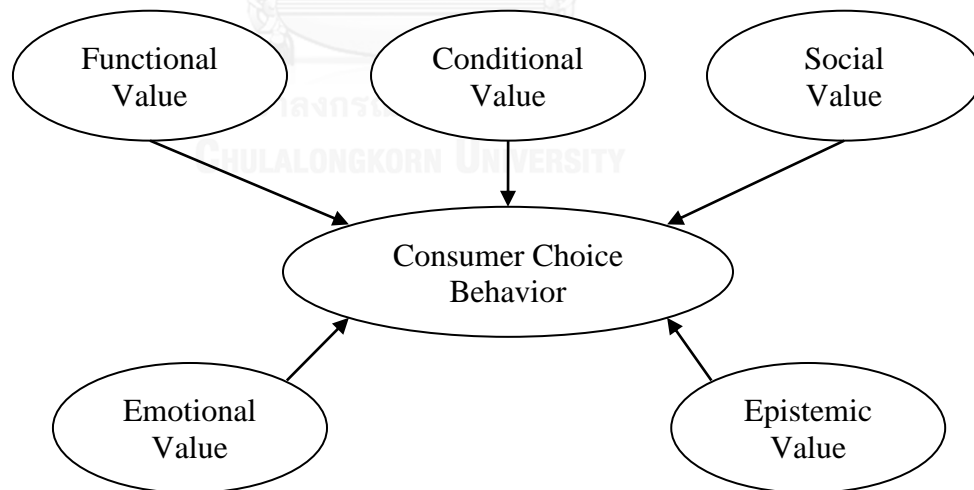


Figure 2.1: Five Consumption Values by Sheth et al. (1991)

### **Functional Value**

Traditionally, market choice has been viewed as influenced mainly by functional value. The functional value of an alternative is defined by Sheth et al. (1991, p. 18) as:

“The perceived utility acquired by an alternative as the result of its ability to perform its functional, utilitarian, or physical purposes. Alternatives acquire functional value through the possession of salient functional, utilitarian, or physical attributes.”

Generally, functional value relates to such attributes as performance, reliability, durability, and price. Based on a buy versus no-buy or use versus no-use decisions on functional value, a consumer would consider whether the functional or physical attributes in the product or service are needed and desired. For example, the decision to buy a particular television might be based on energy consumption record and display resolution.

According to Sheth et al. (1991), functional value is presumed to be the main driver of consumer choice. It may be derived from the characteristics or attributes of the product or service, such as price, reliability, and durability. Sweeney and Soutar (2001) contended that reliability and durability have often been viewed as aspects of quality, and are considered to have different directions of effects on consumer perceived value than price. In other words, quality has a positive effect, and price has a negative effect. In the context of mobile services, Pura (2005) suggested that convenience, which is an attribute of quality, is considered as a primary attractor for

mobile technology use, and proposed to depict functional value by two value dimensions, monetary value and convenience value.

Monetary value is defined as the perceived utility acquired by an alternative as the result of its ability to provide the good value for money regarding a product or service (Sheth et al., 1991). Meanwhile, convenience value is defined as the perceived utility acquired by an alternative as the result of its ability to provide the ease and speed of achieving a task effectively and efficiently, in other words saving time and efforts (Anckar & D’Incau, 2002; Anderson & Srinivasan, 2003).

Another important characteristic or attribute of mobile services is security, especially in online shopping context. Lian and Lin (2008) identified security concerns as a significant factor for shopping behavior. Online shopping involves greater security concerns than traditional retail channels because buyers and sellers do not interact face-to-face with each other, and the virtual online-shopping environment allows high anonymity. Consequently, perceived security is expected to influence consumer choice to adopt mobile shopping. Security value is defined as the perceived utility acquired by an alternative as the result of its ability to provide the security associated with the alternative (Aldas-Manzano et al., 2009).

Hence, in this study functional value aspects are proposed to be depicted by three value dimensions, i.e. monetary value, convenience value, and security value.

### **Social Value**

The social value of an alternative is defined by Sheth et al. (1991, p. 19) as:

“The perceived utility acquired by an alternative as the result of its association with one or more specific social groups. Alternatives acquire



social value through association with positively or negatively stereotyped demographic, socioeconomic, and cultural-ethnic groups.”

Choices involving highly visible products or services such as clothing and hairstyle, and products or services to be shared with others such as gifts, are often driven by social value. Products and services generally considered to be utilitarian or for personal use may also be selected on the basis of social value. Buy versus no-buy or use versus no-use decisions are influenced by social value in that consumers perceive their choices as either congruent or incongruent with the norms of social groups to which they belong. For example, men generally use “men’s products” but not “women’s products” like cosmetic powder and dresses.

### **Emotional Value**

Choices may also be based on emotional value which arouses desired emotion. The emotional value of an alternative is defined by Sheth et al. (1991, p. 20) as:

“The perceived utility acquired by an alternative as the result of its ability to arouse feelings or affective states. Alternatives acquire emotional value when associated with specific feelings or when they facilitate or perpetuate feelings.”

Products and services are frequently associated with emotional responses. Emotional value is frequently associated with aesthetic and intangible alternatives such as song and art. However, more functional products also provide emotional value. Emotions are normally considered to have no underlying cognitive reasons or rationale because they are quite difficult to describe to others. Buy versus no-buy or use versus no-use decisions may be influenced by emotional value. For example, a

consumer may desire to buy a house because the idea to own a house arouses feelings of success and independence.

### **Epistemic Value**

Choices are also sometimes based on the ability of alternatives to satisfy curiosity, knowledge, and novelty needs, which is epistemic value. The epistemic value of an alternative is defined by Sheth et al. (1991, p. 21) as:

“The perceived utility acquired by an alternative as the result of its ability to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge. Alternatives acquire epistemic value through the capacity to provide something new or different.”

All new experiences provide epistemic value. However, an alternative representing a simple change could also possibly provide epistemic value. Therefore, an alternative selected because of its epistemic value could be anything perceived by the consumer as new and be able to arouse his or her curiosity. Buy versus no-buy or use versus no-use decisions may be influenced by epistemic value. For example, many consumers try new snacks or beverages as they are introduced into the market.

### **Conditional Value**

The conditional value of an alternative is defined by Sheth et al. (1991, p. 22) as:

“The perceived utility acquired by an alternative as the result of the specific situation or the context faced by the choice maker. Alternatives acquire conditional value in the presence of antecedent physical or social

contingencies that enhance their functional or social value, but do not otherwise possess this value.”

The value of an alternative often varies according to situation. For instance, conditional functional value is often found in urgent situations, such as when an alternative is available at a special price for a limited time period, or in situations characterized by unusual resource constraints.

### **2.2.2 Comparison of Theory of Consumption Values with other Theories**

Several theories from various disciplines have contributed ideas and knowledge analogous to the values in theory of consumption values. Sheth et al. (1991) discussed and made comparison of their theory with other theories in diverse disciplines, and claimed that none is as comprehensive as theory of consumption values. The discussions are summarized as follows:

#### **Economics**

According to utility theory, economists contended that consumer choice behavior is motivated by the desire to maximize utility in general. Sheth et al. (1991) argued that the assessment of choice behavior presented by economists generally accounts only for rational behavior, and can be viewed as the behavior motivated by functional value. Thus, theory of consumption values is much broader in scope than economic utility theory. It incorporates not only the economically rational behavior, but also the behavior driven by non-economic utilities based on emotional, social, and epistemic values.

#### **Social Psychology**

In social psychology, attitude, social norms, and beliefs are three primary constructs in models of choice behavior. Attitude refers to the positive or negative affect associated with an alternative, which can be considered to be subsumed within the domain of emotional value. Social norms refer to behavior perceived as desirable and encouraged by referent others, and fall within the domain of social value. Finally, beliefs refer to perceptions of how alternatives will perform, and is similar in scope to functional value.

Table 2.1: Comparisons of Theory of Consumption Values with Other Theories from Various Disciplines by Sheth et al. (1991)

Discipline <sup>a</sup>	Constructs similar to:				
	Functional value	Social value	Emotional value	Epistemic value	Conditional value
Economics (utility theory)	O				
Social Psychology (attitude models)	O	O	O		O <sup>b</sup>
Clinical Psychology (Freudian)	O	O	O		
Experimental Psychology (learning theory)	O		O	O	O
Consumption Economics and Economic Psychology	O		O		
Sociology		O			

Remarks: a) As for marketing and consumer behavior discipline, the constructs similar to theory of consumption values largely depend on the theories and model to be considered. Thus, the comparison is not shown in the table.

b) Only Triandis model

Several models of choice behavior have been developed in social psychology discipline, such as Triandis model (Triandis, 1971), Theory of reasoned action (Ajzen & Fishbein, 1980), and Theory of planned behavior (Ajzen, 1991). However, none of them covers all values proposed in theory of consumption values. For instance, Triandis model contains constructs similar to four of the five constructs mentioned in theory of consumption values, but does not account for the effect of epistemic value.

### **Clinical Psychology**

Psychoanalytic theory proposed by Sigmund Freud provides a foundation to the explanations for choice behavior in clinical psychology. These explanations represent an elaboration of Freud's idea of anxiety and personality into *the id*, *the ego*, and *the superego* (Freud, 1966). According to Freud, the id is the source of psychic energy and seeks the unrestrained gratification of basic needs. This concept bears resemblance to the concept of emotional value. In contrast to the id, the superego represents societal and personal norms that serve to constrain behavior. It is considered to be subsumed within social value. Finally, the ego mediates the demands of the id and the prohibitions of the superego. It represents the requirements of physical reality, and is similar in scope to the concept of functional value. As applied to consumer choice behavior, psychoanalytic theory is limited in that it does not contain concepts analogous to the epistemic value and conditional value.

### **Experimental Psychology**

In experimental psychology, Hull (1943) proposed a theory of learning focusing on the role of habit and the human tendency to form expectations about the future. Hull's theory suggests that learning is a function of *drive*, *goal object*, *habit*,

and *stimulus dynamism*. Drive bears resemblance to the concept of epistemic value. Goal object falls within the domain of functional value. Habit captures the domain of emotional value. Finally, stimulus dynamism focuses on situational factors similar to conditional value. However, learning theory does not account for the separate influence of social value and conditional value. In other words, while Hull's stimulus dynamism may be considered as a composite of social and conditional values called conditional social value, Sheth et al. (1991) recognize that social and conditional values influence behavior independently.

### **Consumption Economics and Economic Psychology**

By modifying classical economic utility theory, researchers in the fields of consumption economics and economic psychology have developed new theories which adopt a descriptive focus that contrasts with the normative focus characterizing classical economics. Central to these disciplines is the fundamental question of how consumers make economic choices (Katona, 1975). The important determinants of economic choices are *sentiments* and *subjective expectations* which are psychological factors. Moreover, *satisficing* behavior, which emphasizes on minimizing downside risk, is considered to be more important in decision making than behavior aimed at maximizing utility (Simon, 1963).

Sheth et al. (1991) contended that despite the enhancement of classical economic theory, the disciplines of economic psychology and consumption economics have not generated concepts to explain choices driven by social, epistemic, or conditional values. Most of the focus has been on functional value, with some attention to emotional value.

### **Sociology**

In contrast to the focus on individual behavior as a unit of analysis which is widely found in psychology and economics, sociology focuses on the group as the basic unit of analysis. Individual behavior is seen as resulting from the influences of the social structure. Sociological theories related to choice behavior have largely centered on such concepts as *reference groups*, *social class*, and *social norms*. Thus, researchers taking a sociological perspective have provided concepts relevant to social value in the area of choice behavior, but it pays less attention to the other values.

### **Marketing and Consumer Behavior**

The disciplines of marketing and consumer behavior have provided a lot of contributions relevant to consumer choice behavior. For instance, research on variety seeking has focused on a domain of behavior pertinent to epistemic value, research on opinion leadership has studied a domain of behavior relevant to social value, and research on situational factors has examined a domain of behavior considered as conditional value. Earlier research studies include some comprehensive theories that attempt to provide the understandings on buyer behavior. For example, the theory of buyer behavior (Howard & Sheth, 1969) was modeled under a learning framework; the Engel, Kollat, and Blackwell model (Engel et al., 1968) was developed under a decision-making framework. These theories are different than theory of consumption values in that they do not include an integrative typology to explain why consumers made such choices they did. In other words, they do not explain how the concepts influence consumption choices among alternatives, and cannot predict the choices that

will be made. Therefore, theory of consumption values can be considered as an advance within the fields of consumer behavior and marketing (Sheth et al., 1991).

According to the discussion above, the framework proposed by Sheth et al. (1991) is a comprehensive framework for explaining and predicting consumer choice behavior. Thus, it is used as a foundation of the model proposed in this research for studying to enhance the understanding of factors that influence the acceptance of mobile shopping.

There is one more point to be noted. According to literature review, to date the majority of existing empirical research on consumer perceived value is based on products or services purchased and experienced from the physical environments (Babin et al., 1994; Cronin et al., 2000; Kerin et al., 1992; Sheth et al., 1991; Sweeney & Soutar, 2001). There are few established measures for perceived value in electronic environments, especially in mobile context (Anckar, 2002; Anckar & D’Incau, 2002; C. H. Lin et al., 2005; Pihlstrom & Brush, 2008; Pura, 2005). However, these perceived value researches show to provide a good progress and background for assessing the values of mobile services from a consumer’s point of view. For example, empirical findings by Anckar (2002) indicate that a particular mobile service decision by consumers regarding the adoption or rejection is determined by their perceived value of the mobile service compared to other alternatives; Anckar and D’Incau (2002) provide an analytical framework from consumer perspective of perceived value that can be used to evaluate whether a certain mobile service is likely to offer values for consumers.



### 2.2.3 Perceived Value as a Formative Second-order Construct

In general, a latent construct can be measured by two different measurement models, i.e. the reflective (principal factor) model and the formative (composite latent variable) model (Jarvis et al., 2003). The reflective model is the commonly used measurement model where co-variation among indicators can be explained by the variation of the latent construct. The attitude construct is one of examples to be appropriately modeled as a reflective construct because it is a latent construct which explains the indicators such as unfavorable-favorable and like-dislike manners of people toward a certain object (Jarvis et al., 2003).

In contrast, the formative model is a measurement model where the indicators are hypothesized or assumed to cause changes in the variance of a latent construct (Jarvis et al., 2003). In other words, the indicators jointly explain the meaning of the latent construct. The consumer complaint behaviors is one of examples to be appropriately modeled as a formative construct because it is a latent construct which is explained by the indicators such as the likelihood of complaining to the store manager, and saying negative things about the service to others (Jarvis et al., 2003).

As contended by Sheth et al. (1991), the consumption values are independent from each other, and do not necessarily co-vary. Accordingly, it does not satisfy the conditions for the reflective indicator model where co-variation is assumed among the reflective indicators to reflect the variation in the underlying latent factor which is perceived value here (Jarvis et al., 2003). Rather, the multi-dimensional perceived value construct should be modeled as ‘a second-order latent variable with first-order latent variables (i.e. consumption values) as its formative indicators’, or so called a *formative second-order construct*. Unlike the reflective indicator model, this model

does not assume that the first-order indicators are caused by an underlying second-order construct (Jarvis et al., 2003). Rather, it assumes that the first-order indicators have influences on the second-order construct.

### **2.3 Personal Characteristics related to Innovation Adoption**

It has been widely received considerable attention by researchers that innovativeness and self-efficacy, which are personal characteristics, play a major role on consumer in the innovation adoption (Citrin et al., 2000; Lian & Lin, 2008; Limayem et al., 2000; O’Cass & Fenech, 2003; Rogers, 2003). Several researchers contended that innovativeness drives people to adopt an innovation (Hirschman, 1980; Rogers, 2003), while self-efficacy is also a main factor underlying the intrinsic motivation, and has several empirical supports in predicting the adoption of new technologies (Dabholkar & Bagozzi, 2002; Davis, 1986; Davis et al., 1989).

In the past researches regarding innovativeness and self-efficacy, most of researchers focused only on the direct effect of those personal characteristics on the adoption intentions or behaviors (Lian & Lin, 2008; Limayem et al., 2000). Few of the past researches have studied on personal characteristics as antecedents of consumer perceived value. O’Cass and Fenech (2003) showed that self-efficacy is an antecedent of perceived ease of use and perceived usefulness in the context of Web retailing.

Thus, this research also aims to study and explore the relationships of innovativeness and self-efficacy with consumer perceived value and their effects toward the acceptance of mobile shopping.

#### **Consumer Innovativeness toward Shopping**

In behavioral sciences, innovativeness is one of few concepts that have much relevance to consumer behavior. Innovativeness is viewed by several researchers to drive consumers to adopt new products or services, and play an essential part in theories of consumer decision-making, innovation diffusion, and communication (Hirschman, 1980; Rogers, 2003). Innovativeness has so far received considerable attention by several consumer researchers (Hirschman, 1980; Midgley & Dowling, 1978; Rogers, 2003). They view innovativeness as a personality construct which is possessed by all individual consumers to some extent. This is because each consumer normally adopts some objects or ideas that are new in some aspects during his or her own life. If there was no such characteristic as innovativeness, consumers would routinely purchase the same set of products and services. Thus, it is important for consumers to possess some degree of innovativeness in order to give the market its dynamic nature.

Although a number of researchers have used different techniques to define or to measure consumer innovativeness, two main types of innovativeness have emerged, namely general innovativeness (or open-processing innovativeness) and domain-specific innovativeness.

General innovativeness involves the intellectual, perceptual, and attitudinal characteristics of an individual consumer, which is viewed as a cognitive style (Joseph & Vyas, 1984). It has impacts on the ways in which an individual consumer reacts to a new product, sensation, or experience in a certain environment. It is viewed by Rogers (2003) as a continuous variable normally distributed within a population of consumers, as well as generalizable across products and services. Furthermore, a consumer who scores high on the general innovativeness will be open to new

experiences, and will try to seek out these experiences. Regarding new information or ideas received, consumers with high innovativeness will make constructive use of them, and will be able to recognize the potential application of them, and willing to try them before other people (Citrin et al., 2000). Thus, the consumers with high innovativeness will be more responsive to information or ideas in a selective and constructive way when they possess new aspects relevant to those consumers. Findings in several studies using general innovativeness lend support to its use as an essential explanation and predictor of the acceptance of innovation (Citrin et al., 2000; Craig & Ginter, 1975; Joseph & Vyas, 1984).

However, consumer innovativeness could be viewed more domain specific. In their research, Gatignon and Robertson (1985) found innovation to be more product category or domain specific rather than in general like the one defined by general innovativeness. Due to the degree of abstraction of scope defined in general innovativeness, Goldsmith and Hofacker (1991) defined domain-specific innovativeness and developed a measurement scale for it. They defined domain-specific innovativeness as “the individual’s tendency to try innovations in products, services or processes in his or her area of interest”. Domain-specific measures were shown to have more predictive power on the purchase of new items than general innovativeness (Goldsmith et al., 1995). Domain-specific innovativeness is used to explain the narrow aspects of human behavior within a person’s specific domain of interest.

Consumer researchers have shown that innovative consumer behavior is normally related to the use of a product or service category (Dickerson & Gentry, 1983). In fashion adoption context, studies using the scale of domain-specific

innovativeness have shown that the fashion innovators spend more time, money and efforts on new fashions than non-fashion innovators do (Goldsmith & Flynn, 1992). Additionally, research by Beldona et al. (2004) found that the travel innovators go travels more frequent than non-travel innovators do. Additionally, Lassar et al. (2005) also showed that the Internet-specific innovativeness positively influences the adoption of Internet banking.

Regarding retail shopping context, several researchers (Citrin et al., 2000; Goldsmith, 2002; Lian & Lin, 2008) have applied the concept of domain-specific innovativeness to Web retail shopping, and found that this factor influences the search for information of online purchase and the decision to purchase via this channel. The study by Limayem et al. (2000) found that innovativeness has influences directly and indirectly on Web retail shopping via the consumers' attitude and behavioral intentions. This conclusion is supported by Citrin et al. (2000) with their findings that domain-specific innovativeness together with Internet usage directly influences Web retail shopping behavior of consumers.

Nevertheless, in the past literature, the studies were on the domain of Web retail shopping, in which the domain-specific innovativeness was defined to measure the degree of individual's tendency to search for information or know about a new retail shopping website. This definition might be too specific because the way to measure people who search for or always know about a new retail website implies that those people already have intention to shop online.

Thus, this study proposes to define domain-specific innovativeness for shopping context as the consumer innovativeness toward shopping which indicates

the degree of individual's tendency to try out new ways or channels of shopping. By this definition, the implication of online shopping intentions will not be confounded in the innovativeness construct. Then, the relationships among consumer innovativeness toward shopping, consumer perceived value, and the acceptance of mobile shopping will be studied.

### **Mobile Self-efficacy**

Self-efficacy was first introduced in social cognition theory, and considered to be the core concept of the theory. It refers to "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has, but with judgments of what one can do with whatever skills one possesses" (Bandura, 1986). Self-efficacy directs and controls human behavior by motivating the people to take more efforts, overcoming difficulties in the face of challenge, and being persistent to complete tasks. In other words, self-efficacy refers to the individual beliefs of people on their capabilities of learning and performing particular behaviors. Thus, it is considered to be a non-generalized trait, or in other words domain specific (Bandura, 1997).

According to social cognition theory, individuals who have more confidence in their abilities will tend to take more efforts to perform a certain task, persist longer to overcome difficulties, and set more challenging goals than those who have less confidence. Furthermore, since the judgment of self-efficacy is positively related to expectations of outcome, the stronger the degree of individuals' self-efficacy is, the more likely they are to attain the expected outcome (Yi & Gong, 2008). The expectations of outcome are related to the perceived possible consequences of

individuals' actions, e.g. engaging in mobile services, which can be positive or negative consequences (Bandura, 1986). In sum, strong degree of self-efficacy pertains to perceiving more positive outcomes and fewer negative outcomes.

The previous studies of consumer researchers showed that the perceptions of self-efficacy have influence on consumers' decisions about the choice of activity in which they engage, their emotions during behavioral responses, and their persistence in performing these behaviors (Bandura, 1997; Schunk, 2008). Consequently, self-efficacy has been considered to be a significant factor on many contexts of achievement behaviors (Schunk, 2008). Moreover, self-efficacy is a main factor underlying the intrinsic motivation, and has several empirical supports in predicting the adoption of new technologies (Dabholkar & Bagozzi, 2002; Davis, 1986, 1989).

In Web retail shopping, the shopping activity requires basic knowledge of computer use as well as knowledge about the Internet, so a distinction in research has been made in this context between "computer self-efficacy" and "Internet self-efficacy". Marakas et al. (1998) defined the "computer self-efficacy" as "an individual's judgment of efficacy across multiple computer application domains", whereas "Internet self-efficacy" is defined by Eastin and LaRose (2000) as "a person's judgment of his or her ability to apply Web-based Internet skills in a more encompassing mode, such as finding information or troubleshooting search problems." By the nature, computer self-efficacy is considered to be a precursor to the Internet, and should be required as well as be the main component for being capable of using Internet or Internet self-efficacy (O'Cass & Fenech, 2003).

The study of O’Cass and Fenech (2003) found that Internet self-efficacy showed to be one of the main antecedents to have effects on the perceived usefulness and perceived ease of use of the Web for retail shopping, which in turn affect the Web retail shopping attitudes, and further influence the adoption of Web retail shopping. As such, it can imply that consumers with low Internet self-efficacy are uncomfortable and unconfident with shopping on Web retail. Consequently, after Internet users have accumulated sufficient personal experience on surfing Internet through websites, they may acquire a belief in their self-efficacy for the extension into Web retail shopping (O’Cass & Fenech, 2003).

In mobile shopping context, the shopping activity is mainly carried on mobile application which required different experiences and skills from those found in Web retail shopping. In other words, navigating mobile application and content delivery systems in mobile devices require a skill set different from Web-based Internet. Thus, Internet self-efficacy construct which is created in Web retail context might not be suitable for mobile shopping context because the consumer’s judgment of efficacy is different between Web-based and Mobile-based retail shopping. It is important to note that self-efficacy is an indicator of belief or perception in one’s skills rather than the indicator of actual skills.

Hence, in the same manner, mobile users also accumulated their personal experiences on using mobile device and its applications which may create self-efficacy expectancies of those mobile users to extend their mobile usage to purchase products or services. Mobile self-efficacy is defined in this study as the degree of individual’s beliefs on his or her capability of learning and using mobile devices, such as searching for information, installing and using a mobile application. Thus, this



research proposes to study mobile self-efficacy as a factor that may have influence on consumer perceived value and the acceptance of mobile shopping.

#### **2.4 Online Product and Service Types**

Many consumer researchers have insisted on the importance of product and service differences in online retail shopping (Francis & White, 2004; Lian & Lin, 2008; Liao & Cheung, 2001; Peterson et al., 1997). However, the previous literature offers few insights into the effects of different product and service types on the acceptance of online shopping, including mobile shopping. This narrow focus of past research limits the generalizability of research results to only some products or services.

Peterson et al. (1997) indicated that due to the special characteristics of the Internet, the suitability of Internet for marketing depends on the characteristics of the products and services marketed in it. As such, considering the differences among product and service types is important to fully understand the influence of online retail shopping. Liang and Huang (1998) expressed a similar opinion, noting that when coping with the market with electronic characteristics, the more attention must be paid to understanding which products or services are suitable for the market. In sum, they indicated that different product and service types could influence consumer online shopping acceptance.

So far, some researchers such as Lian and Lin (2008) studied the effects of product and service types on determinants of online shopping adoption via a desktop, but none of them has done it in the mobile shopping context. Thus, this research also

aims to study the effects of different product and service types on the proposed model of mobile shopping adoption.

In conventional marketing research, researchers have used level of information asymmetry to divide products into three types: search goods, experience goods, and credence goods (Darby & Karni, 1973; Nelson, 1970). Search goods are characterized by goods characteristics that the complete goods information can be acquired prior to purchase; experience goods are characterized by goods characteristics that cannot be known until the purchase and after use of the goods, or for which an information search is more costly or difficult to obtain; while credence goods are characterized by goods characteristics that difficult or impossible for the consumer to obtain even after directly experiencing the goods. Nevertheless, many times it is difficult to have a clear-cut classification of a product or service according to the mentioned criteria. For example, a cut of beef in which a search characteristic could be visible fat of a cut of beef, and an experience characteristic is the taste of beef under different preparations.

Peterson et al. (1997) contended for a classification scheme that is supposed to be more relevant to the Internet context. They proposed three dimensions to distinguish between products and services purchased on Internet: cost and frequency, value proposition, and degree of differentiation. Cost and frequency dimension ranges from low cost and high frequently purchased products to high cost and infrequently purchased products; value proposition dimension is defined as the tangibility and intangibility characteristics of the purchased products or services; while degree of differentiation dimension is defined as high or low degree of sustainable competitive advantage through differentiation. However, the proposed classification dimensions cannot distinguish between online and offline services which have different

characteristics for consumption. Regarding offline services, the purchase refers to making a booking or reservation of services, e.g. movie and concert tickets, and then consumers need to travel to a certain place to get the actual services, while for the online services, consumers subscribe for an account or membership with an online service provider in order to obtain the access, and get the service offering online, e.g. online TV service.

In the absence of an established categorization scheme for Internet retail shopping, Francis and White (2004) proposed a classification scheme, called “fulfillment-product classification scheme”, from the viewpoint that how the products or services have been fulfilled in the Internet retail shopping. The classification scheme is based on two marketing-relevant attributes. The first attribute is 'fulfillment' in which products or services are physically delivered offline or electronically delivered online. The second attribute is 'product' purchased online which includes goods and service. Combining 'fulfillment' with 'product' segments, Internet retail shopping can be categorized into four product and service types: offline-goods category, offline-services category, electronic-goods category, and electronic-services category.

In the offline-goods category, consumers order and pay for tangible goods via Internet retail channel, and then get the goods via physical delivery channels, e.g. clothes and bags. The offline-services category pertains to reserving and paying for a service that would be consumed later at a certain place, e.g. airline ticket and hotel reservation. The electronic-goods category relates to digitized goods that are downloaded over the Internet, e.g. software and e-book. Finally, with the electronic-

services category, a service is paid for and consumed online by a consumer with an account to access the online service, e.g. utility payment and online music services.

Since the fulfillment-product classification scheme proposed by Francis and White (2004) is shown to be an established scheme to categorize products and services in the online shopping context, this research considers using the scheme for studying the effects of different product and service types on proposed mobile shopping adoption model.

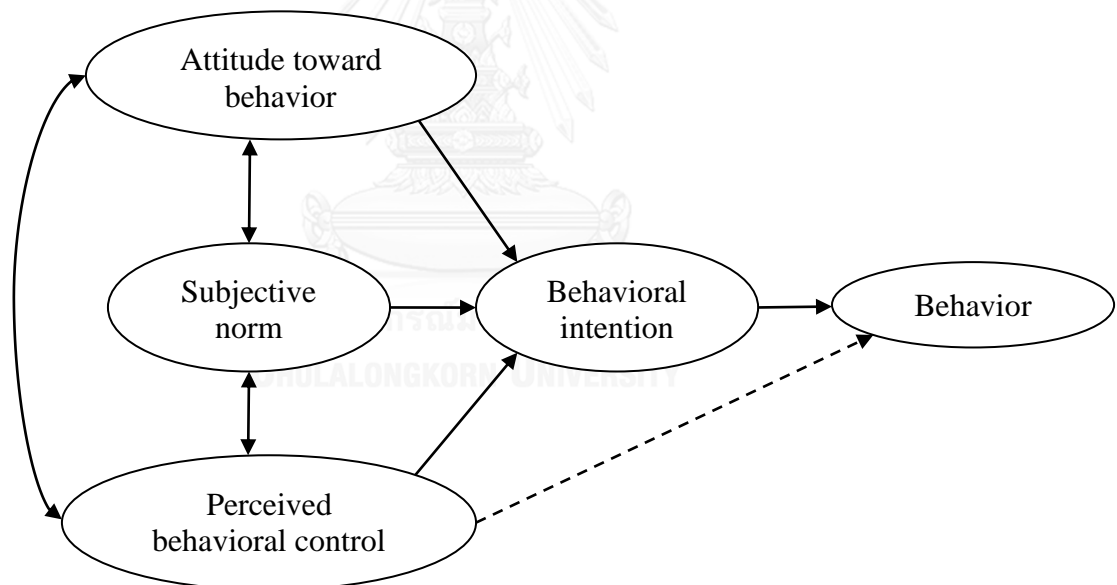
Table 2.2: Fulfillment-product Classification Scheme by Francis and White (2004)

	Offline	Electronic
Goods	<ul style="list-style-type: none"> <li>• Consumer orders and waits for tangible goods to be delivered, e.g. refrigerator, car, and clothes.</li> <li>• Firm dispatches goods via physical delivery channels.</li> </ul>	<ul style="list-style-type: none"> <li>• Consumer pays for and downloads digital products for consumption, e.g. mp3 music file.</li> </ul>
Services	<ul style="list-style-type: none"> <li>• Consumer reserves and pays online, e.g. concert ticket, accommodations.</li> <li>• Consumer travels to the firm's service delivery location.</li> </ul>	<ul style="list-style-type: none"> <li>• Consumer establishes account or membership and pays online.</li> <li>• A service is produced and consumed online, e.g. online TV.</li> </ul>

As contended by the studies of KResearch (2012), online shopping in Thailand is still in its infancy since its market value is still less than 5% of total value of Thailand retail market. Moreover, Thai online shoppers still mostly shop for tangible goods and make a reservation of services online which accounts for more than 90% of products or services purchased online (ETDA, 2013). Accordingly, this research will focus the study on the offline-goods and offline-services categories.

## 2.5 Behavioral Outcomes

The theory of consumption values by Sheth et al. (1991) mentioned previously has been pointed out by Sweeney and Soutar (2001) that it presents a narrow view in which the value dimensions affected only consumer choice behavior. Some researchers also contended that perceived value may influence other behavioral outcomes, including behavioral intentions such as usage intentions, repurchasing intentions and willingness-to-pay; thus the theory may be extended to include behavioral outcomes other than consumer choice decisions (Pihlstrom & Brush, 2008; Pura, 2005; Sweeney & Soutar, 2001; Turel et al., 2010).



Remarks: Dashed line indicates that the effect of perceived behavioral control on behavior occurs only when perceived behavioral control matches the actual control.

Figure 2.2: Theory of Planned Behavior by Ajzen (1991)

Ajzen (2002) stated that behavioral intention is “an indication of an individual's readiness to perform a given behavior, and assumed to be an immediate antecedent of behavior.” In other words, behavioral intention reflects how much a

person is motivated and willing to take efforts to perform a certain behavior. Ajzen (1991) has pointed out that behavioral intention is theoretically the most proximate predictor of a behavior. Nevertheless, it should be noted that a behavioral intention can find a predictive power on a certain behavior only if the behavior in question is under volitional control, in other words whether the person can decide at will to perform or not perform the behavior. According to theory of planned behavior, Ajzen (1991) contended that behavioral intention together with perceived behavioral control can be used to predict an actual behavior. Perceived behavioral control is defined as the individual's perception of his or her ability to perform a given behavior.

Ajzen (1991) indicated that the view of perceived behavioral control is most compatible with Bandura's concept of perceived self-efficacy (Bandura, 1982, 1997) which is related to the individual's perception of how well he or she can perform courses of actions required to deal with certain situations. Bandura (1997) contended that the perceived self-efficacy could have influences on the activity choice, the activity preparation, how much efforts would be taken, as well as cognitive patterns and emotional reactions. The concept of self-efficacy is applied by Ajzen (1991) in the concept of perceived behavioral control, which means the perception of the ease or difficulty to perform a certain behavior. It also links to the control beliefs, which refers to beliefs about the presence of factors that may support or hinder the performance of a certain behavior.

Since the model proposed in this study has incorporated self-efficacy as a factor that has influence on the mobile shopping acceptance behavior, according to theory of planned behavior, behavioral intentions could be used as a proximate proxy of the actual behavior in study.

So far, the behavioral outcomes that are of interest to products, services, and technology adoption and diffusion researchers are behavioral usage intentions and positive WOM intentions (Pihlstrom & Brush, 2008; Pura, 2005; Sweeney & Soutar, 2001; Turel et al., 2010).

Behavioral usage intentions serve as a key proxy for usage behavior, or the acceptance of mobile shopping in this study. On the other hand, WOM basically can be positive or negative, and researchers normally separated it into two different constructs, i.e. positive WOM intentions and negative WOM intentions, for different results of WOM outcomes to be studied (Harrison-Walker, 2001; Vazquez-Casielles et al., 2013). Positive WOM intentions refer to the degree of willingness to spread favorable experiences and recommendations on a product or service, while negative WOM intentions refer to the degree of willingness to spread unfavorable experiences regarding a product or service. Additionally, the separation of WOM into two constructs is to avoid the measurement scale to have both positive and negative signs as in the case of using only one construct to represent both positive and negative WOM intentions.

According to the past literature, several previous researches generally support the claim that WOM is more influential on consumer behavior than other sources of marketing communication (Arndt, 1967; Day, 1971; Herr et al., 1991; Mangold, 1987; Murray, 1991; Sheth, 1971). The study of Sheth (1971) indicated that WOM was more important than advertising in raising awareness of a certain innovation as well as securing the decision to try the innovation. Favorable attitudes toward products or services were formed on the basis of a favorable or positive WOM. The review of Mangold (1987) about the impact of WOM in the service sector also confirmed that

WOM has a more impact on the buying decision than other sources. This is probably because personal sources are viewed as more trustworthy.

Turel et al. (2010) contended that positive WOM is of interest to products and services adoption, and marketers are generally interested in promoting positive WOM in order to expedite the diffusion of their products or services. Moreover, positive WOM can reduce risk perceived by consumers during their evaluation on the adoption of products or services. These views are widely supported by several researchers such as Aldas-Manzano et al. (2009), Pihlstrom and Brush (2008), Sweeney et al. (2008), and Midgley and Dowling (1978).

Accordingly, in this study, positive WOM is adopted as a target behavioral outcome for marketers to aim for when carrying out marketing campaigns to make consumers shop more on mobile retail channel. In the mobile shopping context of this study, positive WOM intentions represent willingness to recommend or say positive things about mobile shopping to others. Individuals who have positive WOM intentions, however, are not required to use or commit to future use of the mobile shopping.

Thus, this study considers using behavioral usage intentions and positive WOM intentions as behavioral outcomes of the proposed model.

Table 2.3: Construct Conceptual Definitions

<b>Construct</b>	<b>Conceptual Definition</b>	<b>Source</b>
Monetary value	The perceived utility acquired by an alternative as the result of its ability to provide the good value for money regarding a product or service.	Sheth et al. (1991)
Convenience value	The perceived utility acquired by an alternative as the result of its ability to provide the ease and speed of achieving a task effectively and efficiently	Anckar and D’Incau (2002)



<b>Construct</b>	<b>Conceptual Definition</b>	<b>Source</b>
Security value	The perceived utility acquired by an alternative as the result of its ability to provide the security associated with the alternative.	Aldas-Manzano et al. (2009)
Social value	The perceived utility acquired by an alternative as the result of its association with one or more specific social groups.	Sheth et al. (1991)
Conditional value	The perceived utility acquired by an alternative as the result of the specific situation or the context faced by the choice maker.	Sheth et al. (1991)
Epistemic value	The perceived utility acquired by an alternative as the result of its ability to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge.	Sheth et al. (1991)
Emotional value	The perceived utility acquired by an alternative as the result of its ability to arouse feelings or affective states.	Sheth et al. (1991)
Perceived value	The overall assessment or aggregation of perceptions on various consumption values.	Zeithaml (1988)
Consumer innovativeness toward shopping	The degree of individual's tendency to try out new ways or channels of shopping.	Adapted from Goldsmith and Hofacker (1991)
Mobile self-efficacy	The degree of individual's beliefs on his or her capability of learning and using mobile devices.	Adapted from Marakas et al. (1998)
Behavioral usage intentions	Individual's degree of willingness to use a product or service.	Turel et al. (2010)
Positive WOM intentions	Individual's degree of willingness to spread favorable experiences and recommendations on a product or service	Turel et al. (2010)

## CHAPTER 3

### RESEARCH MODEL AND HYPOTHESES

In this chapter, the research model is proposed as shown in Figure 3.1. The model aims to examine the relationships between consumption values, personal characteristics and behavioral intentions among different product and service types. The discussions of relationships between constructs, as well as their hypotheses are described as follows:

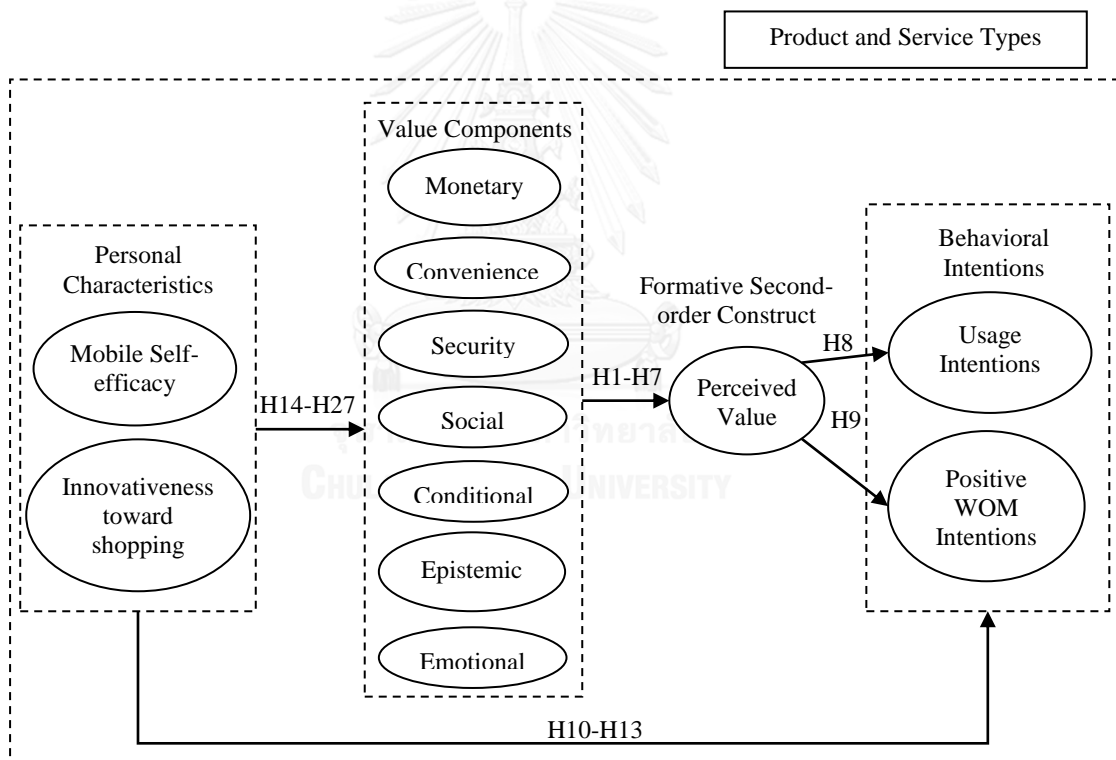


Figure 3.1: Full Proposed Research Model

### **3.1 Relationships between Multi-dimensional Perceived Value and Behavioral Intentions**

As discussed in literature review, perceived value is viewed as a multi-dimensional construct which is the aggregation of perceptions on various consumption values. In the other words, the consumption value components provide the basis on which individuals form their assessment on perceived value. As discussed in Section 2.2.3, perceived value was modeled as a formative second-order construct in this study.

#### **3.1.1 Functional Value**

According to the discussion in Section 2.2, functional value was proposed to be depicted by three value dimensions, i.e. monetary value, convenience value, and security value.

##### **3.1.1.1 Monetary Value**

Monetary value denotes perceptions of good value for money regarding a product or service, or low price compared with alternatives (Sheth et al., 1991). In Internet online shopping context, consumers are able to search and compare prices of products or services to look for a real bargain, or items on sale. This causes perceptions of good value for money for online shopping channel. Since online self-services are normally perceived to save consumers' money (Meuter et al., 2000), monetary value is expected to have a positive effect on the perceived value of the mobile shopping adoption.

**H1.** The higher the monetary value, the higher the perceived value on mobile shopping.

### 3.1.1.2 Convenience Value

Convenience value represents the ease and speed of achieving a task effectively and efficiently, in other words saving time and efforts (Anckar & D’Incau, 2002; Anderson & Srinivasan, 2003). It is a main attractive reason for consumers to adopt self-service technologies, including mobile technology. Since mobile retail channel provides consumers with the convenience of searching for information and shopping on the go, it makes consumers save time and efforts on shopping without concerning about their location and time. Thus, the following hypothesis is inferred:

**H2.** The higher the convenience value, the higher the perceived value on mobile shopping.

### 3.1.1.3 Security Value

Security value represents the degree of security associated with online shopping environment. Aldas-Manzano et al. (2009) contended that consumers would increase their purchases only if they perceive that credit card number and other sensitive information is safe. The study by Liao and Cheung (2001) found that transaction security concerns significantly affect Internet shopping behavior. Meanwhile, O’Cass and Fenech (2003) expressed the similar opinion that consumers’ perceptions of Internet security influence their adoption of Web retailing. Thus, the following hypothesis is inferred:

**H3.** The higher the security value, the higher the perceived value on mobile shopping.

### 3.1.2 Social Value

Sweeney and Soutar (2001) indicated that social value arises through social approval or enhanced social self-concept generated by the use of a product or service. Social value is expected to have a great influence on mobile retail service, as it is possible to enlarge consumers' social network or enhance their sociability. This is because it is easy for consumers to share their purchasing experiences with their peers through their social network in mobile shopping environment. Thus, it is expected to have a significant influence on the perceived value of the mobile shopping adoption.

**H4.** The higher the social value, the higher the perceived value on mobile shopping.

### 3.1.3 Conditional Value

Conditional value is another value to possibly drive consumers to purchase a product or service via mobile retail channel in an urgent situation, especially for problem solving in situations that are unplanned or difficult to purchase via the traditional channels. For example, a consumer may come to realize that he or she forgot to buy concert tickets of a favorite band, so he or she comes in a hurry to book them via mobile shopping channel. Moreover, supports for the direct positive effect of the context, i.e. conditional value on purchase behavior were also found in the studies of Pura (2005). Thus, the following hypothesis is inferred:

**H5.** The higher the conditional value, the higher the perceived value on mobile shopping.

### 3.1.4 Epistemic Value

Epistemic value refers to novelty value and the value derived from the curiosity or arousal to learn new things. Epistemic value is often found in several studies as a motivation to try new services (Donthu & Garcia, 1999; Duman & Mattila, 2005; Pura, 2005). The shopping via mobile retail channel may provide novelty and curiosity value to satisfy consumers' aspiration on seeking for new knowledge. This is because it could provide new shopping experiences for consumers such as being able to shop when consumers are on a train or bus. Thus, the following hypothesis is inferred:

**H6.** The higher the epistemic value, the higher the perceived value on mobile shopping.

### 3.1.5 Emotional Value

Holbrook (1994) indicated that emotional value arises through fun or enjoyable experiences, and it can make consumers feel good and give pleasure. In particular, one of the reasons that consumers shop is because they emotionally like or enjoy the shopping experience itself. Thus, it is expected to have a significant influence on the perceived value of the mobile shopping adoption.

**H7.** The higher the emotional value, the higher the perceived value on mobile shopping.

### 3.1.6 Perceived Value

As indicated by Zeithaml (1988), consumers are value-driven and their decision-making behaviors depend on perceived value or the overall assessment of value perceptions. Regarding innovation adoption, Turel et al. (2010) contended that

perceived value is the basis on which consumers develop a decision to adopt an innovation. The study of Turel et al. (2010) demonstrated that perceived value has strong direct effects on usage and recommendation intentions of the adoption of hedonic digital artifacts. Accordingly, it is expected that perceived value would influence the intentions of consumers to adopt the mobile shopping channel.

**H8.** The higher the perceived value, the higher the behavioral usage intentions on mobile shopping.

**H9.** The higher the perceived value, the higher the positive WOM intentions on mobile shopping.

## **3.2 Relationships between Personal Characteristics and Behavioral Intentions**

### **3.2.1 Consumer Innovativeness toward Shopping**

Goldsmith and Hofacker (1991) contended that domain-specific innovativeness is a key predictor of the tendency of an individual to adopt an innovation within a specific domain of interest. The study of Citrin et al. (2000) showed that domain-specific innovativeness exerted a strong influence on the tendency of shoppers to look for a new shopping website, learn about and adopt it. In the same manner, it is expected that consumers who have high innovativeness toward shopping tend to learn about and adopt a new shopping channel such as mobile shopping.

**H10.** The higher the consumer innovativeness toward shopping, the higher the behavioral usage intentions on mobile shopping.

**H11.** The higher the consumer innovativeness toward shopping, the higher the positive WOM intentions on mobile shopping.

### 3.2.2 Mobile Self-efficacy

According to theory of planned behavior (Ajzen, 1991), perceived behavioral control, in addition to attitude and subjective norm, is also an antecedent of behavioral intentions. Perceived behavioral control refers to people's perceptions of their ability to perform a given behavior. As stated by Ajzen (1991), much of knowledge about the perceived behavioral control comes from the studies of Bandura (1982, 1986) regarding self-efficacy. Therefore, the view of self-efficacy is compatible with perceived behavioral control. Accordingly, consumers who have high mobile self-efficacy may tend to feel confident in adopting mobile shopping. Thus, mobile self-efficacy is expected to have direct effects on the intentions to adopt mobile shopping. Additionally, according to the study of Yi and Gong (2008), consumers with high self-efficacy tend to have more satisfaction on online services and motivate themselves to share their good experiences with their friends. Thus, the following hypotheses are inferred:

**H12.** The higher the mobile self-efficacy, the higher the behavioral usage intentions on mobile shopping.

**H13.** The higher the mobile self-efficacy, the higher the positive WOM intentions on mobile shopping.



### 3.3 Relationships between Personal Characteristics and Perceived Consumption Values

#### 3.3.1 Consumer Innovativeness toward Shopping

As suggested by conventional marketing wisdom, a skimming price policy is generally followed when launching a new product because the innovators and early buyers of new products are willing to pay premium prices (Bearden et al., 1995). The study of Goldsmith and Newell (1997) confirmed this wisdom by showing that innovative consumers relatively more price 'insensitive' than other consumers. Furthermore, Brassington and Pettitt (1997) noted that the higher the perceived monetary value or good value for money of the product, the lower the price sensitivity. Hence, it can be logically deduced that consumers who are high in innovativeness toward shopping are more likely to perceive high monetary value on trying out new channels of shopping.

**H14.** The higher the consumer innovativeness toward shopping, the higher the monetary value.

In consumer research, innovativeness researchers found that innovativeness can be induced by different motivations which are functional, hedonic, social and cognitive motivation (Vandecasteele & Geuens, 2010). Hirschman (1984) and Venkatraman (1991) emphasized utilitarian reasons for buying new products, and found that innovative consumers are motivated by functional attributes of new products which have motivations such as usefulness and ease of use. They tend to perceive higher utilitarian values which involve task management and problem

solving than those of less innovative. In other words, their motivations tend to be activated by convenience and conditional values.

**H15.** The higher the consumer innovativeness toward shopping, the higher the convenience value.

**H16.** The higher the consumer innovativeness toward shopping, the higher the conditional value.

Rogers (2003) stated that innovators who are the first to adopt an innovation show a risk-taking tendency together with empathy and the change of attitudes toward the innovation. Additionally, several studies found that risk-taking propensities of consumers are significantly related to innovativeness (Aldas-Manzano et al., 2009; Beldona et al., 2004; Eastlick & Lotz, 1999). The study of Aldas-Manzano et al. (2009) confirmed that an individual innovative trait pertains to risk-taking propensities to adopt online banking service which involves some degree of unavoidable risk. Thus, it is logically expected that consumers who are high in innovativeness toward shopping are more likely to perceive high security value (or low security risk) on trying out new channels of shopping.

**H17.** The higher the consumer innovativeness toward shopping, the higher the security value.

Apart from functional motivations, innovative consumers are also motivated by need to impress others and raise their social status, or social value (Vandecasteele & Geuens, 2010). Several innovativeness researchers stressed the importance of the social motivation toward innovative consumers to buy new products or services (Rogers, 2003; Vandecasteele & Geuens, 2010; Venkatraman, 1991). Thus, it is

logically expected that consumers who are high in innovativeness toward shopping are more likely to perceive high social value on trying out new channels of shopping.

**H18.** The higher the consumer innovativeness toward shopping, the higher the social value.

Epistemic value is also expected to be influenced by innovativeness. Venkatraman and Price (1990) emphasized a cognitive reason for buying new products which is the desire of consumers to have new experiences with the motivations to learn, know, and understand new things. Thus, in mobile shopping context, it can be logically considered that the more consumers interested in new ways of shopping, the more they tend to gain attention and perceive higher epistemic value of mobile shopping.

**H19.** The higher the consumer innovativeness toward shopping, the higher the epistemic value.

Venkatraman and Price (1990) emphasized hedonic reasons for buying new products, and found that innovative consumers are motivated by hedonic characteristics of products such as fun, joy and excitement. In the same vein, Vandecasteele and Geuens (2010) stated that hedonically motivated innovative consumers buy new products because they want to experience feelings of fun and pleasure. Thus, it is logically expected that consumers who are high in innovativeness toward shopping are more likely to perceive high emotional value on trying out new ways or channels of shopping.

**H20.** The higher the consumer innovativeness toward shopping, the higher the emotional value.

### 3.3.2 Mobile Self-efficacy

According to the previous studies of online shopping via a desktop, consumers who have high Internet self-efficacy tend to occupy skills to search for information of products or services on Internet in order to compare their functions and prices so that they can find the one that provide them with good value for money (Lian & Lin, 2008; O’Cass & Fenech, 2003). In the same manner, consumers who have accumulated their personal experiences on using mobile device and its applications may perceive that they can extend their skills to learn and utilize their experiences effectively on mobile shopping and save their money by being able to search for a good deal, collect reward points, and obtain promotions and discounts, etc. Thus, it is expected that consumers who are high in mobile self-efficacy are more likely to perceive high monetary value on mobile shopping.

**H21.** The higher the mobile self-efficacy, the higher the monetary value.

Previously, Davis (1989) indicated that self-efficacy is possibly an antecedent of perceived ease of use and usefulness of innovation. This is confirmed by the study of O’Cass and Fenech (2003) which showed that Internet self-efficacy affects consumer perception on ease of use and usefulness of the Web retail shopping. In other words, consumers who have more experience and get used to Internet usage will tend to perceive higher value on ease of use and usefulness. In the same manner, it is expected that mobile self-efficacy will have a positive effect on convenience value, which relates to speed and ease of use on mobile shopping. Additionally, conditional value is also expected to be influenced by mobile self-efficacy. This is because the more consumers get familiar with mobile usage, the more they tend to be able to apply the mobile capability with certain contexts they encounter. In other words, they

would perceive higher value on usefulness under certain situations which is conditional value. Thus, the following hypotheses are inferred:

**H22.** The higher the mobile self-efficacy, the higher the convenience value.

**H23.** The higher the mobile self-efficacy, the higher the conditional value.

In Web retail context, consumers who have high Internet self-efficacy will normally possess high Internet surfing experience and be aware of security measures available for secure transactions, so they can understand and control their involvement with the Web retail channel as well as perceiving lower security risk on Web shopping (O’Cass & Fenech, 2003). In the same manner, consumers who have high experiences on mobile usage tend to have knowledge and confidence on using mobile services, and may think that they know well about mobile systems. Consequently, they may have risk-taking tendencies and perceive lower security risk on using mobile services than consumers who have lower skills and knowledge on mobile usage. Thus, it is expected here that consumers who are high in mobile self-efficacy are more likely to perceive high security value (or low security risk) on mobile shopping.

**H24.** The higher the mobile self-efficacy, the higher the security value.

The study of Yi and Gong (2008) showed that consumers with high self-efficacy tend to have more satisfaction on online services and motivate themselves to share the experiences with their friends and increase their social self-esteem to be the one who found out and could use the new services. In the same manner, it is expected that consumers who are high in mobile self-efficacy are more likely to perceive high social value on mobile shopping.

**H25.** The higher the mobile self-efficacy, the higher the social value.

As discussed in literature review, consumers who have high experiences on mobile usage tend to perceive that they have knowledge and confidence to extend their mobile usage to a new mobile service. Under this circumstance, those consumers may tend to see and capture the aspects of novelty in new mobile services faster than others who have low mobile self-efficacy. Thus, it is expected that consumers who are high in mobile self-efficacy are more likely to perceive high epistemic value on mobile shopping.

**H26.** The higher the mobile self-efficacy, the higher the epistemic value.

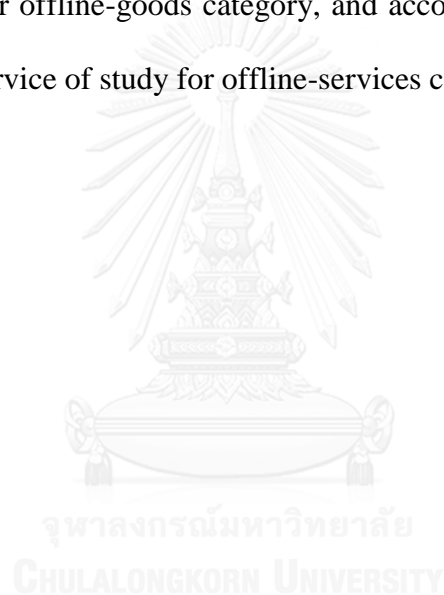
According to the study of Yi and Gong (2008), consumers with high self-efficacy tend to have less difficulty with using online services due to their possessing skills and knowledge on the services. Consequently, they can get the best outcome from the online services, and are more satisfied than consumers with lower self-efficacy. In other words, they tend to enjoy and perceive higher emotional value. In the same manner, it is expected that consumers who are high in mobile self-efficacy are more likely to perceive high emotional value on mobile shopping.

**H27.** The higher the mobile self-efficacy, the higher the emotional value.

### **3.4 Product and Service Types**

According to literature review in Chapter 2, this research maintains that product and service types influence the relationships between consumer perceived value, personal characteristics, and behavioral intentions in mobile shopping. In other words, the different product and service types could provide different conditions for the relationships between consumption values, personal characteristics, and behavioral intentions. Thus, in this study, all hypothesized relationships were also

examined from the perspectives of different product and service types. As discussed in Section 2.4, this research will focus the study on the offline-goods and offline-services categories. Additionally, according to the study of ETDA (2013), Thai consumers purchase fashion goods (i.e. clothes and shoes) online nearly 59% of online shopping, and make online reservation for accommodations (e.g. hotel, resort) 19% which is more than other service reservations which account for less than 10% of online shopping. Thus, in this study, fashion goods are selected as a representative of a product of study for offline-goods category, and accommodations are selected as a representative of a service of study for offline-services category.



## **CHAPTER 4**

### **RESEARCH METHODOLOGY**

The research methodology is described in this chapter. First, Section 4.1 describes the research approach, i.e. qualitative or quantitative research. Section 4.2 discusses the types of research whether it is exploratory, descriptive, or causal research. Next, the research process which includes instrument development, data collection, and data analysis is described in Section 4.3. Finally, sample profiles and descriptive statistics of collected data for each context of this study are presented in Section 4.4.

#### **4.1 Research Approach**

Basically, there are two types of basic research approaches: quantitative and qualitative. Different research problems require the use of different research approach, and qualitative and quantitative approaches play different roles in a research methodology for all practical purposes. Quantitative research relies on numerical data collection and statistical analysis. In other words, the marketing phenomena are described, explained, and predicted through data that can be quantified.

In qualitative research, conclusions of marketing phenomena are based on non-numerical data, such as texts and images, which it is possible to have various and subjective interpretations of data.

This research mainly used quantitative research approach to study the proposed research model. The measurement scales were developed from existing scale items found in previous related researches (e.g. O’Cass & Fenech, 2003;



Pihlstrom & Brush, 2008). The proposed research model was quantitatively analyzed by means of structural equation analysis. The research process will be discussed further in details in the following sections.

## 4.2 Types of Research

After the research approach has been defined, the type of research will be set. Generally, there are three main types of research (Hair et al., 2007) as follows:

**Exploratory research:** Exploratory research is useful when the research topic is new and there are few or no any information and findings on the topic. Researcher will use exploratory research to probe for the ideas and more information in order to have more understandings on the research problem, and draw directions for further research. All in all, the objective of exploratory research is to gather more information to define the problem and suggest hypotheses for further investigation.

**Descriptive research:** Descriptive research involves providing the descriptions of characteristics of the research phenomenon, i.e. what, when, where, who, and how descriptions of the phenomenon. It also can be used to discover the relationships or associations among variables, but not include the causal relationship. If the main objective of exploratory research is to discover and give direction for a research, descriptive research will be used to further describe and summarize the phenomenon.

**Causal research:** Causal research aims to explain cause-and-effect relationships between independent and dependent variables or whether X causes Y. Being able to prove causality requires certain conditions to be fulfilled, i.e. temporal sequence, co-variation between variables, non-spurious association, and theoretical support.

This study is the combination of exploratory and descriptive researches. It started with the exploratory research during scale development. Then, the descriptive research was used in order to investigate associations among variables or constructs in the proposed model. Since this research focuses on a snapshot of the investigated phenomenon, it is cross-sectional and thus could not be considered as causal research.

### 4.3 Research Process

The steps of research process in this study are described as follows:

#### Step-1: Instrument Development

In this study, data were collected by means of questionnaire survey. The past literature related to consumption values, personal characteristics, and behavioral intentions were reviewed in order to obtain initial set of scale items from the existing scales. All items were rated on seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The interviews with eight shoppers who normally shop on mobile were conducted in order to pre-test and make sure that the questionnaire captured the meanings of constructs. Some items were modified by adapting the wording to fit the mobile shopping context. Thus, content validity was ensured. Research constructs and their scale items are outlined in Table 4.1.

Table 4.1: Research Constructs and Scale Items

Construct	Scale Items	Measure Sources
Monetary value (Mon)	<ul style="list-style-type: none"> <li>• Mobile shopping would save me money to be spent on the shopping activity.</li> <li>• Mobile shopping would enable me to compare prices to find a good deal.</li> <li>• Mobile shopping would enable me to find good promotion for goods or services.</li> </ul>	Z. Chen and Dubinsky (2003); Dodds et al. (1991)

Construct	Scale Items	Measure Sources
Convenience value (Conv)	<ul style="list-style-type: none"> <li>• Mobile shopping would save my time to go to brick-and-mortar channel for shopping.</li> <li>• Mobile shopping would enable me to shop without concerning about my location and time.</li> <li>• Mobile shopping would enable me to conveniently access information about goods or services.</li> </ul>	Anderson and Srinivasan (2003); Mathwick et al. (2001)
Security value (Sec)	<ul style="list-style-type: none"> <li>• I feel secure sending my personal or financial information across mobile network.</li> <li>• I feel safe providing my personal or financial information to mobile retailers.</li> <li>• I feel that mobile channel is a safe environment for shopping.</li> </ul>	O’Cass and Fenech (2003)
Social value (Soc)	<ul style="list-style-type: none"> <li>• Mobile shopping would help me feel accepted by others.</li> <li>• Mobile shopping would make me feel to have a good impression on others.</li> <li>• Mobile shopping would improve the way people perceive me.</li> </ul>	Soutar and Sweeney (2003)
Conditional value (Cond)	<ul style="list-style-type: none"> <li>• The flexibility of mobile shopping to be able to shop anytime and anywhere makes me get what I need at the time it is necessary or the unexpected events occur.</li> <li>• Mobile shopping would increase my chance to find rare or limited items.</li> </ul>	Pihlstrom and Brush (2008); Sheth et al. (1991)
Epistemic value (Epi)	<ul style="list-style-type: none"> <li>• Mobile shopping arouses my curiosity for novel experiences.</li> <li>• Mobile shopping arouses me with a new experience to be able to shop anytime and anywhere.</li> <li>• Mobile shopping arouses me with a new experience to come across with marvelous offers.</li> </ul>	Sheth et al. (1991)
Emotional value (Emo)	<ul style="list-style-type: none"> <li>• Shopping on mobile would give me pleasure.</li> <li>• Shopping on mobile would make me feel good.</li> <li>• Shopping on mobile would give me an enjoyable time.</li> </ul>	Soutar and Sweeney (2003)
Perceived value (PerValue)	<i>Formative Second-order Construct</i>	
Consumer innovativeness toward shopping (Innov)	<ul style="list-style-type: none"> <li>• Compared to my friends, I often seek out information about new shopping channels.</li> <li>• If I heard that a new retail channel was available, I would not hesitate to try shopping at it.</li> <li>• I am among the first in my circle of friends to try shopping at a new shopping channel.</li> </ul>	Goldsmith and Hofacker (1991)

Construct	Scale Items	Measure Sources
Mobile self-efficacy (SelfEff)	<ul style="list-style-type: none"> <li>• I could search and install a mobile application on my own.</li> <li>• I feel comfortable using a mobile application on my own.</li> <li>• I could use a mobile device to find information that I want.</li> </ul>	O’Cass and Fenech (2003)
Behavioral usage intentions (UseInt)	<ul style="list-style-type: none"> <li>• I intend to purchase products or services via mobile shopping in the future.</li> <li>• I would purchase a greater variety of products or services via mobile shopping in the future.</li> <li>• Mobile shopping is one of shopping channels that I would visit when I want to buy a product or service in the future.</li> </ul>	Pihlstrom and Brush (2008); J. Kim et al. (2007)
Positive WOM intentions (WOMInt)	<ul style="list-style-type: none"> <li>• I would say positive things about mobile shopping to other people.</li> <li>• I would recommend mobile shopping to someone who seeks my advice.</li> <li>• I would encourage friends and relatives to purchase from mobile shopping channel.</li> </ul>	C. H. Lin et al. (2005)

This research was conducted in Thailand with Thai consumers, and thus the measurement scales are in Thai language. Since all scales were derived from English literature, they were translated into Thai. The translation followed the back-translation procedure to ensure an accurate translation (Brislin, 1970). The English scales were first translated into Thai by two professional translators who work at the English translation department of Kasikorn Research Center. Minor differences between the two translators’ versions were discussed, and agreement reached through discussion. Then, the Thai version was translated back into English by another translator who also works at the same department in order to ensure the accuracy of translation.

### **Step-2: Data Collection**

The target respondents in this research were the people who have shopping experience on mobile retail channel. Two groups of respondents were collected; one

for the context of purchasing fashion goods, and the other for reserving accommodations. Regarding the sample size for each group, since this research used partial least squares SEM (PLS-SEM) method for the analysis (the details will be discussed in Step-3: Data Analysis), the minimum sample size of a PLS-SEM model should be ten times the maximum number of formative indicators or structural paths directed at a latent construct (Hair et al., 2014). For this research model, the maximum number of relations directed at a construct is 7 which is the number of formative indicators used to measure the perceived value construct. So, the minimum number of sample size is 70. In this research, the data of 308 respondents were equally collected for each context of the product and service in study.

Regarding sampling methods, samples were drawn from target population by using a *non-probability sampling method* called *quota sampling*. In quota sampling, the target population which is the consumers who have experience on mobile shopping is first divided into mutually exclusive groups. Then, the subjects are selected by judgment from each group based on a specified proportion. Unlike stratified random sampling which is the probability sampling version of quota sampling, quota sampling does not require a sampling frame such as the customer database of online shopping companies which is difficult to obtain.

In this study, the target survey subjects were stratified into two groups by age, i.e. 20-34 age group which represents a new generation in working-age consumers who grew up with online environment and is familiar with it, and 35-49 age group which represents middle-aged consumers who did not grow up with online environment. By combining these two age groups, the samples of this study would

represent target population in two different generations who have their own incomes for shopping and might have different perceptions toward mobile shopping.

The proportion of each target survey group followed a survey on Thai online-shoppers by NSO (2013). According to NSO (2013), 59.6% of Thai online shoppers are female, while 40.4% are male. Furthermore, Thai online-shoppers between the ages of 20 and 34 years occupy 68.9% of total online-shoppers between the ages of 20 and 49, while the ages of 35 and 49 years occupy 31.1%.

### **Step-3: Data Analysis**

The measurement and structural models were analyzed using partial least squares SEM (PLS-SEM). There are two approaches to analyze a structural equation model, i.e. covariance-based SEM (CB-SEM) and PLS-SEM. PLS-SEM utilizes an ordinary least squares (OLS) regression-based method as the estimation procedure, while CB-SEM uses the maximum likelihood (ML) method (Hair et al., 2014). PLS-SEM uses sample data to estimate coefficients that maximize the explanation of variance of constructs. So, it is more suitable than CB-SEM for the analysis of a model in situations where theory is less developed, or it is an extension of an existing structural theory (Hair et al., 2014) like the model to be studied in this research.

PLS-SEM was chosen because it, compared to CB-SEM, can work efficiently with much smaller sample size, non-normality of data, and increased model complexity such as modeling higher-order constructs, as well as can incorporate formative and reflective constructs (Hair et al., 2014). The formative second-order construct in this study was computed by using the repeated-indicators approach with Mode B in which the second-order construct is measured by formative measurement.

This approach was empirically studied and recommended by Becker et al. (2012) to be the preferable approach for modeling reflective-formative type hierarchical latent variable model. SmartPLS 2.0 software was used as a tool for PLS-SEM analysis. The study followed the PLS-SEM analysis procedure suggested in Hair et al. (2014).

The analysis began with the evaluation of measurement models. First, the relationships between all latent constructs and their indicators were evaluated. As suggested by Hair et al. (2014), an indicator's outer loading should be above 0.708 in order to make a latent variable be able to explain a substantial part of the indicator's variance which is at least 50%. Second, the internal consistency or reliability of each latent construct was analyzed. As suggested by Hair et al. (2014), composite reliability was used instead of Cronbach's alpha which generally tends to underestimate the internal consistency when using with PLS-SEM. The composite reliability was recommended by Hair et al. (2014) to be above 0.70.

Finally, construct validity of measurement models was checked by looking at two types of construct validity, i.e. convergent validity and discriminant validity. Fornell and Larcker (1981) suggested confirming convergent validity by checking the average variance extracted (AVE) whether it is exceeded 0.50 for all latent constructs. Meanwhile, discriminant validity was tested by using criterion suggest by Fornell and Larcker (1981). The criterion is that the AVE of each latent construct should be higher than the construct's highest squared correlation with any other latent construct, which is identical to comparing the square root of the AVE with the correlations between the latent constructs.

As for the assessment of perceived value construct which is a formative second-order construct, multicollinearity among first-order dimensions and nomological validity were evaluated according to the approaches suggested in Diamantopoulos et al. (2008). Multicollinearity among the seven dimensions of consumption values was evaluated by the variance inflation factor (VIF). Meanwhile, nomological validity was confirmed by examining the perceived value construct's relation to other two reflectively-measured outcome constructs which are behavioral usage and positive WOM intentions.

After the evaluation of measurement models, the structural model was analyzed by PLS-SEM with multi-group analysis in order to examine the hypothesized relationships in the model for each group of product and service types, as well as the statistical differences of each relationship between both groups. The PLS-SEM with multi-group analysis allows to test whether two groups of sample data have significant differences in the analysis results of each relationship (Hair et al., 2014). It uses the parametric t-testing by utilizing the PLS re-sampling technique. This is different from the multi-group analysis in CB-SEM which normally utilizes the chi-square test by comparing a structural model between two groups of sample data.

From the results, the hypothesized relationships for each different product and service types were verified, and the conclusions were drawn accordingly.

#### **4.4 Sample Profiles and Descriptive Statistics**

In this research, data were collected by means of questionnaire survey as described in Step 2: Data Collection of Section 4.3. The sample profiles are shown in



Table 4.2. The number of respondents for each context was 308 respondents. For each context, the sample was divided between men (39.9%) and women (60.1%). The proportion of sample by age for each context was 68.5% for respondents between the age of 20 and 34 years, and 31.5% for respondents between the age of 35 and 49 years. Additionally, the descriptive statistics of data were shown in Table 4.3.

Table 4.2: Sample Profiles

Context	Age	Respondents		Gender			
		Number	Percent	Male	Percent	Female	Percent
Fashion Goods	20-34	211	68.5%	83	39.3%	128	60.7%
	35-49	97	31.5%	40	41.2%	57	58.8%
	Total	308	100%	123	39.9%	185	60.1%
Accommodation Reservation	20-34	211	68.5%	83	39.3%	128	60.7%
	35-49	97	31.5%	40	41.2%	57	58.8%
	Total	308	100%	123	39.9%	185	60.1%

Table 4.3: Descriptive Statistics

Latent Variable	Indicators	Fashion Goods		Accommodation Reservation	
		Mean	Standard deviation	Mean	Standard deviation
Mon	Mon_1	4.11	1.59	4.55	1.46
	Mon_2	5.03	1.53	5.06	1.42
	Mon_3	4.65	1.38	5.02	1.33
Conv	Conv_1	5.53	1.44	5.84	1.11
	Conv_2	5.44	1.46	5.71	1.20
	Conv_3	4.77	1.50	5.47	1.21
Sec	Sec_1	3.32	1.43	3.94	1.44
	Sec_2	3.05	1.39	3.69	1.47
	Sec_3	3.23	1.38	3.82	1.36
Soc	Soc_1	2.56	1.35	1.90	1.01
	Soc_2	2.53	1.34	1.89	1.00
	Soc_3	2.44	1.39	1.86	1.00
Cond	Cond_1	4.81	1.57	5.33	1.41
	Cond_2	4.73	1.67	5.15	1.41
Epi	Epi_1	4.49	1.57	4.69	1.42
	Epi_2	4.89	1.48	5.06	1.33
	Epi_3	4.48	1.38	4.68	1.37

Latent Variable	Indicators	Fashion Goods		Accommodation Reservation	
		Mean	Standard deviation	Mean	Standard deviation
Emo	Emo_1	4.14	1.55	4.18	1.45
	Emo_2	4.21	1.42	4.28	1.41
	Emo_3	4.17	1.45	4.12	1.49
Innov	Innov_1	4.00	1.54	4.25	1.59
	Innov_2	3.73	1.50	3.95	1.62
	Innov_3	3.31	1.61	3.62	1.66
SelfEff	Self_1	5.47	1.50	5.62	1.29
	Self_2	5.26	1.32	5.51	1.26
	Self_3	6.02	1.11	5.94	1.14
UseInt	Usage_1	4.18	1.55	5.00	1.46
	Usage_2	4.25	1.45	5.03	1.40
	Usage_3	4.47	1.60	5.18	1.43
WOMInt	WOM_1	4.51	1.45	4.85	1.44
	WOM_2	4.69	1.46	4.99	1.40
	WOM_3	3.94	1.33	4.61	1.39

## **CHAPTER 5**

### **DATA ANALYSIS AND RESULTS**

This chapter presents the data analyses and results of the research model proposed in this study. The research model was analyzed using PLS-SEM as described in Chapter 4. The analysis began with the evaluation of measurement models on both reliability and validity in Section 5.1. Then, the hypotheses were tested by analyzing the structural model, and results were given in Section 5.2.

#### **5.1 Measurement Models**

The analysis results by using data collected from both contexts confirmed that all constructs had acceptable measurement properties on both reliability and validity. Table 5.1 demonstrated that all outer loadings exceeded the threshold value of 0.708 (Hair et al., 2014). Thus, the variance in each indicator was mostly explained by its underlying latent variable. Furthermore, all latent constructs had composite reliability greater than the recommended value of 0.7 (Hair et al., 2014). The convergent validity was supported by the AVE values of all latent constructs which were well above the required minimum level of 0.50 (Fornell & Larcker, 1981).

Meanwhile, the discriminant validity was able to be confirmed by the results shown in inter-construct correlation matrix (Table 5.2). The matrix demonstrated that the square root of the AVE for each construct was higher than the corresponding inter-construct correlations according to the criterion recommended by Fornell and Larcker (1981).

Table 5.1: Results Summary of Measurement Models

Latent Variable	Indicators	Outer Loadings	AVE	Composite Reliability	Formative Second-order Construct (PerValue)		
					VIFs of Dimensions	Standardized Est.	t-statistic
Mon	Mon_1	0.7989	0.7367	0.8933	1.8646	0.2087**	52.7269
	Mon_2	0.8833					
	Mon_3	0.8898					
Conv	Conv_1	0.8522	0.7433	0.8967	2.1339	0.2099**	53.0406
	Conv_2	0.8924					
	Conv_3	0.8410					
Sec	Sec_1	0.9428	0.8696	0.9524	1.3757	0.2273**	50.8028
	Sec_2	0.9455					
	Sec_3	0.9088					
Soc	Soc_1	0.9387	0.9009	0.9646	1.0585	0.2302**	48.5844
	Soc_2	0.9668					
	Soc_3	0.9418					
Cond	Cond_1	0.8772	0.7740	0.8726	1.8507	0.1421**	49.7560
	Cond_2	0.8823					
Epi	Epi_1	0.8801	0.7715	0.9101	2.9182	0.2133**	54.0153
	Epi_2	0.8961					
	Epi_3	0.8584					
Emo	Emo_1	0.9491	0.8892	0.9601	2.2092	0.2287**	51.4960
	Emo_2	0.9546					
	Emo_3	0.9250					
Innov	Innov_1	0.8940	0.8485	0.9438	-	-	-
	Innov_2	0.9374					
	Innov_3	0.9314					
SelfEff	Self_1	0.8992	0.7677	0.9082	-	-	-
	Self_2	0.8965					
	Self_3	0.8311					
UseInt	Usage_1	0.9400	0.8750	0.9545	-	-	-
	Usage_2	0.9448					
	Usage_3	0.9213					
WOMInt	WOM_1	0.9239	0.8372	0.9391	-	-	-
	WOM_2	0.9290					
	WOM_3	0.8915					

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$

As for the assessment of perceived value construct which is a formative second-order construct, the multicollinearity results (Table 5.1) showed that the VIF

values of all perceived value dimensions were lower than the recommended value of 3.3 (Roberts & Thatcher, 2009). Thus, there was no multicollinearity among first-order dimensions. Furthermore, all dimensions were also shown to have significant weights in the formative measurement model of perceived value.

Meanwhile, nomological validity was confirmed by examining the perceived value construct's relation to other two reflectively-measured outcome constructs which are behavioral usage and positive WOM intentions. The perceived value construct was shown to have significant and strong relationships with both outcome variables (Table 5.3).

Table 5.2: Inter-construct Correlation Matrix with Square Roots of AVEs

	Mon	Conv	Sec	Soc	Cond	Epi	Emo	Innov	SelfEff	UseInt	WOMInt
Mon	<b>0.8583</b>										
Conv	0.6237	<b>0.8621</b>									
Sec	0.3791	0.4199	<b>0.9325</b>								
Soc	0.1035	0.0389	0.0733	<b>0.9492</b>							
Cond	0.4840	0.5745	0.3766	0.0658	<b>0.8798</b>						
Epi	0.5818	0.6137	0.3597	0.1124	0.6233	<b>0.8784</b>					
Emo	0.4423	0.4779	0.4384	0.2141	0.4729	0.7002	<b>0.9430</b>				
Innov	0.4310	0.3666	0.4253	0.1425	0.2971	0.4448	0.4545	<b>0.9211</b>			
SelfEff	0.4559	0.4881	0.3353	0.0828	0.4017	0.3904	0.2704	0.3034	<b>0.8762</b>		
UseInt	0.5185	0.5749	0.4995	0.0442	0.5913	0.6313	0.5800	0.4888	0.3981	<b>0.9354</b>	
WOMInt	0.4842	0.5766	0.4580	0.1288	0.5311	0.6134	0.6054	0.4996	0.4007	0.7662	<b>0.9150</b>

Note: Square roots of AVEs are presented on the diagonal. Construct correlations are below the diagonal.

Table 5.3: Establishing Nomological Validity for Perceived Value Construct

Relationship	Standardized Est.	t-statistic
PerValue -> UseInt	0.7471**	37.7214
PerValue -> WOMInt	0.7238**	32.3904

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$

## 5.2 Hypotheses Testing

The hypotheses test results were shown in Table 5.4. The results revealed that fashion goods shoppers significantly considered convenience, security, and emotional values as the basis upon which individuals assessed the overall perceived value on mobile shopping. Meanwhile, travelers significantly considered convenience, security, conditional, epistemic, and emotional values for their value evaluations of reserving accommodations. Furthermore, for both groups, the perceived value exhibited strongly significant relationships with behavioral usage and positive WOM intentions.

According to the results of multi-group t-statistic in Table 5.4, the relationships between each consumption value and perceived value showed no statistically significant difference between two groups, but on the level of aggregated value assessment there were significant differences between those two groups to decide whether to shop on mobile and spread positive WOM.

From Table 5.4, the results also showed that fashion goods shoppers with high innovativeness toward shopping significantly perceived higher on all consumption values. The results were similar for accommodation reservation except for social value. Additionally, all relationships between innovativeness toward shopping and consumption values showed no statistically significant difference between two groups. Furthermore, innovativeness toward shopping exhibited a direct and significant relationship with usage intentions only among fashion goods shoppers, but with positive WOM intentions among both groups of shoppers. According to the results of multi-group t-statistic in Table 5.4, only relationship between innovativeness toward shopping and usage intentions showed a significant difference between two groups.

Table 5.4: Hypotheses and Multi-group Test Results

Hypothesized Relationship	Fashion Goods			Accommodations			Multi-group t-statistic
	Std Est.	t-statistic	Std Error	Std Est.	t-statistic	Std Error	
<b>H1</b> Mon -> PerValue	0.1059	1.2281	0.0862	0.0684	1.0531	0.0650	0.3479
<b>H2</b> Conv -> PerValue	0.2091*	2.4227	0.0863	0.2108**	3.1885	0.0661	0.0157
<b>H3</b> Sec -> PerValue	0.1573*	2.2436	0.0701	0.1950**	4.0627	0.0480	0.4445
<b>H4</b> Soc -> PerValue	0.0463	0.7224	0.0641	0.0053	0.1292	0.0414	0.5382
<b>H5</b> Cond -> PerValue	0.1180	1.4068	0.0839	0.3069**	4.4335	0.0692	1.7397
<b>H6</b> Epi -> PerValue	0.2027	1.9374	0.1046	0.2787**	3.3098	0.0842	0.5669
<b>H7</b> Emo -> PerValue	0.4372**	4.6348	0.0943	0.2317**	3.4938	0.0663	1.7856
<b>H8</b> PerValue -> UseInt	0.5884**	13.1620	0.0447	0.7354**	19.8042	0.0371	2.5346*
<b>H9</b> PerValue -> WOMInt	0.5486**	11.7599	0.0466	0.6717**	15.5849	0.0410	1.9865*
<b>H10</b> Innov -> UseInt	0.2231**	5.0470	0.0442	0.0371	0.8992	0.0413	3.0798**
<b>H11</b> Innov -> WOMInt	0.1821**	3.7704	0.0483	0.1338**	2.8401	0.0471	0.7171
<b>H12</b> SelfEff -> UseInt	0.0181	0.4073	0.0444	0.0706	1.7281	0.0409	0.8711
<b>H13</b> SelfEff -> WOMInt	0.0977*	2.1426	0.0456	0.0246	0.5478	0.0449	1.1441
<b>H14</b> Innov -> Mon	0.3185**	6.1730	0.0516	0.3172**	5.4819	0.0579	0.0168
<b>H15</b> Innov -> Conv	0.1449*	2.4349	0.0595	0.2620**	5.1936	0.0504	1.5042
<b>H16</b> Innov -> Cond	0.2064**	3.7194	0.0555	0.2227**	4.1250	0.0540	0.2108
<b>H17</b> Innov -> Sec	0.3307**	5.7010	0.0580	0.3645**	6.7706	0.0538	0.4279
<b>H18</b> Innov -> Soc	0.2147**	3.3285	0.0645	0.0944	1.7169	0.0550	1.4215
<b>H19</b> Innov -> Epi	0.3084**	5.5723	0.0554	0.4003**	7.6617	0.0522	1.2093
<b>H20</b> Innov -> Emo	0.4244**	9.1636	0.0463	0.4002**	6.8673	0.0583	0.3256
<b>H21</b> SelfEff -> Mon	0.3947**	8.1847	0.0482	0.3244**	6.2894	0.0516	0.9972
<b>H22</b> SelfEff -> Conv	0.3397**	5.5567	0.0611	0.3974**	7.7128	0.0515	0.7232
<b>H23</b> SelfEff -> Cond	0.4410**	9.2760	0.0475	0.3508**	6.1908	0.0567	1.2214
<b>H24</b> SelfEff -> Sec	0.2394**	4.3740	0.0547	0.2193**	3.9116	0.0561	0.2569
<b>H25</b> SelfEff -> Soc	0.0494	0.8991	0.0549	0.0490	0.8560	0.0572	0.0051
<b>H26</b> SelfEff -> Epi	0.3129**	5.8920	0.0531	0.2532**	5.1113	0.0495	0.8237
<b>H27</b> SelfEff -> Emo	0.1837**	3.4460	0.0533	0.1084*	2.2211	0.0488	1.0437
<b>R<sup>2</sup> of UseInt</b>		54.5%			62.6%		
<b>R<sup>2</sup> of WOMInt</b>		51.1%			58.1%		

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$

Mobile self-efficacy was shown to exert significant effects on all value components except social value for both groups. It was also shown to exhibit direct and significant influence only on positive WOM intentions among fashion goods

shoppers, but in a very weak degree. Additionally, according to the results of multi-group t-statistic in Table 5.4, all relationships between mobile self-efficacy and other constructs showed no statistically significant difference between two groups.

From the results as shown in Table 5.4, perceived value, innovativeness toward shopping, and mobile self-efficacy explained major portions of the variation in behavioral intentions on mobile shopping adoption for fashion goods and accommodation reservation -- respectively about 54.5% and 62.6% of the variance ( $R^2$ ) for usage intentions, and 51.1% and 58.1% for positive WOM intentions.





## **CHAPTER 6**

### **DISCUSSION AND IMPLICATIONS**

As noted by Shim and Drake (1990), several studies in the past on non-store shopping have made many contributions on explaining and predicting the change of consumer buying behaviors. Nevertheless, there is much inconsistency across previous studies, which is partly because of the differences in product or service categories under studies, shopping methods, and consumer segments. Thus, it is noted to be cautioned on the translation of the buyers' characteristics and their behaviors across the different mentioned criteria.

This study aimed to create more understandings of consumers' decision-making behaviors on the adoption of mobile shopping which is quite a new non-store shopping channel in Thailand. It introduced the theory of consumption values and personal characteristics as a way of explaining and predicting the adoption of mobile shopping under the contexts of purchasing fashion goods and reserving accommodations.

To be more specific, the objectives of this study were threefold: (1) to examine the influences of consumption values on the behavioral intentions to adopt mobile shopping, (2) to investigate the direct influences of personal characteristics on the mobile shopping adoption, as well as the indirect effects through the perceptions of consumption values, and (3) to study all relationships from the perspectives of two different contexts which are fashion goods and accommodation reservation. The research results and their key findings are discussed in Section 6.1. Theoretical and

managerial implications are further discussed in Section 6.2 and 6.3, respectively. The limitations and future research are provided in Section 6.4.

## **6.1 Discussion of Research Results**

### **Consumption Values**

From research results as shown in Table 5.4, fashion goods shoppers and travelers significantly paid attention to different sets of consumption values when considering whether to adopt mobile shopping. Both group of shoppers significantly considered a common set of consumption values which are convenience, security, and emotional values. Additionally, travelers also significantly paid attention to conditional and epistemic values. Based on these different sets of values, consumers developed an overall perceived value assessment on which they used as the basis for making adoption decision. This is in line with the findings which showed that both groups of shoppers with high perceived value intended to shop on mobile and spread positive WOM.

The reasons why shoppers significantly paid attention to different sets of consumption values can be discussed as follows.

Regarding convenience value, with the arrival of online shopping, accommodation reservation has become simpler than ever. In the past, it was quite inconvenient for travelers to contact a hotel's sales representative for obtaining information about hotels and make a reservation, especially when travelling to foreign countries. Nowadays, travelers can conveniently review hotels, specify room preferences, check availability, and reserve hotel rooms online during planning for their trips to anywhere in the world.

Moreover, the information searched from mobile devices can be customized according to consumer's location. This can make travelers save time and easily search for information of accommodations without concerning about their location. For instance, a traveler can find and make a reservation on a good hotel near a place intended to visit by using mobile retail channel without having to know the exact location of the hotel. Additionally, with the mobile navigation functionality, travelers can easily obtain timely information to help them get to the accommodations or nearby attractions.

Similarly, online shopping also allows fashion goods shoppers to conveniently search for information of products, order the products, and let them be delivered to their places without the necessity to visit a physical store. Furthermore, with the advancements of virtualization technology, fashion goods shoppers can easily interact with a three-dimensional product image which make them be able to virtually try on a product before deciding to buy it.

As for security value, the level of security value in mobile shopping remains a crucial concern for both groups of shoppers due to the perceived risk involved in transmitting sensitive information such as personal information. Online shoppers are also concerned about security on online payment. Security concerns were identified as one of the main obstacles to the adoption of Internet banking services which include online payment (Aldas-Manzano et al., 2009).

Regarding emotional value, according to the study of Heijden (2004), the interactive environment created by virtualization technology could increase the emotional value of the online shopping experience. With the advancements of mobile

technology, mobile shoppers can enjoy interactive environment created on mobile. For example, fashion goods shoppers can enjoy zooming in and out as well as controlling the viewing angle of pictures of good-looking models with attractive clothes, while travelers can enjoy walking around the entire hotel and seeing its decorations.

In contrast with our expectations, only travelers were shown to significantly consider conditional and epistemic values in their assessment of perceived value (Table 5.4). The possible reasons might be the following. Regarding conditional value, travelers perceived that mobile accommodation reservation can resolve some urgency or emergency situations for them, such as being able to help them search for a suitable accommodation near a place where they have never been before. This is different from buying fashion goods which generally do not have such a high degree of contingency or urgency to urge consumers to purchase them online. Normally, fashion goods shoppers prefer to leisurely browse through a wide range of goods before making their buying decisions.

Regarding epistemic value, accommodation marketers can utilize location-based features available on mobile to provide travelers with novelty experiences, such as utilizing the location information to provide real-time navigation. On the other hand, location information is presently not utilized much in fashion goods shopping service in Thailand. It is still a passive service in which shoppers access online stores, browse through pages of goods, place orders, and wait for them to be delivered. This may be why mobile fashion goods shopping does not have sufficient novelty to create a new experience to arouse the shoppers' curiosity.

Far from our expectations, both groups of shoppers did not perceive monetary and social values as important values in the mobile shopping adoption. This might be due to the facts that the current pricing levels of fashion goods and accommodations in Thailand between online shopping channel and the traditional retail channels are not significantly different (KResearch, 2012). So, Thai shoppers may not see much monetary gains to shop on mobile over other alternative shopping channels. Furthermore, it also reveals that both groups of shoppers did not perceive mobile shopping itself as a shopping channel that could give them social approval or enhance their social self-concept. In other words, they may perceive that it is merely conventional to be able to shop on mobile.

According to the results of multi-group t-statistic in Table 5.4, the study found that there was no significant difference when both groups of shoppers evaluated each consumption value for the overall perceived value assessment. This means that no matter what the context is, consumers view each value component to have the same meaning and evaluate it in the same way. For example, emotional value represents how consumers enjoy shopping on mobile for both contexts of study.

Additionally, regarding the aggregated assessment of consumption values, the findings from multi-group analysis in Table 5.4 also suggest that the perceived value of accommodation reservation has significantly stronger influence toward the adoption of mobile shopping than the one of fashion goods shopping. This might be due to the facts discussed so far in each consumption value that accommodation reservation has more obvious relative advantages when compared with fashion goods shopping.

### **Personal Characteristics**

From research results as shown in Table 5.4, the findings reveal somewhat unexpected results regarding direct relationships between the characteristic of innovativeness toward shopping and the adoption of mobile shopping. Innovativeness toward shopping directly motivates only the group of fashion goods shoppers to shop on mobile, but both groups of shoppers tend to spread positive WOM.

One explanation for the findings may be that online accommodation reservation has become widely accepted ahead of online fashion goods shopping in Thailand, especially via a desktop. This makes Thai travelers who have high innovativeness toward shopping are already familiar with online reservation and realize the existence of mobile channel. However, this does not give them enough motivation to adopt it. They still need to assess the consumption values of mobile channel and decide whether to adopt it. This explanation is in line with our findings that innovativeness characteristic indirectly drove both groups of shoppers to adopt mobile shopping through the increased perceptions of consumption values.

Apart from our expectations, both groups of shoppers were shown not to be directly driven by mobile self-efficacy to adopt mobile shopping. Moreover, mobile self-efficacy had a very weak degree of influence on both groups of shoppers to directly drive them to spread positive WOM about mobile channel although it was a significant effect in case of fashion goods shoppers. Nevertheless, in the same manner as innovativeness characteristic, both groups of shoppers were indirectly driven by mobile self-efficacy via consumption values. This implies that shoppers who are

skilled at using mobile devices still need actual driving forces which are consumption values to attract them to decide to adopt mobile shopping.

According to the results of multi-group t-statistic in Table 5.4, the study also found that there was no significant difference when both groups of shoppers with high innovativeness toward shopping or mobile self-efficacy perceived each consumption value. It has the same reason as we discussed in the findings of consumption values that no matter what the context is, consumers normally view each value component to have the same meaning and evaluate it in the same way.

Moreover, the findings from multi-group analysis in Table 5.4 also suggest that there was a significant difference when both groups of shoppers with high Innovativeness toward shopping considered to shop on mobile, and fashion goods shoppers had stronger usage intentions than those of travelers. This is because only fashion goods shoppers with high innovativeness toward shopping showed the intentions to shop on mobile, but not in the case of accommodation reservation as discussed previously.

## **6.2 Theoretical Implications**

### **Consumption Values**

From the research findings, we can derive three main theoretical implications regarding consumption values as follows. First, consumers consider different sets of values for different product and service types as the basis upon which individuals assess the overall perceived value on mobile shopping adoption. It suggests that there are three common value components on which consumers normally consider whether they will adopt mobile shopping on both studied contexts. These common values are

convenient, security, and emotional values. The author expects that shoppers on other product and service contexts also considered these same common values when considering whether to shop on mobile. This is because in general, convenience value is a main driver of the adoption of self-service technologies, while emotional value is an important attractor of shopping activity, and security value remains an important concern among online shoppers.

Apart from the common values, consumers also consider other value components depending on the product or service they are intending to shop on mobile. For example, consumers also pay attention to conditional and epistemic values when considering whether to reserve a room on mobile.

Second, perceived value influences the decision of consumers to adopt mobile shopping in different degrees depending on the product and service types. As discussed in Section 6.1, perceived value has stronger effects on mobile shopping adoption of a certain product or service context than those of other contexts in the condition that there are more obvious relative advantages or consumption values to purchase the certain product or service on mobile when compared with other products or services.

Finally, the findings in this study might be applicable to other goods or services with similar characteristics as of those studied in this research. As for fashion goods such as clothes, the characteristics of the goods are tangible goods which needed to be delivered via physical channel, and consumers normally want to leisurely browse through a wide variety of them before making their buying decisions. Thus, the author expects that the findings could be applied to those goods which have



the same characteristics such as watch and furniture. On the other hand, the findings might be different in some tangible goods such as food or cooking gas delivery in which consumers mainly considered their utilitarian values to resolve some problems or urgency situations. In this situation, conditional value might become significant as an important value component to consider when purchasing on mobile.

Regarding accommodation reservation, consumers need to reserve a service and go to a specific place to get the service. Thus, the author expects that the findings might be applicable to other wide range of services such as restaurant and concert ticket reservations.

### **Personal Characteristics**

From the research findings, we can derive four main theoretical implications regarding personal characteristics as follows.

First, depending on product and service types, innovativeness characteristic may not give shoppers enough direct motivation to use mobile shopping, but could motivate them to spread WOM. As discussed in Section 6.1, innovativeness toward shopping directly motivates only the group of fashion goods shoppers to shop on mobile. This is because Thai innovators might have long been familiar with reserving an accommodation online via a desktop. Thus, the familiarity of purchasing a product or service online among innovators might be another factor to influence the innovators' decision-making on mobile shopping adoption.

Second, Innovativeness characteristic indirectly drives consumers to adopt mobile shopping through increasing perceptions on consumption values. Even though innovators might not have enough direct motivation to shop on mobile in some

product and service contexts, but they tend to perceive higher consumption values and it indirectly drives consumers to adopt mobile shopping in any contexts.

Third, mobile self-efficacy does not give shoppers enough direct and strong motivation to use mobile shopping and spread WOM. However, as the fourth implication which is similar to innovativeness characteristic, mobile self-efficacy indirectly drives consumers to adopt mobile shopping through increasing perceptions on consumption values.

### **6.3 Managerial Implications**

The research findings give several managerial implications for new mobile retail developers and marketing managers with regard to how to plan and market the mobile as an alternative valuable retail channel among consumers in the future. The managerial implications are discussed as followed.

#### **Consumption Values**

From the research findings of consumption values, marketers should promote the mobile shopping adoption with emphasis on increasing positive perceptions of different sets of consumption values from the perspectives of different product and service contexts. In other words, marketers and retailers need to focus on mobile consumers' perceived values toward mobile shopping as a strong mechanism to move them to adopt the mobile for retail usage. Marketers of fashion goods and accommodation reservation should pay attention to convenience, security, and emotional values, while marketers of accommodation reservation should also consider conditional and epistemic values.

Regarding convenience value, marketers of fashion goods and accommodation reservation should utilize customers' profiles, preferences and location information for providing the convenient and customized services for consumers. For example, marketers can provide a recommendation regarding sightseeing places near the hotel to consumers based on their preferences and give them a mobile navigation service to get there. As for fashion goods shoppers, when they happen to come near our physical store, marketers may push the new products' information in their interests through mobile channel according to the data of their preferences that we collected from their past purchases.

Apart from this, even though mobile shopping also allows fashion goods shoppers to conveniently search for information and order products without the necessity to visit a physical store. However, it lacks some other experiences that can be found on a physical channel, such as being able to touch merchandise and try things on. Consequently, consumers may still be reluctant to buy fashion goods online because they cannot assess the feel of materials and the fit of goods. Marketers may need to provide a convenient and free return service, especially for the clothes with the brand new fabrics, in order to make it possible for customers to treat the online shopping somewhat like a physical store, where they can try on, assess the products, and easily return them.

Apart from the free return service, marketers may utilize virtualization technology to enhance the mobile shopping environment which allows fashion goods shoppers to easily interact with a three-dimensional product image. The shoppers can virtually try on a product, zoom in on a product image, and rotate it for a 360-degree

view. In other words, the technology can help mobile retailers transform their mobile stores into virtual brick-and-mortar stores.

Regarding security value, marketers should design and develop their mobile retail service to have substantial security and limited risk in order to convince those consumers who place an importance on security dimension to shop on mobile. Apart from security concerns, it is important to note that fashion goods shoppers may encounter some other concerns regarding the items they purchased, which are of no concern to travelers, for instance the goods are broken or defective, or a delay in the delivery. Thus, apart from designing a secured mobile retail service, fashion goods marketers also need to offer an efficient exchange service for the shoppers.

With the advancements of interactive technology, marketers could deliver more emotional value as found in the study of Heijden (2004) while designing and operating mobile retail application, such as including an interactive feature that allows shoppers to be able to control the viewing angle of virtual environment of beautiful hotels surrounded by colorful nature, in order to stimulate the mobile shopping intentions of consumers. With the advancements of mobile technology, mobile application should be able to provide a more realistic environment, and bring more enjoyment to mobile shoppers. Clearly, interactive technology has the potential to provide pleasurable experience in addition to convenience value to mobile shoppers.

Apart from the interactive contents, the study of J. Kim et al. (2007) demonstrated that online store environment such as color and layout also has a strong influence on shopping enjoyment and desire to stay in the online store which showed the same results as found in brick-and-mortar store environment. Thus, mobile

marketers should also carefully design the online store to be attractive in order to increase the emotional value of mobile shopping.

Regarding conditional value, marketers of accommodation reservation should develop and provide useful features to help consumers in difficult and unplanned situations, such as being able to get real-time navigation when travelers get lost on the way to the hotel, and automatically calculate travel distance and the best route to the hotel. As for epistemic value, marketers should combine the location-based function together with the preferences of travelers whom they are serving in order to provide new experiences for travelers. It would be a valuable combination for marketers to provide suitable services at the place and time the travelers are ready to be served.

### **Personal Characteristics**

From the research findings, both groups of shoppers who have high innovativeness toward shopping or high mobile self-efficacy tend to perceive higher consumption values of mobile shopping which in turn drive them to adopt mobile shopping and spread positive WOM. Consequently, marketers should promote the mobile shopping adoption by targeting their value perception enhancement campaigns firstly on consumers who have high innovativeness toward shopping or high mobile self-efficacy.

To be more specific, innovativeness toward shopping could possibly help marketers identify innovators and early adopters of their mobile retail service. This is very important in two ways. First, the innovators and early adopters contribute to the initial groups of customers who will shop via mobile retail channel, and second, they could provide important positive WOM about the mobile retail channel to later

adopters. Thus, if marketers are able to identify potential innovators who love to try out new shopping channels, they can create marketing campaigns with appropriate incentives, and present them to those innovators in order to facilitate the adoption process and encourage subsequent positive WOM to later adopters.

Similarly, mobile self-efficacy could help marketers attract consumers to adopt mobile shopping, especially through increasing their perceptions of consumption values on mobile shopping. In order to promote the mobile retail usage among shoppers with high level of mobile self-efficacy, marketers could develop and design marketing campaign such as providing trial period for shopping on their various mobile shopping services. This campaign thus could increase customers' familiarity with mobile retail technologies, and enhance good value perceptions on mobile shopping. Then, marketers might provide incentives to persuade those shoppers to continue using mobile channel as an alternative shopping channel and to stimulate them to spread positive WOM to other consumers.

### **Overall Marketing Strategies**

The research results could also give implications for overall marketing strategies that can be either directed in building more commitment among current customers or attracting new customers to adopt mobile shopping. Through understanding differences in the perceptions of consumption values among mobile shoppers of different product and service types as shown in this study, marketers can create targeted marketing strategies for dissimilar segments and plan marketing communications that address the critical motivations driving continuous product or service use. Moreover, marketers can also attract new customers by emphasizing the

perceived value dimensions that are considered important by customers of a certain product or service type.

To be more specific, there are two managerial implications for marketers who would like to enhance commitment among customers, as well as develop and design marketing strategies for the mobile shopping. First, marketers could choose a target customer segment from their current customer base, and then keep offering products or services which the selected target customer segment finds valuable to purchase via mobile retail channel. Or if a company has already offered the mobile retail channel and has experiences, they could extend their mobile businesses to target the relevant type of products or services to a particular customer segment that most likely perceives its values to purchase on mobile retail channel. Thus, value-based planning of new mobile retail channel helps to identify ways in which mobile retail usage can make customers live better in certain situations.

Second, effective marketing strategies require good knowledge about the value perceptions of each customer segment toward mobile retail usage according to different product or service types. The value-based approach gives a good foundation for segmenting and planning marketing strategies on mobile retail channel, and helps to attract more customers that may have a real need to shop on the mobile channel. Moreover, communicating these values to the other potential customers could possibly attract new customers who share similar values with the current customers. In other words, marketers should take into account the different perceptions of consumption values among customers of different product and service types before selecting the most effective positioning, communication message and medium to persuade those customers to purchase on mobile retail channel.

As for other overall marketing strategies, based on companies' current customer base, the mobile retail marketers could attract and move the truly loyal customers to adopt the mobile for retail usage. As such, they may attract also new mobile retail customers through positive WOM of those truly loyal customers. Another strategy may be to attract customers who may not feel committed to the companies' products or services by convincing them with the differentiating experiences in terms of more valuable services which could be obtained from mobile shopping channel. In any case, such a strategy may require brand building in order to make consumers more aware of who is providing the mobile shopping service. Furthermore, linking the mobile retail service to a particular brand also helps to promote and manage the satisfaction of customers regarding the consumption values fulfilled by the mobile retailer.

Differentiating the mobile retail service from competitors is necessary if marketers want to increase the number of customers who commit to the brand and spread positive WOM to other consumers. It is important to be noted that even though consumers currently have not yet been able to differentiate between the offerings of different mobile shopping providers, they may perceive themselves to be loyal mobile retail users, and thus are potential loyal customers of a specific mobile retail brand in the future.

An alternative mobile retail strategy might be to attract a large amount of mobile retail customers as much as possible from the beginning, and ask them to try the mobile retail service provided by the company. By this way, marketers can educate a lot of potential mobile retail shoppers, but with the risk that some customers may switch to competitors when they enter the mobile retail market with



differentiated values of service. In such a case, the general countermeasure could be to focus on developing and communicating the convenience, security and emotional values which are crucial values of mobile retail service in order to emphasize the superiority of our service over those offered by competitors. Additionally, encouraging customers to switch to mobile retail service instead of purchasing at traditional retail channels could be done by emphasizing the convenience of using a mobile device over other alternatives of shopping channels.

#### **6.4 Limitations and Future Research**

Despite its potential contributions, this study has some limitations. First, the results are derived from consumers in Thailand where mobile shopping is still in its infancy and may have different results when comparing to the established markets. Cross-national research is encouraged to investigate whether the results in this study are generalizable. The author expects that the common values which are convenience, security, and emotional values found in this study would be the values shared with the established markets, but other values might have different results. For example, epistemic value is a significant value component for Thai travelers when considering whether to adopt mobile shopping, but the travelers in the established markets which normally got familiar with the mobile shopping might not perceive that mobile channel provides any new experience for them on accommodation reservation.

A further limitation is that behavioral outcomes were measured by behavioral intentions. In the future, a comparative research is encouraged between data from actual behaviors and intentions. Further research could also investigate on the adoption of mobile shopping under other settings of different product and service

types that have not been done in this study. Additionally, it may be valuable to investigate the influence of brand building on how consumers perceive consumption values of mobile shopping for different brands.

This research was also limited to the study of consumers who have mobile shopping experience. The findings may be different from those of inexperienced mobile shoppers. As found in the study of Agrebi and Jallais (2015), the perceptions of usefulness, ease of use and enjoyment exert the significant effects on satisfaction among both experienced and inexperienced mobile shoppers. However, satisfaction positively influences the intentions to adopt mobile shopping only among the experienced shoppers. Thus, it would be beneficial to examine the proposed research model in this study further for inexperienced mobile shoppers.

Finally, as pointed out by Sherman (2014), mobile payment which refers to the use of mobile device as the payment device plays an important role in the era of mobile commerce. From a market view, Sherman (2014) suggested that the ultimate drivers of mobile payment are the reduced costs and the increased reach to financial services, while the important inhibitors are security, regulations and the convenient ways to deposit and withdraw cash from a mobile account. In order to encourage the adoption of mobile shopping, the empirical study of those drivers and inhibitors in the acceptance of mobile payment would be useful.

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**APPENDIX**



จุฬาลงกรณ์มหาวิทยาลัย  
CHULALONGKORN UNIVERSITY

แบบสอบถามคุณค่าการบริโภค คุณลักษณะส่วนบุคคลและความตั้งใจเชิงพฤติกรรม  
ในการยอมรับการชอปปิ้งผ่านอุปกรณ์เคลื่อนที่

**ส่วนที่ 1 ข้อมูลทั่วไป**

1.เพศ ①ชาย ②หญิง

2.อายุ ①น้อยกว่า 20 ปี ② 20-34 ปี ③ 35-49 ปี ④ ตั้งแต่ 50 ปีขึ้นไป

3.รายได้ต่อเดือน

①ไม่เกิน 10,000 บาท ② 10,001-20,000บาท ③ 20,001-30,000บาท ④ 30,001-40,000บาท ⑤ ตั้งแต่ 40,001 บาทขึ้นไป

4.ท่านเคยชอปปิ้งผ่านอุปกรณ์เคลื่อนที่หรือไม่

① เคย ② ไม่เคย

**หมายเหตุ** อุปกรณ์เคลื่อนที่ คือ อุปกรณ์ประเภทสมาร์ทโฟน หรือแท็บเล็ต

**ส่วนที่ 2 คุณลักษณะส่วนบุคคล**

จากสเกล 1 – 7 โดย 1 หมายถึง ไม่เห็นด้วยอย่างยิ่ง 4 หมายถึง ปานกลาง และ 7 หมายถึง เห็นด้วยอย่างยิ่ง กรุณาประเมินคุณลักษณะส่วนบุคคลของท่านดังข้อความต่อไปนี้

	ไม่เห็นด้วย อย่างยิ่ง			ปาน กลาง	เห็นด้วย อย่างยิ่ง		
	1	2	3	4	5	6	7
5. เมื่อเทียบกับเพื่อนของฉัน ฉันมักมองหาข้อมูลเกี่ยวกับช่องทางใหม่ ๆ ในการชอปปิ้ง	1	2	3	4	5	6	7
6. ถ้าฉันได้ข่าวเกี่ยวกับช่องทางใหม่ในการจำหน่ายสินค้าหรือบริการ ฉันจะไม่ลังเลที่จะลองชอปปิ้งผ่านช่องทางดังกล่าว	1	2	3	4	5	6	7
7. ฉันมักจะเป็นหนึ่งในกลุ่มคนกลุ่มแรกในบรรดาเพื่อนของฉันที่จะลองชอปปิ้งผ่านช่องทางใหม่	1	2	3	4	5	6	7
8. ฉันสามารถค้นหาและติดตั้งแอปพลิเคชันบนอุปกรณ์เคลื่อนที่ได้ด้วยตัวของตัวเอง	1	2	3	4	5	6	7
9. ฉันรู้สึกสบายใจและไม่ลำบากที่จะใช้งานแอปพลิเคชันบนอุปกรณ์เคลื่อนที่	1	2	3	4	5	6	7

ด้วยตัวฉันเอง								
10.	ฉันสามารถใช้อุปกรณ์เคลื่อนที่ในการค้นหาข้อมูลที่ฉันต้องการได้	1	2	3	4	5	6	7
<p>สมมติว่าคุณกำลังต้องการเลือกซื้อสินค้าหรือบริการบางอย่างผ่านทางอุปกรณ์เคลื่อนที่ ภายใต้อาคารดังกล่าว กรุณาตอบคำถามในส่วนที่ 3 และ 4 ของแบบสอบถามนี้</p> <p><u>ส่วนที่ 3 มุมมองเชิงคุณค่าต่อการช้อปปิ้งผ่านอุปกรณ์เคลื่อนที่</u></p> <p>จากสเกล 1 – 7 โดย 1 หมายถึง ไม่เห็นด้วยอย่างยิ่ง 4 หมายถึง ปานกลาง และ 7 หมายถึง เห็นด้วยอย่างยิ่ง กรุณาประเมินการรับรู้ของท่านต่อข้อความดังต่อไปนี้</p>								
		ไม่เห็นด้วย อย่างยิ่ง			ปาน กลาง			เห็นด้วย อย่างยิ่ง
11.	การช้อปปิ้งผ่านอุปกรณ์เคลื่อนที่ช่วยฉันประหยัดเงินที่ต้องจ่ายในกิจกรรมช้อปปิ้ง	1	2	3	4	5	6	7
12.	การช้อปปิ้งผ่านอุปกรณ์เคลื่อนที่ทำให้ฉันสามารถเปรียบเทียบราคาเพื่อหาราคาที่ตนเองพึงพอใจมากที่สุดได้	1	2	3	4	5	6	7
13.	การช้อปปิ้งผ่านอุปกรณ์เคลื่อนที่ช่วย使我ฉันเจอโปรโมชั่นที่คุ้มค่าสำหรับสินค้าหรือบริการได้	1	2	3	4	5	6	7
14.	การช้อปปิ้งผ่านอุปกรณ์เคลื่อนที่ช่วยฉันประหยัดเวลาในการเดินทางไปช้อปปิ้งที่ร้านค้าที่มีหน้าร้านได้	1	2	3	4	5	6	7
15.	การช้อปปิ้งผ่านอุปกรณ์เคลื่อนที่ทำให้ฉันสามารถช้อปปิ้งโดยไม่ต้องกังวลเรื่องเวลาและสถานที่ได้	1	2	3	4	5	6	7
16.	การช้อปปิ้งผ่านอุปกรณ์เคลื่อนที่ทำให้ฉันสามารถเข้าถึงข้อมูลต่างๆเกี่ยวกับสินค้าหรือบริการได้สะดวก	1	2	3	4	5	6	7
17.	ฉันรู้สึกปลอดภัยในการส่งข้อมูลส่วนตัวหรือข้อมูลด้านการเงินของฉันผ่านเครือข่ายสื่อสารโทรคมนาคมเคลื่อนที่	1	2	3	4	5	6	7
18.	ฉันรู้สึกปลอดภัยในการให้ข้อมูล	1	2	3	4	5	6	7

ส่วนตัวหรือข้อมูลด้านการเงินของฉัน  
แก่ร้านค้าบนอุปกรณ์เคลื่อนที่

19.	ฉันรู้สึกว่าการขอซื้ออุปกรณ์เคลื่อนที่ เป็นช่องทางที่ปลอดภัยในการขอซื้อ	1	2	3	4	5	6	7
20.	การขอซื้อผ่านอุปกรณ์เคลื่อนที่ช่วยให้ ฉันรู้สึกเป็นที่ยอมรับของบุคคลอื่น	1	2	3	4	5	6	7
21.	การขอซื้อผ่านอุปกรณ์เคลื่อนที่ช่วยให้ ฉันรู้สึกเป็นที่ประทับใจแก่บุคคล อื่น	1	2	3	4	5	6	7
22.	การขอซื้อผ่านอุปกรณ์เคลื่อนที่ช่วยให้ ปรับปรุงสายตาที่บุคคลอื่นมองและ คิดต่อฉัน	1	2	3	4	5	6	7
23.	ความยืดหยุ่นของการขอซื้อผ่าน อุปกรณ์เคลื่อนที่ที่สามารถทำได้ ทุกที่ทุกเวลา ทำให้ฉันสามารถหาซื้อ สิ่งที่ต้องการในช่วงเวลาที่จำเป็นหรือ กรณีที่เกิดเหตุการณ์ที่ไม่คาดคิดได้	1	2	3	4	5	6	7
24.	การขอซื้อผ่านอุปกรณ์เคลื่อนที่ช่วยให้ เพิ่มโอกาสของฉันในการหาซื้อสินค้า หรือบริการที่หายากหรือมีจำนวน จำกัด	1	2	3	4	5	6	7
25.	การขอซื้อผ่านอุปกรณ์เคลื่อนที่ช่วยให้ กระตุ้นความอยากรู้อยากเห็นของฉัน ที่ได้จากประสบการณ์ใหม่ๆ	1	2	3	4	5	6	7
26.	การขอซื้อผ่านอุปกรณ์เคลื่อนที่ทำให้ ฉันได้รับประสบการณ์ใหม่ที่สามารถ ขอซื้อได้ทุกที่ทุกเวลา	1	2	3	4	5	6	7
27.	การขอซื้อผ่านอุปกรณ์เคลื่อนที่ทำให้ ฉันได้รับประสบการณ์ใหม่ที่สามารถ พบเจอข้อเสนอที่ยอดเยี่ยม ของสินค้าและบริการต่างๆ	1	2	3	4	5	6	7
28.	การขอซื้อผ่านอุปกรณ์เคลื่อนที่ทำให้ มีความสุขแก่ฉัน	1	2	3	4	5	6	7

29. การขอป้ังผ่านอุปกรณ์เคลื่อนที่ให้ความรู้สึกที่ดีแก่ฉัน	1	2	3	4	5	6	7
30. การขอป้ังผ่านอุปกรณ์เคลื่อนที่ได้มอบช่วงเวลาสนุกสนานแก่ฉัน	1	2	3	4	5	6	7

#### ส่วนที่ 4 ความตั้งใจเชิงพฤติกรรมต่อการขอป้ังผ่านอุปกรณ์เคลื่อนที่

จากสเกล 1 – 7 โดย 1 หมายถึง ไม่เห็นด้วยอย่างยิ่ง 4 หมายถึง ปานกลาง และ 7 หมายถึง เห็นด้วยอย่างยิ่ง กรุณาประเมินความตั้งใจเชิงพฤติกรรมของท่านต่อการขอป้ังผ่านอุปกรณ์เคลื่อนที่ดังต่อไปนี้

	ไม่เห็นด้วย อย่างยิ่ง			ปาน กลาง		เห็นด้วย อย่างยิ่ง	
31. ฉันตั้งใจที่จะซื้อสินค้าหรือบริการผ่านช่องทางอุปกรณ์เคลื่อนที่ในอนาคต	1	2	3	4	5	6	7
32. ในอนาคตฉันจะซื้อสินค้าหรือบริการที่หลากหลายมากขึ้นบนอุปกรณ์เคลื่อนที่	1	2	3	4	5	6	7
33. การขอป้ังผ่านอุปกรณ์เคลื่อนที่นับเป็นหนึ่งในหลายช่องทางที่ฉันจะใช้ซื้อสินค้าหรือบริการในอนาคต	1	2	3	4	5	6	7
34. ฉันจะบอกต่อสิ่งที่ดีๆเกี่ยวกับการขอป้ังผ่านอุปกรณ์เคลื่อนที่ไปยังคนอื่น	1	2	3	4	5	6	7
35. ฉันจะแนะนำการขอป้ังผ่านอุปกรณ์เคลื่อนที่ไปยังคนอื่นที่ถามหาคำแนะนำจากฉัน	1	2	3	4	5	6	7
36. ฉันจะสนับสนุนเพื่อนๆและญาติให้ขอป้ังผ่านอุปกรณ์เคลื่อนที่	1	2	3	4	5	6	7

===== ขอขอบพระคุณทุกท่านที่สละเวลาในการให้ความร่วมมือตอบแบบสอบถาม =====

## VITA

Rujipun Assarut received a bachelor's degree in Computer Engineering from Chulalongkorn University, Thailand, in 1997 and a master's degree in Computer Science from Gunma University, Japan, in 2002. He also received a Master of Business Administration degree from Chulalongkorn University, Thailand, in 2009. In 2012, He entered and pursued a Doctor of Business Administration degree at Chulalongkorn University. Currently, he is working as a head of research at Kasikorn Research Center. He has been engaged in business research on information and communication technology.

