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Personalisation of Promotional Offers in a Mobile Coupon Service Context: The Role of Regulatory Fit

A thesis submitted in the fulfillment of requirements for the degree of Doctor of Philosophy

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Abstract

This thesis theoretically develops and empirically tests a model of personalisation in the context of mobile couponing. The focus is in particular on personalised mobile coupon services provided to shoppers in shopping centres while they shop. To use such a service, customers sign up once and then send requests to receive new offers whenever they wish during their shopping trip. Three factors are identified as the key cues conveyed by a mobile coupon. The three factors consist of: the type of product category offered by a mobile coupon (i.e., hedonic or utilitarian), the congruency of the offer with consumers' temporal (i.e., current or future) needs, and the convenience of access to a merchant to redeem the coupon (i.e., convenient or inconvenient). It is hypothesised that these factors interact with the consumer's shopping motivation in affecting the consumer's intention to redeem an offer. It is also hypothesised that this relation is mediated by perceptions of regulatory fit. The main theories used in this thesis to explain the hypothesised effects include regulatory focus theory, construal level theory, and the notion of regulatory fit. The main premise of the thesis is that consumers' responses to personalised mobile coupons depend on the compatibility of the mobile coupon's cues with the consumer's focal shopping motivation. The reason for this is that hedonic and utilitarian shoppers perceive different levels of regulatory fit in compatible and incompatible offers.

In order to test the proposed theoretical framework, four preliminary and four main studies were conducted. According to the extant literature on regulatory focus, firstly, certain marketing cues (e.g., the expiration date of a promotion, the framing of its message, and the familiarity of the brand) each prime certain types of regulatory focus (i.e., promotion or prevention). Secondly, the compatibility between the type of regulatory focus primed by these marketing cues and the type of regulatory focus adopted by consumers results in increased shopping basket size, including both promoted and unpromoted products (Ramanathan and Dhar, 2010). In the same vein, research has illustrated that the compatibility between product offers' attributes and people's regulatory focus results in higher product evaluations, greater behavioural intentions, as well as more actual behaviours, which occurs through the perception of regulatory fit. In the present thesis, the results of two preliminary experiments conducted among members of an online panel shows that: First, consumers' shopping motivation as well as mobile coupons' cues (i.e., the type of product offer they have received, and the congruity of the offer with the consumers' temporal needs) each prime a certain type

of regulatory focus which is superior in strength to the other type. Also, two preliminary studies showed that the spatial distance of a target object (in the present thesis, access convenience of a retailer) activates a certain type of construal level (i.e., concrete or abstract) more strongly than the other type. Second, the results of four main experiments demonstrated that the compatibility between the regulatory focus activated by a personalised mobile coupon's cues and the one activated by a consumer's shopping motivation leads to the perception of regulatory fit and subsequently enhanced intention to redeem. However, the results showed that consumers with different shopping motivations differ in their perceptions of regulatory fit in the same compatible or incompatible personalised offer. In particular, it was found that while utilitarian shoppers respond to personalised offers that are relevant to their focal shopping motivation (i.e., utilitarian products, products congruent with their current needs, and offers that are convenient to redeem), hedonic shoppers are responsive to both compatible and incompatible personalised offers (i.e., to both hedonic and utilitarian products, to products congruent with their future or current needs, and to offers that are convenient to redeem, especially utilitarian products). In this research, it was also shown that regulatory fit mediates the effect of the interaction between shopping motivation (as a situational state variable) and mobile coupons cues on intention to redeem an offer.

In terms of managerial implications, the results of the present thesis suggest that managers can use consumers' shopping motivation, their last purchase history, and their location as appropriate bases for personalising their mobile coupon offers. Specifically, the findings provided by this thesis suggests that, at a market level, while applying personalisation for utilitarian shoppers is important, it is less important for hedonic shoppers. This is important since in a mobile couponing business model, the more elements considered to target consumers, the more expensive will be for merchants, who are charged by mobile service providers to deliver their offers.

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other institution, and to the best of the my knowledge the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed: _____

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Chapter 1 : Thesis Introduction

1.1 Introduction

In today's highly competitive market environment, retailers are always searching for innovative ways to enhance consumers' shopping experiences (Grewal, Levy, & Kumar, 2009, p. 37). To this end, retailers are increasingly embracing mobile technologies, such as mobile services, as a new marketing channel to serve their consumers more effectively and efficiently (Shankar, Venkatesh, Hofacker, & Naik, 2010). Mobile services refer to any type of information or transaction services accessed by mobile devices and delivered by interactions between an organisation and consumers (Mort & Drennan, 2007). In this sense, a mobile coupon service, also referred to as mobile couponing, has emerged as one of the promising variants of mobile services. A mobile coupon is defined by Dickinger and Kleijnen (2008) as a digital coupon, sent to mobile devices, such as mobile phones, smart phones, or personal digital assistants (PDAs), that can be saved by consumers in their mobile phones and redeemed at the time of purchase.

Mobile coupon services have become a major component of location- and time-based services offered by mobile service providers (Mort & Drennan, 2002; Stafford & Gillenson, 2003), and are being deployed by mobile service providers in several parts of the world. A typical business model for such a mobile service comprises four parties: a mobile carrier, a merchant, customers, and a mobile service provider (MSP), who acts as an intermediary among the other parties. In practice, the MSP uses the channel capacity it has bought from the mobile carrier to configure and send personalised and time/location-sensitive offers to consumers to promote the merchant's products. The nature of the contract between the merchant and MSP varies on the basis of the number of mobile coupons delivered or redeemed at the right times and locations. In doing so, the MSP takes into account factors such as consumers' stated preferences, purchase history, and in more advanced technological platforms, customers' context-specific (time, location, and task) data (Gopal & Tripathi, 2006). Since, in a mobile coupon service context, retailers pay the MSP to promote their products, the rate of mobile service usage, especially the rate of coupon redemption by consumers, is crucial for both the retailers and the MSP (Gopal & Tripathi, 2006; Raghubir, 2004).

Introduction

In general, location-based services such as SMS advertising and mobile coupons can be delivered on the basis of two approaches: push and pull (Paavilainen, 2002). Pull mobile coupons are sent to consumers who have subscribed to the mobile service on a real-time basis. That is, the coupons are sent only and shortly after the consumers request to receive the offers (i.e., consumers opt-in or grant permission to the mobile service provider) (Barwise & Strong, 2002; Okazaki, 2005). In more advanced versions of pull-based mobile coupon services, consumers can specify their preferred product categories specifically for their location. Mobile coupons are then sent promoting the nominated retailers close to this location (Unni & Harmon, 2007; Xu, Oh, & Teo, 2009). However, despite guarantees from mobile service providers, tracking consumers' locations may cause privacy concerns since it is more likely to be regarded as an intrusion into the consumers' personal space (Unni & Harmon, 2007). Push mobile coupons refer to any message that is sent to consumers' mobile devices at a time different from when they have subscribed to the service or made a request (Paavilainen, 2002). This means that the direction of mobile content is from the marketer to the consumer (Spiller & Baier, 2005), where the marketer initiates sending messages to the consumer regardless of whether or not consumers have given real-time permission to receive the messages. In a push strategy, consumers have less control than the marketer over the flow of mobile communication, causing this type of service to be viewed as more intrusive. However, it provides an effective way to trigger impulse buying (Unni & Harmon, 2007). Research has revealed that prior permission (i.e., opt-in) to receive messages, as well as having the option to opt-out, are the most important factors in consumers' responses to mobile advertisements (Carroll, Barnes, Scornavacca, & Fletcher, 2007).

The mobile couponing service that is the focus of the present thesis can be categorised as pull mobile coupons and follows the business model described above. A variant of this service is a permission-based mobile promotional service in the form of SMS coupons that promote products or services offered by the participating retailers at a shopping centre (for an example in Australia, see: www.mocomedia.com). To use this mobile service, consumers entering the shopping centre are required to first give permission to the mobile service provider, for example, by texting a certain code to a specified number so that the mobile service provider will send them mobile coupons. This means that consumers need to opt-in every time they visit the shopping centre and decide to use the mobile service, eliminating the possibility of spamming.

1.2 Research Objective

Although some companies have incorporated a number of mobile marketing applications, especially mobile coupons, into their marketing channels, in practice, mobile marketing services have not been successful and mobile coupons are not yet being utilized as a major element of companies' direct marketing mix strategies (Dickinger & Kleijnen, 2008; Pura, 2005; Rettie, Grandcolas, & Deakins, 2005). Some studies have reported disenchanting results. For example, a research conducted by Tsang, Ho, and Liang (2004) revealed that consumers have negative attitudes towards mobile advertising unless they give permission to receive the advertisements. In a similar vein, Heinonen and Strandvil (2007) found that consumers view SMS as a more intrusive and disturbing advertising medium than Internet advertising and traditional direct marketing; further, responsiveness to mobile media is lower than responsiveness to e-mail, but is higher when permission is given by customers. On the other hand, Grant and O'Donohoe (2007) reported that young consumers have strong negative attitudes towards mobile marketing communications, even if permission has already been granted by them. However, a small number of the participants valued timely, highly targeted, and interactive mobile communications, highlighting the importance of personalisation.

Indeed, one of the key advantages of the mobile channel over other marketing channels lies in its ability to use context-specific information about consumers, such as their motivational states (Banerjee & Dholakia, 2008; Hill & Troshani, 2010; Peters, Amato, & Hollenbeck, 2007), purchase timing (Mort & Drennan, 2002; Rau, Zhang, Shang, & Zhou, 2011), and their location (Carroll *et al.*, 2007; Drossos, Giaglis, Lekakos, Kokkinaki, & Stavraki, 2007; Gopal & Tripathi, 2006). In a mobile coupon service context, this advantage allows for personalising mobile coupons to better match consumers' needs at the point where they are receiving the offers (Shankar & Balasubramanian, 2009; Xu, 2006/7). Therefore, it is crucial to develop insights into how consumers in different situations respond to different mobile coupons (Murray & Haubl, 2009). This is because mobile coupons that do not match consumers' situational needs may produce negative effects such as feelings of intrusiveness and irritation (Carroll *et al.*, 2007; Xu, 2006/7; Xu *et al.*, 2009). Such negative effects of incompatible offers would mean not only that the mobile coupons may be ineffective, but they may even be counter-productive in satisfying consumer needs (Banerjee & Dholakia, 2008; Barwise & Strong, 2002).

However, there is a dearth of research examining the role of consumers' situational states in their responsiveness to mobile offers. Moreover, the results of the current research in the domain of personalisation are not consistent. On the one hand, research suggests that the match between the content of a personalisation and consumers' specific goals results in higher message effectiveness (Tam & Ho, 2006). On the other hand, it has been found that consumers have negative reactions to highly personalised messages (White, Zahay, Thorbjornsen, & Shavitt, 2008). It has also been revealed that consumers who invest more in their relationships with a firm evaluate exclusive offers more favourably than inclusive ones (Barone & Roy, 2010). In this regard, Arora and colleagues (2008) outline three levels for personalising offers ranging from "no personalisation" to "segment personalisation" to "extreme personalisation", and highlight the importance of investigating the answer to the question of: what level of personalisation is more appropriate and for which group of consumers.

Hence, considering the lack of studies in personalisation of mobile services and the paradoxical findings provided by the research on personalisation, this thesis aims to theoretically develop and empirically test a model of personalisation in the context of mobile couponing. Previous research in traditional (Lee & Ariely, 2006; Walters & Jamil, 2003) as well as online (Gounaris, Koritos, & Vassilikopolou, 2010; Tam & Ho, 2006) environments has shown that consumers' responses to promotional offers are a function of the extent to which promotional cues match consumers' shopping goals. In the current thesis, these insights are applied to the context of mobile coupon services in order to identify the key factors that impact upon consumers' responses to mobile coupons.

1.3 Research Questions

Consumers' needs and preferred value propositions vary depending on the type of products and services on offer (Lim, Widdows, & Park, 2006). In a mobile coupon service setting, shoppers receive offers from various product categories. One way of looking at these product categories is terms of the hedonic or utilitarian benefits a consumer can gain from them (Gill, 2008; Voss, Spangenberg, & Grohmann, 2003). However, regardless of whether they be in a brick-and-mortar, online, or mobile environment, promotions might not always match consumers' needs at the time they receive the offers (Arora *et al.*, 2008; Barwise & Strong, 2002). That is, some product offers may be exactly what the consumers need on their current

shopping trip; for other products, however, the consumers may realize that they need the product only in the future. This implies that the matching of an offer with the consumer's needs involves a temporal aspect. Therefore, in the present research, both the type of product category (i.e., hedonic or utilitarian), as well as the congruency of the offered product with consumers' temporal (i.e., current or future) needs, are conceived as key marketing variables, representing cues that consumers use to assess the value of the mobile coupon. Further, as pointed out above, using context-specific consumer data in principle allows the offering of better personalised mobile coupons that match consumers' needs (Lee, 2005). This, however, requires insight into the effects of consumer situational states such as their mood (Salo & Tahtinen, 2005) and specifically the tasks they are involved in, on their perceptions of and responses to mobile coupons (Banerjee & Dholakia, 2008; Li, Edwards, & Lee, 2002; Peters *et al.*, 2007). Regarding these situational states, consumer shopping behaviour has been studied from a motivational perspective in the sense that consumers may have shopping motivations superior in either a task-oriented(utilitarian) or an experiential (hedonic) aspect, both in brick-and-mortar (Babin, Darden, & Griffin, 1994; Ganesh, Reynolds, & Luckett, 2007) and in online environments (Childers, Carr, Peck, & Carson, 2001; Novak, Hoffman, & Duhachek, 2003). Thus, in the present thesis, consumers' shopping motivations (hedonic or utilitarian) are taken into account as a situational factor that affects how consumers respond to mobile coupons.

A promotion also possesses cues other than the type of product it offers and the congruency of the offer with consumers' temporal needs. A relevant cue for coupon redemption, especially in a mobile couponing environment, is the effort consumers need to make to redeem a coupon. Specifically, consumers have to make a trade-off between the monetary value they acquire from redeeming a mobile coupon and the time and effort they need to access the retailer promoted by the mobile coupon and redeem the offer. Previous research has highlighted the negative role of redemption effort in consumers' intention to redeem electronic (Chiou-Wei & Inman, 2008) and mobile (Dickinger & Kleijnen, 2008) coupons. However, a question that remains to be answered concerns how consumers with certain shopping motivations respond to mobile coupon offers with differing degrees of redemption effort, in terms of the convenience of access to the promoted retailer in order to redeem the offer. In this thesis, this notion is referred to as 'access convenience' and is conceived as another relevant cue that consumers take into account when responding to mobile coupons.

Introduction

As suggested by Kanona and Balasubramanian (2005), a combination of various theoretical perspectives may provide a broader comprehension of consumers' behaviours towards mobile services. In the present thesis, regulatory focus (Higgins, 1997) and construal level (Liberman & Trope, 1998) theories as well as the research on regulatory fit theory (Higgins, 2000) will be drawn upon to predict how consumers with different shopping motivations respond to mobile coupons with different cues. Regulatory focus theory distinguishes between promotion focus and prevention focus as two major and different motivational approaches that people adopt when pursuing their goals. Specifically, this theory posits that promotion-focused people tend to pursue maximal goals, adopt an eagerness strategy to achieve their ideals and desires, and place importance on attaining positive outcomes and gains; on the other hand, prevention-focused people pursue minimal goals, take on a vigilance strategy to fulfil their oughts and duties, and give priority to avoiding negative outcomes and losses (Idson, Liberman, & Higgins, 2000; Levine, Higgins, & Choi, 2000). In this regard, regulatory fit theory holds that people's evaluations of a decision outcome will be enhanced when the outcome sustains the regulatory focus adopted by the people (Aaker & Lee, 2001; Avnet & Higgins, 2006). Construal level theory has to do with the way people represent goals or target objects in their cognitive hierarchies. In particular, when people construe information at a high level, they focus on the desirability of activities and why certain activities should be done; whereas, when construing information at a low level, people focus on the feasibility of activities and how certain activities are performed (Liberman, Trope, & Wakslak, 2007).

Research has demonstrated that for promotion-focused people, the framing of a persuasive message as a gain, and for prevention-focused people, presenting a persuasive message as a non-loss, results in the experience of regulatory fit and consequently more favourable attitudes towards the offered product (Lee & Aaker, 2004). Research has also demonstrated that the match between the regulatory focus primed by a formerly advertised product and the regulatory focus primed by a currently advertised product leads to the experience of regulatory fit, which in turn affects subsequent evaluations and purchase intentions (Labroo & Lee, 2006). It has also been shown that when promotion-focused individuals adopt an eagerness strategy to pursue their goals, and when prevention-focused individuals adopt a vigilance goal pursuit strategy, they will be more willing to pay for a product offer due to the experience of regulatory fit (Higgins, Idson, Freitas, Spiegel, & Molden, 2003). Moreover, it has been found that certain marketing cues (e.g., the expiry date of a promotion, the

familiarity of the promoted brand, and the framing of the promotional message) prime certain types of regulatory focus. It has been further revealed that the compatibility between the type of regulatory focus primed by these marketing cues and consumers' regulatory focus results in a larger shopping basket size that includes both promoted and unpromoted products (Ramanathan & Dhar, 2010). A relevant stream of research on the association between regulatory focus and construal level has demonstrated that while promotion-focused people construe product information at abstract, high levels, prevention-focused individuals construe product information at concrete, low levels. Further, the match between people's regulatory focus and the level of construal at which product information is presented leads to the experience of regulatory fit (Lee, Keller, & Strenthal, 2010). It has also been suggested that a higher level of construal is related to a farther temporal and spatial distance, whereas a lower level of construal is related to a closer temporal or spatial distance (Trope & Liberman, 2010).

Building on these findings, the main premise on which the present thesis proceeds is that the compatibility between the type of regulatory focus induced by personalised mobile coupons' cues (i.e., the type of product offer and the congruency of the offer with consumers' temporal needs) and the type of regulatory focus induced by consumers' shopping motivations leads to the perception of regulatory fit, and consequently to the intention to redeem mobile coupons. Using similar arguments, this thesis also proposes that the compatibility between the construal level induced by the access convenience of the retailers promoted by mobile coupons and the type of regulatory focus induced by consumers' shopping motivation results in the experience of regulatory fit and higher redemption intention. It is predicted, however, that consumers with different shopping motivations will have differing perceptions of regulatory fit in the same compatible or incompatible personalised offer, causing them to have differing intentions to redeem the offers. That is, while both utilitarian and hedonic shoppers perceive regulatory fit in, and are likely to redeem, compatible offers, hedonic shoppers are more responsive to less compatible offers as well.

Figure 1.1 depicts the overall conceptual framework proposed in the thesis. It contains the variables product type, temporal needs congruency, and access convenience. The effects of the interactions of these variables with shopping motivation on regulatory fit and intention to redeem are tested in the present thesis. Throughout, drawing on the notion of regulatory compatibility advanced by Ramanathan and Dhar (2010), the term 'compatibility' will be

used to refer to the match between the type of regulatory focus primed by personalised mobile coupons' cues and the type of regulatory focus primed by consumers' shopping motivations. A point to mention is that in the present thesis the notion of compatibility is not considered as a variables perceived by consumers. Rather, it has to do with the personalised offers sent by marketers, which can be either compatible (i.e., matches the consumers' focal shopping motivation) or incompatible (i.e., does not match the consumers' focal shopping motivation).

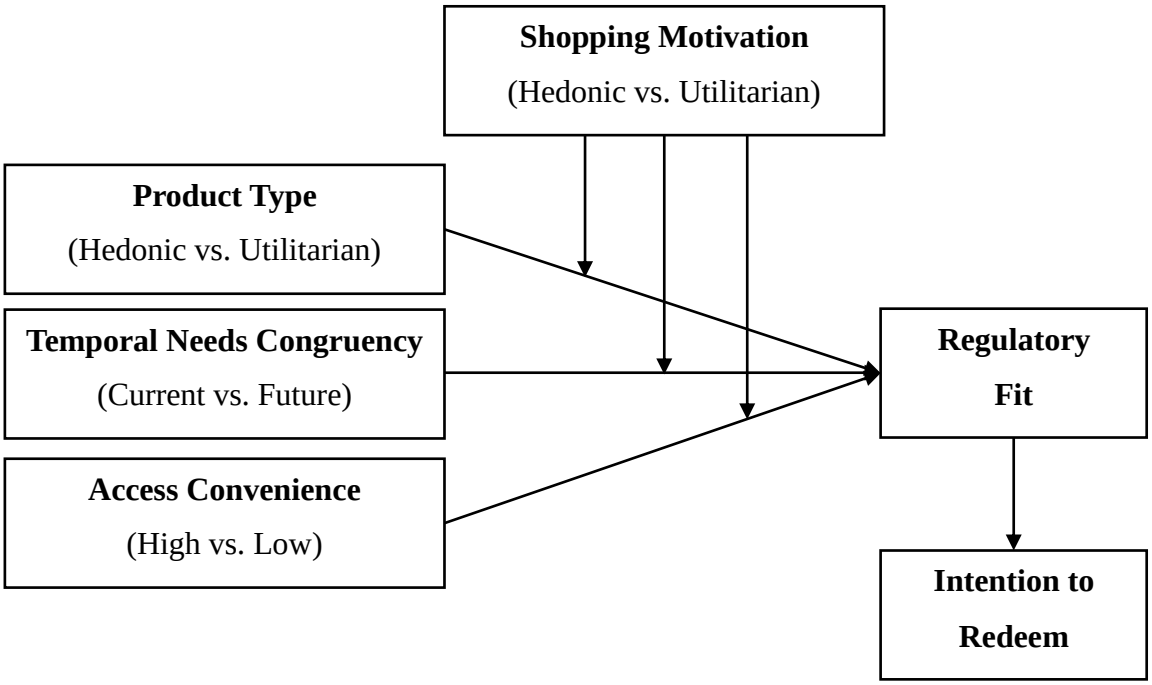

Figure 1.1: Overall conceptual framework

In accordance with the overall conceptual framework (Figure 1.1), the core objective of this thesis is to investigate whether and how consumers with different shopping motivations respond differently to compatible and incompatible personalised mobile coupons. More specifically, the present thesis seeks to answer the following research questions:

1) Do different types of shopping motivation induce different types of regulatory focus?
2) Do certain marketing cues associated with mobile coupons induce certain types of regulatory focuses? Specifically, does the type of product offered and the congruency of the offered product with consumers' temporal needs, prime certain types of regulatory focus?

3) Does the spatial distance of a retailer wherein a mobile coupon is to be redeemed induce a certain type of construal level?

4) Do consumers with different shopping motivations respond to compatible and incompatible personalised mobile coupons in different ways? Specifically, how do consumers with hedonic or utilitarian shopping motivations respond to mobile coupons offering:

   4.1) hedonic or utilitarian products?

   4.2) products congruent or incongruent with their current or future needs?

   4.3) products with high or low levels of access convenience?

5) What process underlies shoppers' responses to mobile coupons?

Considering the definitions of the notion of 'compatibility' mentioned above, the findings presented in the thesis indicate that utilitarian shoppers are willing to redeem personalised mobile coupons that are compatible with their shopping motivation, that is, utilitarian products, product offers congruent with current needs, as well as offers that are convenient to redeem. Conversely, hedonic shoppers are inclined to redeem offers that are compatible or incompatible with their shopping motivation, namely, both hedonic and utilitarian products, product offers congruent with either their current or future needs, or offers with a high or low level of access convenience. The findings have implications for the way in which retail managers should personalise mobile coupons to cater for different groups of shoppers. Specifically, and drawing on the notion of "level of personalisation " introduced by Arora and colleagues (Arora *et al.*, 2008), this thesis suggests that, while applying personalisation for utilitarian shoppers is important, it is less important for hedonic shoppers.

1.4 Conclusion

This chapter presented an outline of the thesis including the overall conceptual framework as well as the research objectives and research questions. The overall conceptual framework is grounded in theories of regulatory focus, construal level, regulatory fit, and in research on the association between consumers' shopping motivations and marketing cues. The chapter specifically highlighted the moderating role of consumers' shopping motivations and the cues conveyed by a mobile coupon in determining consumers' redemption behaviour regarding mobile coupon services. The mobile coupon cues identified as relevant to the focus of the thesis included the type of product offered by a mobile coupon, the congruency of the offer

with consumers' temporal needs, and the convenience of access to the retailer promoted by a mobile coupon.

The main structure of the thesis is as follows: Chapter 2 provides an overview of the research context, which concerns mobile marketing and personalisation. Chapter 3 and Chapter 4 review the literature and empirical research on the basis of which the research hypotheses will be developed. Specifically, Chapter 3 reviews the literature on shopping motivation, type of product, needs congruency, as well as regulatory focus, construal level theory, and regulatory fit theories. Chapter 4 reviews the literature on access convenience. Then, Chapter 5 develops the conceptual model and research hypotheses. This is followed by Chapter 6, which discusses the research design of the studies conducted in the thesis. After that, Chapter 7 presents the results of four empirical studies conducted to test the research hypotheses relating to the effect of the interaction between shopping motivation, product type, and temporal needs congruency on perceptions of regulatory fit and intention to redeem. Chapter 8 details the results of another four empirical studies conducted to test the research hypotheses relating to the effect of the interaction between shopping motivation, product type, and access convenience on perceptions of regulatory fit and intention to redeem. Finally, Chapter 9 discusses the results of the studies and their theoretical and managerial implications, as well as the limitations of the studies and directions for future research in this area.

Chapter 2 : Mobile Marketing and Personalisation

2.1 Introduction

In Chapter 1, the lack of research on the personalisation of mobile coupons, in conjunction with the mixed results provided by the research on personalisation, were identified as the major gaps to be addressed by this thesis. To this end, type of product, temporal needs congruency, and access convenience were identified as the relevant mobile coupon cues that interact with consumers' shopping motivations and affect the consumers' redemption intentions. Regulatory focus and construal level theories were proposed as the relevant theories to explain how consumers with different motivational states respond differently to personalised mobile coupons with different levels of compatibility (i.e., with different degrees of personalisation). The present chapter provides an overview of the literature on mobile marketing followed by the literature on personalisation.

2.2 Mobile Services, Mobile Marketing, and Mobile Coupons

The developments in mobile and telecommunications technologies have given rise to an increasing growth in the use of mobile technology-based devices such as mobile phones, smart phones, or personal digital assistants (PDAs) (Lim *et al.*, 2006), and more recently, iPhones and iPads (Bellman, Potter, Treleaven-Hassard, Robinson, & Vaean, 2011). Statistics show that in 2010, mobile cellular phone subscribers reached 5,282 million people in the world, 3,846 million people in developing countries, and 1,436 million people in developed countries, indicating a 533 percent, 1139 percent, and 196 percent growth in each from 2000, respectively (ITU, 2011). This growth has been accompanied by an increasing use of mobile-enabled applications. For example, a worldwide study conducted by ATKearney (2005) in 21 countries found that more than half of consumers are able to access mobile multimedia services, with 56 percent of multimedia phone owners having browsed their mobile operator portal or having used mobile email services at least once a month, one-third of them using multimedia messaging services such as music downloads. The study by ATKearney also revealed that two-thirds of mobile users prefer to receive time-sensitive video content such as news and sports instead of entertainment. It has been estimated that 10 trillion text messages

will be sent and delivered globally by 2012 (Punchkickinteractive, 2011). In parallel to this, mobile games have been forecasted to yield $7 billion in expenditure worldwide by 2012, from $1.9 billion in 2007, with part of it forecasted to be ad-generated. Mobile music retail revenues will grow from $2.4 billion in 2007 to more than $13 billion globally by 2012 (eMarketer, 2011). It has been estimated that by 2011, over $16 billion will be invested in mobile applications for marketing purposes (Neufeld, 2007). Similarly, it has also been forecast that more than 300 million consumers around the world will have used mobile coupons by 2014, generating a redemption value of £6 billion globally (Thirdscreen, 2011).

Owing to their ubiquity and the ability to exchange context-specific and personalised information with consumers, mobile devices carry a high potential for being incorporated into companies' marketing channels (Shankar & Balasubramanian, 2009; Watson, Pitt, Berthon, & Zinkhan, 2002). Appreciating these advantages of a mobile channel, many companies have started to initiate various mobile technology platforms to find the applications that provide better value propositions for consumers (Barnes & Scornacacca, 2004; Kleijnen, De Ruyter, & Wetzels, 2004; Rettie *et al.*, 2005). This trend has led to the emergence of mobile services. Specifically, mobile services refer to any kind of transactional, information, or entertainment services that are offered to consumers via a mobile device and are delivered through interactions between an organization and a customer (Mort & Drennan, 2005; Pura, 2005). Examples of mobile services include financial information, banking, shopping, ticketing, news reports, emergency alerts, advertising and promotions, or mobile entertainment (Lin & Wang, 2006; Mort & Drennan, 2005), and more recently, applications accessible on iPhones or iPads (Bellman *et al.*, 2011).

Since the mobile phone is a highly personal medium, it can be used as an effective marketing channel to gain direct access to prospective consumers and convey marketing communications to them (Balasubramanian, Peterson, & Jarvenpaa, 2002; Shankar & Balasubramanian, 2009). This personal nature of mobile devices, in conjunction with their high diffusion rate, has resulted in the development of mobile service applications that are used for marketing purposes (Barnes, 2002b; Bellman *et al.*, 2011). In particular, using mobile services for marketing purposes is referred to as 'mobile marketing'. The Mobile Marketing Association (2008, p. 22) defines mobile marketing as "the use of wireless media to deliver content and receive direct response from consumers in an integrated cross-media or

separate marketing communications program." It has also been defined as "using wireless media to provide consumers with time- and location- sensitive, personalized information to promote goods, services and ideas that create value for all involving parties" (Scharl, Dickinger, & Murphy, 2005, p. 165).

A growing enabler of mobile marketing involves sending marketing messages to consumers' mobile phones through SMS (Short Message Service) referred to as 'SMS advertising' (Drossos *et al.*, 2007; Okazaki & Taylor, 2008). As a complementary marketing channel, compared with other traditional and online channels, SMS has been very successful and possesses a higher level of potential to send personalised advertisements to customers (Barnes & Scornacacca, 2004; Drossos *et al.*, 2007; Okazaki & Taylor, 2008). Both practitioners and academics have contended that SMS will turn into a widespread direct-marketing medium and is one of the major elements of companies' promotional mix (Jayawardhena, Kuckertz, Karajaluoto, & Kautonen, 2009; Rettie *et al.*, 2005). Compared to other direct marketing channels, SMS messages enable marketers to have access to consumers on a one-to-one basis, and as a consequence, they may achieve a higher rate of consumer attraction and response (Kavassalis *et al.*, 2003; Rau *et al.*, 2011). Despite the rapid emergence of newer and more advanced mobile applications, such as the ones on iPhone or iPad (Bellman *et al.*, 2011), marketing applications that build on SMS will continue to be used by companies. This is because SMS is popular among a considerable customer base, can be delivered on all types of mobile devices, and can be used for personalisation (Mort & Drennan, 2002; Rau *et al.*, 2011). Text-based mobile marketing can be in different forms. The most widely used ones include brand-building advertisements, promotional messages, or mobile coupons about various ongoing sales and price specials in shops, malls, and restaurants in surrounding areas (Barwise & Strong, 2002; Unni & Harmon, 2007; Varshney & Vetter, 2002).

Mobile coupons are defined by Dickinger and Kleijnen (2008, p. 24) as "digital coupons sent to mobile devices such as mobile phones, smartphones, or personal digital assistants". Mobile coupons may contain various types of messages including text, pictures, audio, or videos; consumers who receive a mobile coupon can save it in their mobile devices until they decide to redeem it in the retailers' outlet (Dickinger & Kleijnen, 2008; Xu *et al.*, 2009). In a typical mobile coupon service setting, a retailer uses other media such as in-store, print, or outdoor advertisements, to initiate contact with customers and invite them to request mobile coupons

by, for example, sending a text message. Then, the retailer sends mobile coupons to those who have responded to the retailer's invitation. The mobile coupons can be saved in mobile phones and redeemed at the retailer's outlet before their expiration date (Xu *et al.*, 2009).

The context of the present thesis resembles this description. Conceivably, one major purpose of using mobile coupons is to increase sales. Extra sales may be prompted by the price discount offered through the face value of the coupon. The redemption rate of mobile coupons has been reported to be between 15-25 percent compared with only 1 percent for traditional paper coupons (Thirdscreen, 2011). An important benefit of mobile coupons is that they allow for efficient handling of coupons by scanning the coupons' bar-code at cash desks (Dickinger, Haghirian, Scharl, & Murphy, 2004). This enables retailers to expand their customer databases and use these data to personalise their offers to consumers (Xu *et al.*, 2009). Furthermore, another benefit of mobile coupons is that they are context-specific, that is, they are configured and delivered to consumers on the basis of the consumers' time and/or locations (Dickinger & Kleijnen, 2008).

2.3 Prior Research on Mobile Marketing

The success of mobile marketing is dependent on identifying how consumers' attitudes are formed and how consumers response to mobile marketing offers on the basis of their needs, wants and preferences (Barnes, 2002a). Neglecting consumers' contextual factors, such as their time, place, and goals, or using inappropriate customer profiles can lead to the failure of mobile marketing offers (Vijayalakshmi & Kannan, 2009). Therefore, it is necessary for mobile service providers to understand the driving forces behind consumers' intentions to use their services so that they will be able to provide consumers with mobile coupons that are more congruent with their needs and motivations. This highlights the need for developing insights into the factors that affect consumers' intentions to redeem mobile coupons. Specifically, these factors can be in the control of the mobile service provider, such as using appropriate bases for configuring personalised mobile coupon offers (Ball, Coelho, & Vilares, 2006), or related to customers' situational characteristics, such as their shopping tasks (Tam & Ho, 2006). In this sense, a mobile promotion that is not congruent with consumers' needs will reduce consumers' evaluations of the offer; hence, promotions might have little or no effect, or indeed may produce negative effects.

An overview of the research in the area of mobile marketing indicates that the current studies are diverse and have varying perspectives (Nysveen, Pedersen, & Thorbjornsen, 2005). Specifically, the extant literature on mobile marketing is dominated by research investigating the general antecedents of consumers' responses to mobile marketing services. For example, Drossos and colleagues (2007) found that incentive, interactivity, appeal, product involvement, and attitude towards mobile advertising in general directly influence consumers' attitudes towards mobile advertisements, brand, and the consumers' purchase intentions. In a cross-country study, Jayawardhena and colleagues (2009) revealed that institutional trust (resulting from a company's image among media) is a major factor affecting consumers' decision to give permission to mobile marketing services. Tsang, Ho, and Liang (2004) showed that entertainment is a key factor influencing consumers' attitudes towards, behavioural intentions, and actual behaviour to use mobile advertisements, followed by the evaluations of the credibility and the irritation of the mobile advertisements.

A major body of research in the field of mobile marketing has drawn on technology acceptance model (Davis, 1989), theory of reasoned action (Fishbein & Ajzen, 1975), theory of planned behaviour (Ajzen, 1991) or a combination of these theories to investigate consumers' adoption of mobile services. For instance, Nysveen, Pedersen, and Thorbjornsen (2005) showed that usefulness, ease of use, enjoyment, and expressiveness are the key factors that affect consumers' attitudes and intentions to use mobile services. The authors also showed that these effects are moderated by service process characteristics (i.e., whether the service is goal-directed or experiential). Pihlström (2007) found that consumers' intentions to use mobile channels are influenced directly by their perceptions of hedonic and utilitarian value in the mobile channel and indirectly through the mediating effect of commitment to the mobile channel. Wu and Wang (2005) revealed that consumers' behavioural intentions and actual use of mobile services are determined by the consumers' perceptions of risk, cost, service compatibility, and usefulness of mobile services.

Another stream of research has explored the effects of different value propositions provided by mobile services on consumers' adoption of the mobile services. For example, looking at the value propositions of a mobile channel from a utilitarian perspective, Kleijnen, De Ruyter, and Wetzels (2007) identified time convenience, user control, risk, and cognitive effort as key antecedents to perceiving value in mobile channels. The authors also found that these

antecedents are more influential for time conscious users. Mort and Drennan (2007) showed that the use of mobile services is influenced by the level of involvement with the mobile phone as a product category, the involvement in purchasing a mobile phone, and also by innovativeness. In addition, the authors revealed that both product and purchase involvement are influenced by consumers' perceived utilitarian value, whereas involvement in purchasing a mobile phone is influenced only by perceived hedonic value. Yang and Jolly (2009) revealed that emotional value is a major antecedent to consumers' positive attitude towards using mobile services. On the other hand, the authors found negative effects for social value and monetary value on consumers' intention to adopt mobile data services.

Few studies, however, have examined the role of contextual factors or that of mobile marketing cues. Banerjee and Dholakia (2008) examined the effect of delivering mobile advertisements in private versus public locations, during non-work-related versus work-related tasks, and using location-based versus location-independent advertising strategies on consumers' responses. The authors found that mobile advertisements that are received in public locations and in non-working situations are perceived as more useful than the ones delivered in private locations or working situations, respectively. Also, location-based mobile advertisements were found to be more effective on consumers' intentions to take advantage of the offer than were location-independent mobile ads. Gopal and Tripathi (2006) investigated the effect of the location (i.e., distance between the point of delivering mobile coupons and retailers location) and coupon characteristics (face value and expiration date) on the effectiveness of mobile advertising in terms of recalling mobile ads. The authors found negative effects for distance and positive effects for the amount of mobile coupon's face value and the length of expiry date on consumers' recall of mobile advertisements. Unni and Harmon (2007) experimentally tested the effects of location-based advertising (LBA) on consumers' privacy concerns (about being tracked), perceived benefits, value, and intentions to try LBA, as well as consumers' perceptions of the intrusiveness of the messages. The two characteristics that they considered in their study included the type of LBA (i.e., pull versus push messages) and message content (advertising versus promotion). The results of their study showed that when LBA adopts a push strategy, perceived value is higher for promotions than for advertising, whereas when LBA strategy is pull, advertising and promotional LBA are valued similarly. It was also found that perceived benefits, perceived value, and intentions to sign up for the mobile service were greater for pull than for push LBA. However, privacy

concerns and perceptions of intrusiveness were found to be greater for push than for pull LBA, and also for promotional LBA than for advertising LBA. In this vein, other research has found context-specificity (Xu & Yuan, 2009) and the compatibility of personalised offers with consumers' needs (Pura, 2005; Rau *et al.*, 2011) as key antecedents to the effectiveness of mobile marketing offers.

Moreover, research that investigates the factors influencing consumers' responses to mobile coupons is scarce. Specifically, in the domain of mobile coupon services, Dickinger and Kleijnen (2008) examined the effects of economic benefits, redemption effort, perceived control, fear of spamming, social norms, past use of coupons, and the moderating role of value seeking (comprising coupon proneness and value consciousness) on consumers' attitudes and intentions towards mobile coupon services. It was found by the authors that redemption effort is the main determinant of attitude towards mobile coupons, followed by economic benefit provided by discounted offers and perceived control over the use of mobile coupons. The authors also revealed a strong negative effect of redemption effort on the attitude towards using mobile coupons for value seeker consumers.

Furthermore, in investigating consumers' responses to mobile marketing offers, few studies have explored the domain of personalised services. Xu, Liao, and Li (2008) found that entertainment, credibility, and sending personalised offers are important factors affecting consumers' responses to mobile advertisements. The authors identified three main components for personalising a mobile advertising message: user preferences, user context (including time, location, and users' activities), and message content. It was found that user context is the most important element of personalised mobile advertisements, followed by user preference and message content. In a similar vein, Xu (2006/7) revealed that entertainment, credibility of the mobile advertisement, and personalisation are the most prominent factors impacting upon consumers' attitudes towards and intentions to use mobile advertising.

Although the extant literature on mobile marketing sheds light on the relative importance of factors such as personalisation of offers, context-specificity, and compatibility with needs, there seems to be a dearth of research addressing the role of underlying psychological or contextual factors, and more importantly, the effects of their interaction with marketing cues.

Specifically, it has not yet been examined what contextual factors, in terms of consumers' situational states, or what marketing cues communicated by a mobile coupon offer, determine consumers' intention to respond to the offers, especially personalised mobile coupons, and how. Since the focus of the current thesis is on personalised mobile coupon services, the next section provides an overview of the literature on personalisation.

2.4 Personalisation

Mobile marketing is a direct marketing channel with the potential to facilitate the implementation of one-to-one marketing strategies (Balasubramanian *et al.*, 2002; Watson *et al.*, 2002). Compared to the traditional and Internet channels, the firms that use mobile channels to apply one-to-one marketing are more likely to receive positive responses from potential consumers (Kavassalis *et al.*, 2003; Mort & Drennan, 2002). This is probably due to the possibility of applying personalisation strategies in a permission-based and context-specific manner (Jayawardhena *et al.*, 2009; Rau *et al.*, 2011). Indeed, mobile marketing channels enable a direct interaction with the consumers and the marketer (Salo & Tahtinen, 2005) allowing personalised messages to be sent to consumers while the latter are on the move (Kalakota & Robinson, 2002; Turban, King, Lee, Warkentin, & Chung, 2008).

Personalisation is defined by White and colleagues (2008, p. 40) as "a specialised flow of communication that sends different consumers distinct messages adapted to their individual preferences or characteristics using consumers' data such as demographics, psychographics, or past purchase histories". In a mobile couponing context, the marketing messages can be personalised on the basis of the information provided by the users themselves through their mobile phones, other marketing channels at an earlier time, or the users' profiles in the companies' databases (Jinjung Xu, 2006; Shen & Ball, 2009). In this sense, in the context of web personalisation, three approaches have been identified by Tam and Ho (2006), ranging from transaction-driven, to user-driven, to context-driven personalisation. In transaction-driven personalisation, the firm configures the personalised content on the basis of preferences inferred from previous transactions. User-driven personalisation is practised when users indicate in advance the desired content that matches their interests and preferences. Context-driven personalisation deploys adaptive systems that are sensitive to the context of interaction and are adjusted to the changing context continuously, where users' processing goals in real-time may also be used.

It is conceivable that, compared to other marketing channels, a mobile coupon service context enables marketers to apply more context-driven personalisation. It has been emphasised that the effectiveness of mobile marketing offers depends to a large degree on delivering context-sensitive (i.e., time- and location-dependent) messages to users (Rau *et al.*, 2011; Salo & Tahtinen, 2005). In this regard, Xu, Liao, and Lee (2008) highlight that it is necessary to identify the relevant variables that enhance the effectiveness of personalised mobile coupons. Related to this, researchers have suggested that marketers need to deploy decision support systems that help them decide for whom and to what extent they should personalise their offers (Arora *et al.*, 2008; Nunes & Kambil, 2001; Salo & Tahtinen, 2005). Specifically, Arora and colleagues (2008, p. 310) outline three different levels for personalising offers, ranging from 1-to-all (no personalisation) to one-to-many (segment personalisation) to one-to-one (extreme personalisation), and raise the question of "how far should a marketers go towards the ultimate goal of personalisation?".

2.5 Prior Research on Personalisation

As mentioned above, marketers have started to use mobile channels to implement personalisation. In a mobile coupon service setting, personalisation is performed by deploying technology-based recommendation agents. Specifically, a recommendation agent is "a collection of software modules used to configure exclusive offers for individual consumers (Tam & Ho, 2006, p. 867) ". Personalised offers are designed on the basis of various factors such as customers' demographic information, purchase history, and stated preferences (Miceli, Ricotta, & Costabile, 2007; Vesanen, 2007; Vijayalakshmi & Kannan, 2009). However, research in the area of technology-based personalisation has predominantly had a modelling perspective intended to develop more effective and efficient algorithms (Chung, Rust, & Wedel, 2009; Murray & Haubl, 2009; Xu *et al.*, 2008). For example, Xu and colleagues (2008) combined behavioural and engineering techniques to model users' responses to personalised mobile advertising applications. In particular, the authors constructed and empirically tested a Bayesian-network-based prototype to improve users' attitude towards mobile advertisements. In the context of mobile entertainment, Chung, Rust, and Wedel (2009) developed and implemented an adaptive personalisation system that eliminates the need for users' inputs and adapts to individual changes in preferences based on any purchase occasion. The authors proved that their model outperforms Markov chain Monte

Carlo (MCMC) procedures that are commonly used in most of the research on recommendation agents (Ansari, Essegaier, & Kohli, 2000; Ying, Feinberg, & Wedel, 2007). In this vein, Murray and Häubl (2009) proposed individual-level and feature-based software agents. These agents personalise product offers on the basis of a preference model that builds consumers' profiles through explicit dialogues with the consumers. The authors argue that an individual-level and feature-based model facilitates consumers' choices by reducing the effort required to choose among available options.

Nonetheless, research on the behavioural aspects of technology-based personalisation is scant and has shown mixed results. Two streams of research are of particular relevance to the present thesis. One stream is represented by Tam and Ho (2006), who examined the effects of compatibility between personalisation cues and consumers' goals. In particular, the authors identified two bases for personalising offers including: content relevance, referring to the degree to which the personalised offer is related to consumers' specific processing goals; and self-reference, which concerns the degree to which the personalised offer activates concepts related to self or to prior experiences of the users. They also identified three levels of specificity for users' processing goals consisting of: product selection, referring to selecting a specific product from a specific product category; product browsing, referring to comparing different products in a specific product category; and random browsing, referring to browsing through different products among different product categories. It was found that relevant content results in a better recall performance among respondents with more specific goals (i.e., product selection and product browsing) than irrelevant content.

Another stream of research has investigated the effect of highly personalised offers on consumers' reactions. Specifically, White and colleagues (2008) demonstrated that highly distinctive personalised offers lead to negative effects such as personalisation reactance. The distinctiveness of a personalised offer is characterised by the authors as the degree to which the personal information used in the personalised message exclusively recognises the message recipient. Personalisation reactance refers to a psychological resistance by consumers resulting from the receipt of inappropriately personalised offers. The authors identified two factors that alleviate the effect of distinctive personalisation on reactance. The factors include justification and perceived benefits of the offer. Justification is characterised by explicitly explaining how the use of the recipient's personal information is relevant to the personalised

offer. Perceived benefits concerns the degree to which the psychological costs of receiving an inappropriately personalised offer is compensated by it benefits. It was revealed by their study that consumers have more negative reactions when the personalised offers are highly distinctive and this effect is more prominent when no reason is given for sending highly personalised offers. In addition, the authors found that this effect holds when perceived benefits was low. That is, in the case of low perceived benefits, the presence of justification did not affect consumers' click-through intentions, whereas the absence of justification reduced click-through intentions. In contrast, in the case of high perceived benefits, the absence of justification did not impact upon consumers' intentions to click-through.

In a similar vein, Barone and Roy (2010) investigated how personalised promotions with different levels of exclusivity affect consumers' evaluations of the deals and how this effect is moderated by consumers' characteristics including self-construal, gender, and relationship equity. Exclusivity refers to the degree to which promotions are offered selectively to some customers but not inclusively to others. Self-construal concerns the extent to which people view themselves in isolation from others, referred to as independent self-construal, as opposed to being in a group, referred to as interdependent self-construal. Relationship equity is characterised by the degree of effort or investment in terms of past purchase frequency or purchasing relatively expensive items by customers in order to receive an exclusive deal. The authors showed that consumers assess exclusive offers more favourably than inclusive offers and this effect is stronger for those with a higher level of independent self-construal. It was also found that when relationship equity is high, male consumers favour exclusive personalised promotions more than inclusive ones. However, it was revealed that female consumers and those with an inter-dependent self-construal evaluate inclusive offers more positively than exclusive ones.

These findings highlight two paradoxical challenges in implementing personalisation strategies (Arora *et al.*, 2008). Specifically, while the first stream of research (Tam & Ho, 2006) addresses the consequences of providing consumers with personalised offers that are compatible or incompatible with their processing goals, the second stream of research (Barone & Roy, 2010; White *et al.*, 2008) has to do with the outcomes of providing highly personalised offers for consumers by moving too far from mass-marketing towards one-to-one marketing (Arora *et al.*, 2008). In particular, the second stream of research is at odds with the

positive feelings that result from the exclusivity of customised offers, as suggested by other researchers (Simonson, 2005).

Although this literature on personalisation sheds light on the factors affecting the appropriate degree of personalisation and some boundary conditions for these factors, a complementary but yet unexplored question is: "how customers with different situational states respond to personalised offers". For example, in the study conducted by Tam and Ho (2006), the authors did not examine the effect of relevant or irrelevant personalised offers on users with non-specific processing goals (i.e., random browsing). Similarly, in the other two studies mentioned above (Barone & Roy, 2010; White *et al.*, 2008), the role of consumers' motivational states, such as their shopping goals, was not examined. More to the point, the question of: "how and to what extent consumers' shopping motivations impact the consumers' responses to personalised mobile coupons that are compatible or incompatible with their goals" is yet to be investigated. From a managerial perspective, the question is: what bases should be used to personalise offers in a mobile coupon service context and what group of customers are more or less responsive to these bases?

The importance of taking into account consumers' contextual factors (Zhang & Wedel, 2009) as well as using appropriate bases (Zhang & Krishnamurthy, 2004) for personalising product offers has also been highlighted in the contexts of brick-and-mortar and Internet shopping. For instance, Zhang and Krishnamurthy (2004) used consumers' purchase timings as a relevant basis for personalising offers. In particular, the authors built on the concepts of consumers' variety seeking and inertia as tendencies that vary over time for a considerable proportion of households. The authors argue that a promotion targeting a consumer who has not purchased the offered brand on the previous occasion may not be effective if the consumer is in a state of inertia or is in a variety-seeking state. However, none of this research has examined how and to what extent the heterogeneity among consumers in terms of their mood, especially their motivational state, affects their responsiveness to promotional offers, although it is emphasized as a direction for future research.

Therefore, having juxtaposed the literatures on mobile marketing and personalisation, the focus of the present research is to investigate the roles of consumers' shopping motivation (as a consumer's situational factor), the type of product offered by a mobile coupon, the

congruity of the offer with consumers' temporal needs, as well as the physical distance from the advertised retailer, in consumers' responses to personalised mobile coupon offers. The present research also examines the role of regulatory focus, construal level, and regulatory fit as the mechanisms to explain consumers' responses to mobile coupons. These notions will be discussed in more detail in the following chapters.

2.6 Conclusion

This chapter presented a review of the literature on mobile marketing and personalisation. The main goal of this review was to better comprehend the research context and the gap in the literature to be addressed by the present thesis. It was pointed out that although the extant research on mobile marketing emphasises the positive effect of applying personalisation strategies, it has not examined the role of consumers' contextual factors in the consumers' responses to personalised offers. Further, the extant literature on personalisation has produced mixed results in terms of consumers' reactions to high or low degrees of personalisation. Integrating these two bodies of research on mobile marketing and personalisation, it was noted that the role of consumers' motivational states and their interaction with the marketing cues conveyed by a mobile coupon seems to be overlooked. The next chapter will discuss the literature related to different components of the overall conceptual framework and the theories used to explain consumers' responses to personalised mobile coupon offers.

Chapter 3 : Goal-Related Theories

3.1 Introduction

In the present thesis, the overall conceptual framework proposed in Chapter 1 (Figure 1.1) is tested in two stages. In the first stage, the variable access convenience is kept constant and hence removed from the model. The resultant framework is titled 'conceptual model 1' and is depicted in Figure 3.1. In particular, this model examines the effect of the interactions between shopping motivation (as a situational state), product type, and temporal needs congruency (as two marketing cues associated with a mobile coupon) on regulatory fit and intention to redeem. The present chapter reviews the literature related to the components of conceptual model 1, as well as the theories used to hypothesise about the relationships in the model.

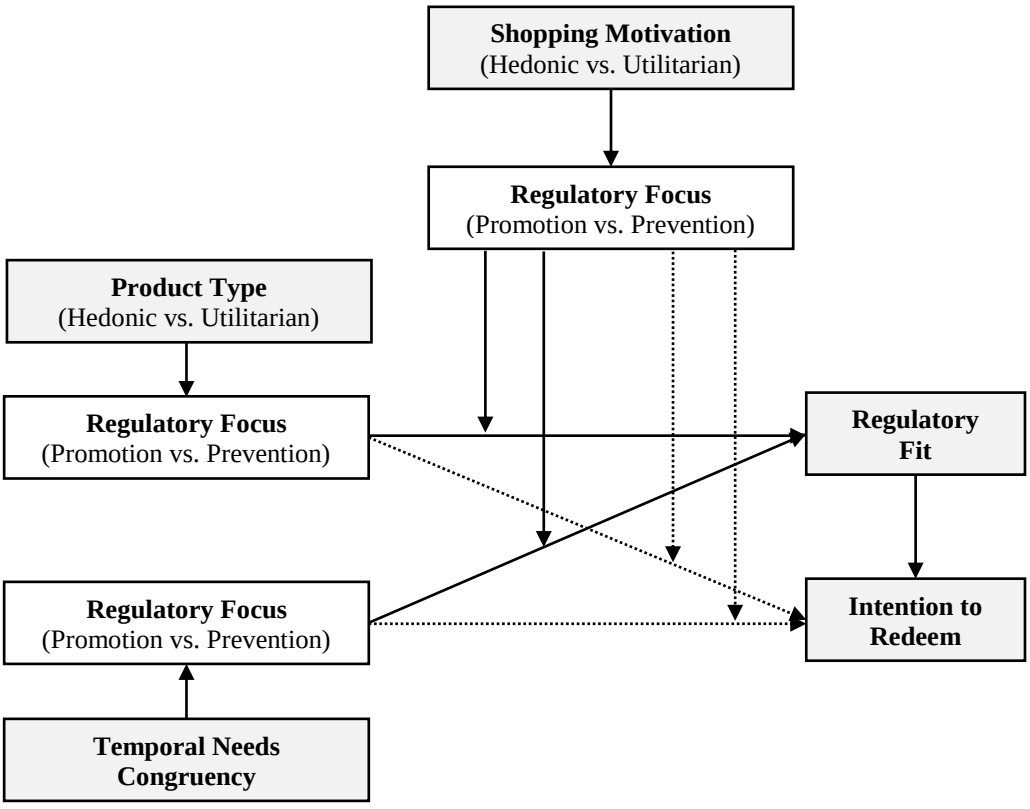

Figure 3.1: Conceptual Model 1

In the second stage, the variable temporal needs congruency is controlled and hence removed; instead, the variable access convenience is included in the model. The resultant framework is titled 'conceptual model 2' and is depicted in Figure 3.2. The Chapter 4 will review the literature relating to the variable access convenience, which is the variable of focus in conceptual model 2.

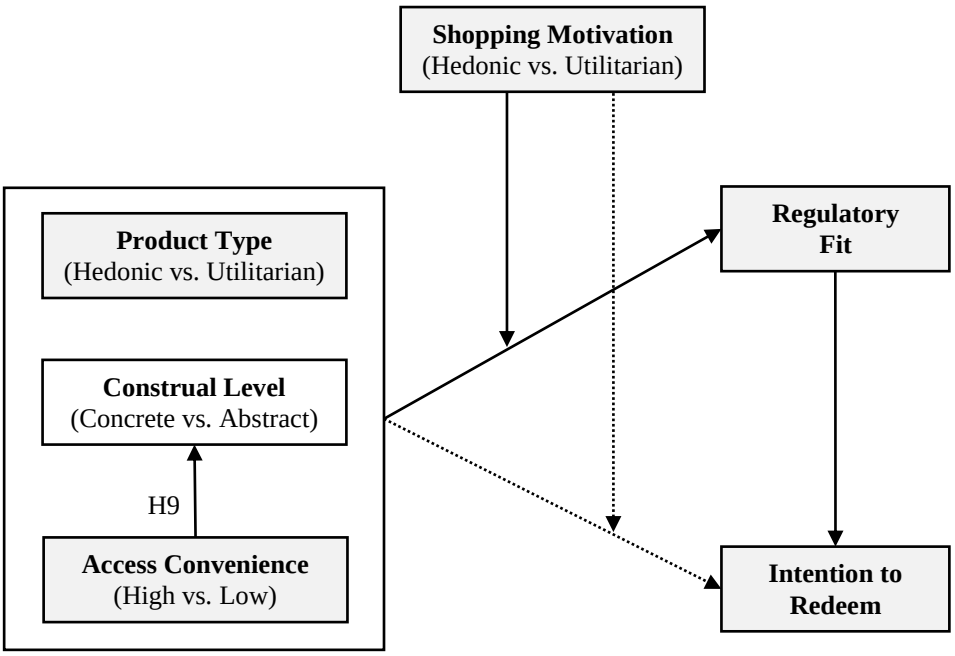

Figure 3.2: Conceptual Model 2

3.2 Shopper Typologies

The development of proper shopper typologies has been one of the most long-standing areas of research on consumers' shopping behaviour. The various studies conducted in this area have resulted in several taxonomies of shoppers (Morschett, Swoboda, & Foscht, 2005). The extant typologies in the literature are divergent, possibly because each taxonomy has categorized consumers on the basis of different criteria (Westbrook & Black, 1985). However, the advantage of these typologies lies in their potential to assist retail managers to identify and target different segments (Sheth, 1983; Westbrook & Black, 1985). Two shopper typologies in the literature that are relevant to the focus of the present thesis are: utilitarian versus hedonic shopping motivations and planned versus unplanned purchasing. As noted previously, in the overall conceptual framework of this thesis, the variable shopping motivation plays the role of a moderating variable in the effects of mobile coupons' cues on

consumers' perceptions of regulatory fit in and intentions to redeem mobile coupons. As will be discussed, in order to introduce the concept of temporal needs congruency, the taxonomy of planned and unplanned purchasing will be drawn upon.

3.2.1 Utilitarian and Hedonic Shopping Motivations

In some studies on consumers' shopping behaviour, shopping is viewed as a "task" that should be performed by "unhappy consumers" who, as "problem solvers", are experiencing "the dark side of shopping" (Hirschman, 1984; Sherry Jr., McGrath, & Levy, 1993). On the other hand, in some studies, consumers seek "fun, fantasy, arousal, sensory stimulation, and enjoyment" in their shopping experience (Hirschman, 1984; Sherry Jr., 1990). This suggests that different types of motivations underlie shopping goals (Babin *et al.*, 1994; Ganesh *et al.*, 2007), resulting in the consumers deriving different types of value from their shopping experiences (Babin & Babin, 2001; Babin, Chebat, & Michon, 2004). It has been suggested that in order to better understand consumers' shopping behaviour as a consumption activity, besides focusing only on the objective and monetary benefits of acquiring goods or services, researchers need to take into account the various subjective and emotional costs and benefits involved in a shopping experience (Holbrook, 1986; Mathwick, Malhotra, & Ridgon, 2001). In other words, the growing recognition that shopping can provide both economical and experiential outcomes suggests that in order to provide a more comprehensive explanation of consumers' shopping behaviour, shopping should be viewed in terms of more than one aspect (Mathwick *et al.*, 2001; Sheth, Newman, & Gross, 1991).

The notion that consumers may have different motivations as their shopping goals, pursue various shopping outcomes, and consequently derive various types of value from their shopping outcomes has been proven by several studies (for some examples, see: Babin *et al.*, 1994; Ganesh *et al.*, 2007; Westbrook & Black, 1985). For example, Babin, Darden and Griffin (1994) revealed that when consumers go on a shopping trip, their underlying motivation can be either utilitarian or hedonic. In particular, utilitarian shopping motivations are characterized by task-oriented, rational, and cognitive goals underlying a shopping trip (Babin *et al.*, 1994).That is, utilitarian shoppers go on a shopping trip with the goal of purchasing certain products (Ganesh *et al.*, 2007). In this sense, utilitarian shopping motivations refer to the value derived from acquiring the intended products in an efficient and timely manner (Childers *et al.*, 2001). Rather than deriving satisfaction from the shopping as

an activity in itself, utilitarian shoppers derive satisfaction from the outcomes of their shopping, namely, from acquiring their intended products or services with minimum expenditure of time and energy (Kaltcheva & Weitz, 2006). Hence, deriving utilitarian value from a shopping experience depends on whether or not these specific utilitarian motivations behind the shopping trip have been met (Babin & Babin, 2001).

Hedonic shopping motivations, on the other hand, are characterized by enhanced arousal and pursuit of freedom, fantasy, and escapism in shopping (Babin *et al.*, 1994). Hedonic shoppers are consumers who engage in shopping as a leisure and recreational activity (Childers *et al.*, 2001). In this sense, hedonic shopping motivations are more subjective and driven by fun, playfulness, diversion, and affective aspects of the shopping experience (Babin *et al.*, 1994). Consumers with hedonic shopping motivations seek leisure, socialisation, adventure, and diversion from their daily routines in their shopping (Arnold & Reynolds, 2003). Besides deriving satisfaction from shopping outcomes, hedonic shoppers derive inherent satisfaction from the shopping process itself (Kaltcheva & Weitz, 2006). Hedonic shoppers perceive enjoyment and pleasure in hunting for new items that draw their attention more than merely buying pre-specified products (Dholakia, 1999). Compared to their pre-recognized needs, situational factors such as the shopping environment and social surroundings are more influential on hedonic shoppers' purchasing behaviours (Tsang, Zhuang, Li, & Zhou, 2003). In a study conducted by Scarpi (2005), it was found that consumers with hedonic shopping behaviours are more likely to spend more money on a shopping trip in terms of both the number and the expensiveness of the items purchased. On the other hand, those with utilitarian shopping orientations tend to buy exactly the products they need, do not search actively for other or extra options, and spend less money on a certain shopping trip.

On the whole, utilitarian (task-oriented) and hedonic (recreational) shopping motivations have been recognised by the extant research as the two fundamental orientations that underlie different shopping motives (Kaltcheva & Weitz, 2006). However, these two types of motivation are not mutually exclusive; rather, on a certain shopping trip consumers' shopping motivation may be either more hedonic or more utilitarian in nature (Babin *et al.*, 1994; Westbrook & Black, 1985). It is also worth mentioning that consumers' general shopping orientation should be distinguished from their shopping motivation as a situational factor. Specifically, shopping orientation is a personality trait that is relatively a consumer

characteristic (Bellenger & Korgaonkar, 1980; Guiry, Magi, & Lutz, 2006); whereas shopping motivation is a situational state that refers to the conditions in which a shopping trip with some specific goal is initiated (Arnold & Reynolds, 2003; Westbrook & Black, 1985).

Literature on the impacts of the interplay between consumers' shopping motivations and marketing- or consumer-related factors on the consumers' shopping behaviours is diverse. For example, Kaltcheva and Weitz (2006) examined the moderating role of consumers' shopping motivations in the effect of arousal (triggered by environmental characteristics) on the consumers' perceived pleasantness of the retail environment. Their research demonstrated that while task-oriented shoppers perceive a high-arousal environment as unpleasant, recreational shoppers perceive a high-arousal retail environment as pleasant. Further, the authors found that consumers' shopping motivation interacts with arousal to influence behavioural intentions through the mediating effect of pleasantness. Mathwick, Malhotra and Ridgon (2002) investigated the effect of the compatibility of the information cues presented in a retail environment with the tasks performed by consumers (goal-directed vs. experiential shopping) on the consumers' perceptions of experiential value (Mathwick *et al.*, 2001). In their study, the authors conceptualised experiential value in terms of two distinctive dimensions: active dimension, which encompasses efficiency value, economic value, shopping enjoyment, and escapism; reactive dimension, which comprises visual appeal, entertainment value, and service excellence. It was found that in a retail environment, goal-directed shopping tasks are associated with higher perceptions of economic and efficiency value and lower perceptions of enjoyment, compared with experiential shopping tasks. Moreover, it was demonstrated that the congruency between shopping task and information display in a retailing environment (e.g., goal-directed shoppers using the Internet or experiential shoppers using catalogue) results in higher perception of visual appeal, entertainment, and service excellence in retailing performance. In another study, Gounaris, Koritos, and Vassilikopolou (2010) examined the effects of the interaction between an online stores' atmospheric qualities (product-related information, navigation, aesthetics) and consumers' shopping orientation (economic vs. recreational) on two major dimensions of consumers' online shopping behaviour, namely, information search and proceeding to transaction. The results of their empirical study showed that for economic shoppers, information related to their shopping task and aesthetic cues influence their online information search for products and services, but do not affect their decision to proceed to online transaction. However, recreational shoppers' information search

or proceeding to transaction behaviours was found to be independent of information related to shopping orientation or the aesthetics of the online environment.

3.2.2 Planned versus Unplanned Purchasing

In order to investigate the associations between the ways consumers do their shopping and their response to marketing activities such as promotions, researchers have distinguished between two types of purchasing behaviour: planned versus unplanned purchasing (Bucklin & Lattin, 1991; Kelly, Smith, & Hunt, 2000; Kollat & Willet, 1967). Unplanned purchasing, also referred to by some researchers as impulse purchasing (Cobb & Hoyer, 1986; Lee & Kacen, 2008; Spears, 2006), is a buying behaviour that takes place when a consumption need has not previously been recognized by the consumer or a buying intention has not previously been shaped prior to entering a shop (Bucklin & Lattin, 1991). Unplanned purchase decisions are made inside the store and therefore are largely influenced by marketing activities such as promotions within the stores. That is, the cognitive and affective forces that drive the purchase are generally activated at the time and place of making the purchase, leading to an unplanned and unexpected buying behaviour (Bucklin & Lattin, 1991; Rook, 1987). Planned purchasing, in contrast, is a buying behaviour conducted when a consumer has considered and has made a decision to buy or not to buy a certain brand or product prior to entering the store (Bucklin & Lattin, 1991). In-store pricing specials and promotions have less influence on planned purchases (Bucklin & Lattin, 1991; Cobb & Hoyer, 1986; Kollat & Willet, 1967).

Impulse buying is characterized by a comparatively rapid decision-making process which is less deliberate and more aroused than planned purchasing (Hoch & Loewenstien, 1991; Rook, 1987). The impulse buyers tend to be less contemplative in their purchase decisions, become attracted to an object based on their emotions, and like to experience immediate pleasurable emotions (Hoch & Loewenstien, 1991). In impulsive decision-making, less information is searched and processed by consumers; as a result, less time is taken to make a purchase decision (Lee & Kacen, 2008). Impulse buyers tend to have more hedonic than utilitarian considerations in their shopping goals and their shopping experience involves higher levels of emotions such as arousal, pleasure and excitement (Verplanken, Herabadi, Perry, & Silvera, 2005).

Some studies have investigated the factors that affect consumers' unplanned buying. For instance, Inman, Winer and Ferraro (2009) developed and tested a framework that encompasses the factors that influence the degree to which consumers engage in unplanned purchasing. Their framework incorporates the effects of product category characteristics, customer characteristics, and customer activities. Product category characteristics include: type of product category (hedonic vs. utilitarian product); interpurchase cycle (frequency of purchasing a specific item); coupon usage (using or not using coupons for a specific item); and in-store displays (the presence of in-store displays for a specific item). Customer characteristics consist of: gender; household size; store familiarity; and shopping alone or with others. Customer activities comprise: use of a shopping list; number of aisles shopped; shopping frequency (number of shopping trips per week); time spent on shopping; and method of payment (e.g., by cash, cheque or credit card). The authors argue that product category and customer characteristics increase consumers' exposure to in-store stimuli, and consequently their unplanned purchasing; however, some customer activities can serve as strategies to limit the possibility of unplanned purchasing by limiting consumers' exposure to in-store stimuli. It was revealed that all the category characteristics impact on consumers' unplanned purchasing, with in-store displays having the strongest effect. In addition, all customer characteristics were found to be similarly influential on consumers' unplanned purchasing. Among customer activities, the number of aisles shopped was the most influential factor on unplanned purchasing, followed by the use of credit and debit cards to pay for items. Finally, the authors suggest that in order for consumers to limit their amount of unplanned purchasing, they can make more frequent trips, buy fewer items on each trip, use a shopping list, limit their browsing time, limit the amount of time they spend in each store, and pay for items by cash rather than by credit card.

In another study, Bell, Corsten and Knox (2011) demonstrated that not only exposure to in-store stimuli, but also other out-of-store factors established prior to entering the store can lead to unplanned purchasing. Specifically, the authors showed that consumers' overall shopping trip goals (ranging from very precise and concrete goals, such as taking advantage of a specific promotion, to relatively abstract goals, such as filling up with daily essentials or weekly needs), their store specific goals (low price, wide assortment, location convenience, good service, the ability to do one-stop shopping, the convenience of visiting other stores, and crowding), and also out-of-store marketing variables (e.g., mail fliers, word-of-mouth,

advertising) affect the consumers' unplanned buying. Further, the authors illustrated that consumers' unplanned purchasing increases monotonically when the consumers have more abstract shopping goals before entering the store. Also, they found that choosing stores for low pricing and location convenience leads to more unplanned buying, whereas choosing the store as part of a multi-store shopping trip leads to less unplanned buying.

Promotions are usually used to encourage consumers to make unplanned purchases (Inman, McAlister, & Hoyer, 1990). In addition, different types of shopping goals may lead to different types of purchasing behaviour and consequently varying responses to price promotions (Bell *et al.*, 2011; Kollat & Willet, 1967; Walters & Jamil, 2003). Therefore, in order to design and implement appropriate promotional strategies, it is necessary for retailers to understand the relationship between the type of consumers' shopping motivations and their response to promotional offers (Kahn & Schmittlien, 1989; Walters & Jamil, 2003).

3.3 Hedonic versus Utilitarian Products

Generally, consumers purchase products on the basis of the expectation that the benefits provided by the products fulfil specific consumption goals. Therefore, a major part of consumers' shopping goals are accomplished by the benefits offered by products (Chitturi, Raghunathan, & Mahajan, 2008). In this regard, in order to gain a deeper understanding of consumers' attitudes towards marketing offers, marketing researchers have investigated the components of consumers' attitudes towards products and brands from a multi-dimensional perspective (Batra & Ahtola, 1990; Voss *et al.*, 2003). This multi-dimensional approach integrates the experiential aspects of product consumption with more traditional and functional aspects (Gill, 2008; Voss *et al.*, 2003). Specifically, it has been established that consumers tend to have both utilitarian and hedonic considerations when evaluating products and their benefits (Batra & Ahtola, 1990; Voss *et al.*, 2003). In this sense, hedonic goals (and value) are related to experiential aspects of consuming a product, namely, fun, leisure, and diversion derived from using the product, whereas utilitarian goals (and value) involve more functional and practical benefits acquired from the use of a product (Batra & Ahtola, 1990; Gill, 2008; Voss *et al.*, 2003). In other words, utilitarian benefits refer to functional, instrumental, and practical attributes of a product; hedonic benefits, on the other hand, refer to aesthetic, experiential, and enjoyment-related attributes (Chernev, 2004a; Chitturi, Raghunathan, & Mahajan, 2007).

3.4 Temporal Needs Congruency

In order to define the concept of temporal needs congruency in the context of the present thesis, the notions of "desires" and "needs congruency" provide appropriate starting points. The concept of desires, also referred to as needs or wants, has been defined as "the levels of attributes and benefits that a consumer believes will lead to or are associated with higher-level value". (Spreng, MacKenzie, & Olshavsky, 1996, p. 17). The concept of needs congruency has been introduced in the domain of research on satisfaction and service quality (Spreng & Mackoy, 1996; Wirtz & Mattila, 2001) and is conceptualised by Wirtz and Mattila (2001, p. 185) as "a subjective evaluation of the discrepancy between the product or service performance and needs".

Typically, when consumers recognize their need for a particular product, they plan to purchase the product during a forthcoming shopping trip. That is, consumers initiate a shopping trip with the intention of purchasing some specific items (Bell *et al.*, 2011; Inman *et al.*, 2009). This justifies the allocation of the necessary time, effort, and money to go to the store to obtain the goods or services that are needed (Westbrook & Black, 1985). However, as illustrated by Inman, Winer and Ferraro (2009), in-store stimuli can change consumers' pre-planned buying intentions, leading them to purchase unintended items. For another group of consumers, in-store stimuli such as promotions serve as cues that remind the consumers of their need for the promoted product (Chandon, Wansink, & Laurent, 2000; Inman *et al.*, 2009). For both groups of consumers, in-store marketing cues activate needs that had not been recognized or had been forgotten prior to the shopping trip, leading to unplanned purchasing (Inman *et al.*, 2009).

As suggested by Kleijnen and colleagues (2007), the compatibility of a mobile service with consumers' needs is a key factor affecting consumers' perceptions of value and intentions to use mobile services. In a similar vein, previous research has shown that a promotion enhances consumers' perception of the value in their shopping experiences if it is consistent with their shopping orientations (Mathwick *et al.*, 2002), and that satisfaction with a shopping experience is enhanced when consumers acquire what they have planned to buy (Ganesh *et al.*, 2007). In a mobile coupon service context, it is conceivable that when consumers request a mobile coupon, they expect it to be congruent with what they have intended to purchase on

their current shopping trip. Hence, in order for a personalised mobile coupon to be perceived as appealing and for it to be redeemed, it should be congruent with the consumer's needs. However, due to the very nature of using recommendation agents, mobile coupons do not always offer what consumers need on their current shopping trip (Miceli *et al.*, 2007; Montgomery & Smith, 2009). Rather, the offer may be what consumers will need at some time in the future, reminded by the mobile coupon. In the present research, this concept is referred to as 'temporal needs congruency' and is defined as: the congruity or incongruity of an offer with consumers' either current or future needs recognized during their current shopping trip. For example, a consumer may not need to purchase a product category (either planned or unplanned) if he or she has purchased it recently, indicating a future needs congruency; on the other hand, a consumer is more likely to purchase a product category (either planned or unplanned and reminded by a mobile coupon) if she or he has bought it some time ago, indicating a current needs congruency.

In a mobile coupon service context, when consumers request a mobile coupon offer, they may receive messages promoting either a hedonic product (such as a movie DVD or a movie ticket) or a utilitarian product (such as a detergent or a shampoo). Previous research suggests that products that are rated more highly on the hedonic dimension than on the utilitarian dimension are better able to charge a price premium (Dhar & Wertenbroch, 2000) or engage in sales promotions (Chandon *et al.*, 2000). Inman, Winer and Ferraro (2009) revealed a positive association between the hedonicity of product categories and consumers' susceptibility to in-store marketing cues; that is, consumers' unplanned purchasing includes more hedonic products (e.g., movie theatre, ice cream) than utilitarian products (e.g., car service, cleaning supplies). Bell, Corsten and Knox (2011) showed that even though marketing stimuli can trigger unplanned buying, consumers' purchasing behaviour is also dependent upon the abstractness or concreteness of consumers' overall shopping trip goal (Lee & Ariely, 2006). Specifically, the authors illustrated that consumers with more abstract shopping goals (i.e., those who go on weekly or less frequent shopping trips) are more likely to purchase unplanned product categories, as opposed to those with a more concrete overall shopping goal (i.e., those who go on shopping trips for special offers or products for immediate consumption).

As remarked by Bell and colleagues (2011, p. 32), "studies that focus on pre-shopping factors from which the motivation and context for a shopping trip emerge are rare". In a mobile coupon service context, it is conceivable that when consumers visit a shopping centre, they may have shopping motivations that are either predominantly hedonic or utilitarian. However, it seems that the streams of research considered above have overlooked the role of consumers' motivational states and their interaction with the types of products offered and the congruency of the offers with temporal needs. Moreover, the way Bell and colleagues (2011) categorised shoppers bears more resemblance to utilitarian shopping motivations than to hedonic shopping motivations. Thus, in the present thesis, consumers' shopping goals will be examined from a broader perspective, including hedonic versus utilitarian shopping motivations, compared to the one offered by Bell and colleagues (2011). Further, it is proposed that consumers with different shopping motivations respond differently to mobile coupons depending on not only the type of product category they are offered, but also the congruency between the offer and the consumers' temporal needs. As is explained in the following sections, the reason for these differences is that hedonic and utilitarian shoppers have different types of regulatory focus, causing them to perceive different levels of regulatory fit in the mobile coupon cues that are compatible or incompatible with their focal shopping motivations.

3.5 Regulatory Focus Theory

It has been demonstrated that goals can serve as an effective self-regulation mechanism (Shah, Friedman, & Kruglanski, 2002).The success of marketing actions such as promotions depends on the type of goals consumers are pursuing when they are exposed to the promotions and on the ways in which these promotions can influence the consumers' goals (Lee & Ariely, 2006). In this section, regulatory focus and construal level theories as two goal-related theories used to develop the research conceptual framework are described.

Regulatory focus theory identifies two major and different motivational approaches that people adopt when pursuing their goals: promotion focus and prevention focus (Mogilner, Aaker, & Pennington, 2008). Promotion focus involves the pursuit of maximal goals, whereas prevention focus concerns the pursuit of minimal goals (Freitas, Liberman, Salovey, & Higgins, 2002; Idson *et al.*, 2000). A maximal goal represents the most optimal outcome that a person could wish to attain, whereas a minimal goal refers to the basic necessities or the

least level of goal achievement that a person is content to accept (Pennington & Roese, 2003). While prevention focus is associated with people's needs to maintain security and fulfil duties, obligations and responsibilities, promotion focus is associated with individual's needs for growth and achieving hopes, aspirations and desires (Higgins, 1997, 1998).

Both promotion and prevention focuses are self-regulatory strategies for achieving a desired end-state; however, the end-state of each regulatory focus is different (Chernev, 2004a). Promotion-focused goals are associated with maximising the presence of positive outcomes or minimising their absence; prevention-focused goals, on the other hand, are concerned with minimising the presence of negative outcomes or maximising their absence (Brockner, Paruchuri, Idson, & Higgins, 2002; Freitas & Higgins, 2002). While people with a promotion-focused orientation are concerned with gains and non-gains, those with a prevention-focused orientation are concerned with losses and non-losses (Higgins, 1997, 1998). Therefore, promotion-focused people have a tendency to approach their desired endpoints, leading them to focus on achievements and maximising their gains. In contrast, prevention-focused individuals have a tendency to avoid mismatches with their desired end-points, causing them to focus on safety and minimise their losses (Brockner & Higgins, 2001; Freitas & Higgins, 2002).

Research has revealed that people with a prevention focus tend to adopt a vigilance strategy; that is, in order to reduce the possibility of making mistakes and incurring losses, they are inclined to give up the pursuit of alternative options (Herzenstein, Posavac, & Barkus, 2007; Levine *et al.*, 2000). Conversely, those with a promotion focus tend to adopt an eagerness strategy; that is, in order to increase their chances of achieving more gains, they have a propensity to consider more alternatives and seize as many opportunities as possible (Crowe & Higgins, 1997; Levine *et al.*, 2000; Pham & Avnet, 2004). These two distinctive orientations cause people to behave differently in terms of paying attention to or relying on the information that helps them achieve their goals (Aaker & Lee, 2006). For example, research has shown that compared to those with a promotion focus, when people have prevention-focused orientations, they tend to investigate information less extensively, narrow the range of alternatives they take into consideration, and be more selective in information processing (Ariely & Zakay, 2001; Liberman, Molden, Idson, & Higgins, 2001).

3.6 Regulatory Fit

Regulatory fit refers to an intensified motivational tendency that occurs when there is compatibility between the strategic manners that people adopt to accomplish their goals and their regulatory focus orientations (Higgins, 2006; Lee & Higgins, 2009). According to regulatory fit theory, engaging in decisions or choices using strategies that sustain peoples' regulatory orientations causes the people to "feel right" about what they are doing; this feeling right experience then transfers to subsequent evaluations (Avnet & Higgins, 2006). In other words, when the means of pursuing a goal maintains individuals' goal orientations, a psychological effect termed "it-just-feels-right" is experienced, which consequently intensifies the magnitude of the decision makers' evaluations of their goals or their decision outcomes, regardless of whether their evaluations have been positive or negative. That is, positive evaluations become more positive, and negative evaluations become more negative (Aaker & Lee, 2006).

Regulatory fit literature suggests two different ways in which people experience regulatory fit: process-based regulatory fit, and outcome-based regulatory fit (Avnet & Higgins, 2006). First, people experience regulatory fit when they engage in decision-making processes that are compatible with their regulatory orientation. For example, research has demonstrated that promotion-focused individuals experience more regulatory fit regarding a chosen product offer when they assess the offer on the basis of feelings rather than on reasons; whereas, those with a prevention focus experience regulatory fit when their evaluations are based on reasons rather than on feelings (Pham & Avnet, 2004). As another example, it has been shown that promotion-focused people experience regulatory fit when they adopt an eagerness strategy to achieve their goals; whereas, prevention-focused individuals experience regulatory fit when they adopt a vigilance strategy (Higgins, 2000; Higgins *et al.*, 2003).

Second, regulatory fit can be experienced when people with certain regulatory orientations think about gaining or losing the outcomes they are concerned about (Avnet & Higgins, 2006). For example, research has demonstrated that promotion-focused people experience regulatory fit when they think of what they would gain if they choose an alternative outcome; this is because promotion-focused people are sensitive to maximising gains or positive outcomes. In contrast, prevention-focused people experience regulatory fit when they think of what they would lose if they do not choose an alternative outcome; this is because prevention-

focused individuals are sensitive to minimising losses and negative outcomes (Aaker & Lee, 2006; Freitas & Higgins, 2002; Lee & Aaker, 2004). Another study has revealed that promotion-focused individuals experience regulatory fit when they think of achieving their hopes and aspirations; whereas, prevention-focused people experience regulatory fit when they think of fulfilling their duties and obligations (Freitas, Liberman, & Higgins, 2002).

Research has revealed that the experience of regulatory fit enhances people's evaluations of the objects, including their positive attitudes toward a product offer (Lee & Aaker, 2004; Wan, Hong, & Sternthal, 2009; Wang & Lee, 2006), their willingness to pay for the offered product (Avnet & Higgins, 2003, 2006; Higgins *et al.*, 2003), their purchase intentions (Labroo & Lee, 2006), as well as their actual behaviours (White, Macdonnell, & Dahl, 2011). In particular, an overview of the literature on the effects of regulatory fit suggests that the higher evaluations of the target objects occur through the mediating effects of feeling right (Higgins, 2006), strength of engagement in the goals being pursued (Hong & Lee, 2008), heightened motivation to pursue the goals (Idson, Liberman, & Higgins, 2004), as well as processing fluency of messages (Lee & Aaker, 2004). Also, the experience of regulatory fit is shown to enhance not only the amount of anticipated enjoyment provided by a task, but also the degree of perceived enjoyment resulting from performing the task (Freitas & Higgins, 2002). Indeed, feeling right, increased engagement, heightened motivation, and processing fluency have all been measured as a way to operationalize the experience of regulatory fit.

3.7 Construal Level Theory

Construal level theory holds that, depending on the psychological distance of events, objects, or goals, people have different levels of concreteness or abstraction at which they represent and process these events, goals, or objects in their cognitive hierarchy (Trope & Liberman, 2003). An event is psychologically distant when it is detached from a person's direct experience, such as events that occur in the future rather than now (temporal distance), in farther rather than closer locations (spatial distance), to others rather than to oneself (social distance), or an event that is more unlikely than likely to occur (hypothetical distance) (Trope & Liberman, 2010).

As people move away from direct experience of an object, the information about that object becomes less accessible, causing people to rely on schematic and prototypical information. As

a consequence, psychologically distant events are represented at a high level of construal, namely by their essential, abstract, and global features. In contrast, psychologically close events are represented at a low level of construal, namely by their peripheral, concrete, and local features (Fujita, Henderson, Eng, Trope, & Liberman, 2006). High-level construals involve decontextualised, simple and superordinate mental representations of events; whereas, low-level construals involve contextualised, specific and subordinate representations of objects (Khan, Zhu, & Kalra, 2011; Trope & Liberman, 2010). At a high construal level, individuals tend to focus on the desirability of their activities, namely, why specific things are done. At a low construal level people are concerned with the feasibility of their activities; that is, they tend to focus on how particular things are done (Liberman & Trope, 1998; Liberman *et al.*, 2007; Trope & Liberman, 2003).

When shifting from a concrete representation of an object to a more abstract representation, essential features are retained and secondary features are eliminated. For example, by moving from representing an object as a cellular phone to representing it as a communication device, people tend to omit information about size; similarly, by moving from representing an activity as playing ball to representing it as having fun, the ball is omitted by people (Trope & Liberman, 2010, p. 441). Therefore, the level at which a stimulus or a goal is construed (as a result of changing psychological distance) impacts on people's information processing, judgment, and decision-making (Khan *et al.*, 2011). For example, linking this theory to consumers' shopping tasks, Lee and Ariely (2006) identified a two-stage model for abstractness or concreteness of consumers' shopping goals. According to this model, at the initial stages of their shopping trip, consumers construe their shopping goals and product information at an abstract level; this causes the consumers to be more susceptible to marketing cues such as conditional promotions. As consumers approach the later stages of their shopping trip, they have more concrete goals, causing them to be less influenced by conditional promotions.

3.8 Conclusion

As mentioned earlier, in order to test the overall conceptual framework (Figure 1.1), it was split into two conceptual models, namely, conceptual model 1 and conceptual model 2. This chapter presented an overview of the literature related to research questions, the components of conceptual model 1 (Figure 3.1), as well as the theories used to develop research

hypotheses. Specifically, this chapter reviewed the literature on shopper typologies (hedonic versus utilitarian shopping motivations and shopping planned versus unplanned purchasing), type of product (hedonic versus utilitarian), temporal needs congruency (current versus future needs) and the goal-related theories of regulatory focus regulatory and construal level. The next chapter provides an overview of the literature on the main variable of focus in conceptual model 2 (Figure 3.2), namely, access convenience.

Chapter 4 : Access Convenience

4.1 Introduction

As noted previously, the overall conceptual framework was tested in two stages. In the first stage, the variable access convenience was removed from the framework. In the second stage, the variable temporal needs congruency was replaced with the variable access convenience. This chapter reviews the literature related to the variable access convenience. In doing so, building on the notion of convenience as a key antecedent to successful service delivery, the concept of access convenience and its importance especially in a mobile coupon service context will be elaborated on.

4.2 Convenience

The term 'convenience' was initially used in marketing to imply the time and effort required for consumers to purchase a product or use a service (Brown, 1990). Research has observed that organisations can enhance consumers' perceptions of value by reducing the price of their products or services, improving the quality of their products or services, or cutting down the non-monetary costs, such as the time and effort needed to acquire and consume products or services (Zeithaml & Bitner, 2000). This means that firms can create higher levels of value for their customers by making the acquisition and use of their products or services more convenient (Colwell, Aung, Kanetkat, & Holden, 2008). Technological advancements along with rapid transitions in consumers' socioeconomic status have driven consumers to demand more convenience in their transactions with companies (Seiders, Berry, & Gresham, 2000). In this regard, research provides evidence that key marketing outcomes, such as customer evaluation and purchase behaviour, are affected by consumers' perceptions of convenience in products or services (Rust, Lemon, & Zeithaml, 2004; Seiders, Voss, Grewal, & Godfrey, 2005).

4.3 Service Convenience

Service convenience is defined as "consumers' perceptions of required time and effort to buying or using a service" (Berry, Seiders, & Grewal, 2002, p. 1). Therefore, service convenience can be viewed as an additional way of increasing consumer value by decreasing the amount of time and effort the consumers need to spend on a service (Colwell *et al.*, 2008).

Access Convenience

Service convenience has been conceptualised in terms of the specific stages that consumers are required to experience during a service process in order to purchase or make use of the service (Berry *et al.*, 2002; Seiders, Voss, Godfrey, & Grewal, 2007). In order to provide some insight into how the notion of access convenience can be applied in the context of mobile coupon services, a model of service convenience proposed by Berry, Seiders, and Grewal (2002) is drawn upon. According to this model, as presented in Figure 4.1, the perception of service convenience is affected by three factors: service characteristics, firm-related factors, and individual consumer differences. Firstly, convenience perceptions can vary according to the extent to which a service is consequential, inseparable, supply constrained, labour intensive, or hedonic. Secondly, the firm-related factors that influence the perceived service convenience include the physical service environment, information provided for consumers, company's brand, and service system design. Thirdly, convenience perceptions may also be influenced by individual differences such as consumers' time orientations, their time pressure, empathy toward the service provider, and their past experience with the service firm.

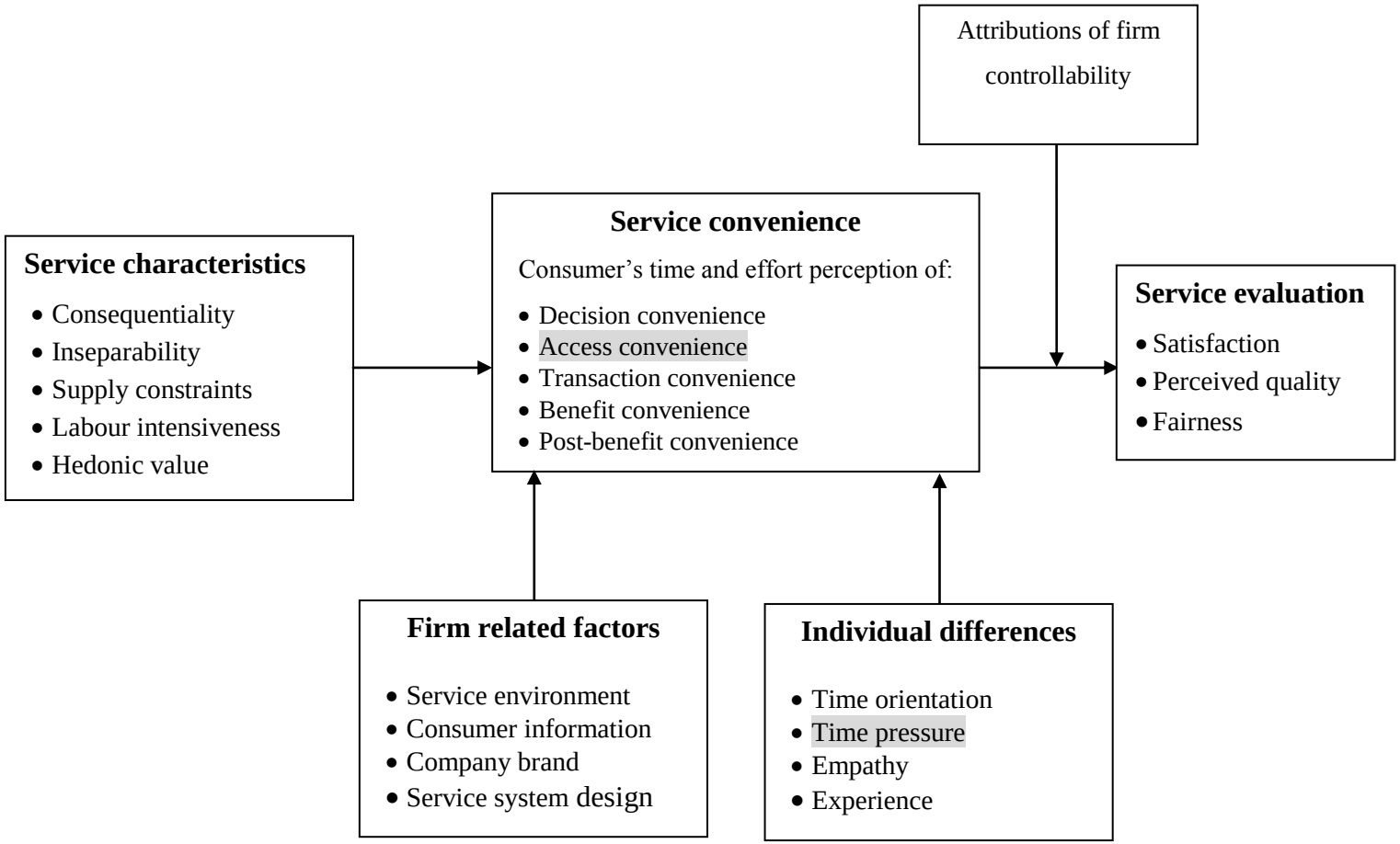

Figure 4.1: A model of service convenience (Berry *et al.*, 2002, p. 2)

Service convenience, the focal dependent variable in Berry and colleagues' model, is conceptualized as consumers' perceptions of the time and effort required when buying or using a service. In this sense, this perceived time and effort expenditure relates to five major types of convenience, which reflect the stages that a consumer should experience in order to receive a service. Specifically, decision convenience has to do with consumers' perceived time and effort expenditures to make a decision about which service provider and what product to choose; this decision is made once the consumers have recognised their need for a product or service. Access convenience refers to consumers' perceived time and effort expenditures to initiate a service delivery; for example, after choosing a certain supplier, consumers can initiate the service consumption through physical interaction (i.e., face-to-face contact) or technological interaction (e.g., through the Internet) with the service provider. Transaction convenience is the consumers' perceived time and effort to make a service consumption happen, that is, the time and energy invested by the consumers to purchase or possess a service. Benefit convenience is defined as consumers' perceived time and effort expenditures in relation to the service's core benefits; this type of convenience is realised after accessing and purchasing the service they have chosen. Finally, post-benefit convenience is consumers' perceived time and effort expenditures when deciding to reinitiate a service (Berry *et al.*, 2002); post-benefit convenience involves post-service needs such as lodging complaints about service failures, requesting maintenance or upgrades, or general service support (Zeithaml & Bitner, 2000). Retailers who seek to provide convenient and efficient shopping experiences for their customers need to invest in all types of convenience (Seiders *et al.*, 2000). The perception of service convenience affects consumers' overall evaluations of the service, namely, their satisfaction with the delivered service and their perceptions of service quality (Berry *et al.*, 2002).

The service convenience model and the five types of convenience it depicts resemble the shopping convenience model proposed by Seiders, Berry, and Gresham (2000, p. 80). In their framework, the authors consider four ways to offer shopping convenience to customers including: 1) Access convenience (referring to speed and ease with which consumers can reach a retailer); 2) Search convenience (denoting to the speed and ease with which consumers can identify and select the product they wish to buy); 3) Possession convenience (implying the speed and ease with which consumers can obtain desired products); and finally, 4) Transaction convenience (signifying the speed and ease with which consumers can effect

or amend transactions). As can be observed, consumers' time and effort expenditures throughout different stages of a service experience are the two underlying dimensions characterising the five components of service convenience (Seiders *et al.*, 2007).

Previous research identifies three different types of consumer effort: physical, cognitive, and emotional (Mohr & Bitner, 1995). These types of effort are also manifested in the five sequential dimensions of service convenience (Figure 4.1). In particular, while the purpose of providing consumers with decision convenience is to minimise their cognitive effort to evaluate and choose a suitable service provider, the aim of access convenience is to reduce customers' physical effort to access the service provider and initiate the service delivery. However, transaction convenience can serve to minimise consumers' emotional effort required to perform a service transaction. Similar to decision convenience, benefit convenience aims to minimise consumers' cognitive effort to consume the core service. Furthermore, post-benefit convenience can reduce both physical and emotional efforts involved in continuing or refining a service process (Seiders *et al.*, 2007).

Berry and colleagues (2002) remark that since service convenience is a multidimensional concept, consumers' perceptions of convenience, in relation to time and effort, should be assessed within the specific service contexts and service delivery stages that consumers need to undergo to acquire and make use of the service. Therefore, in a mobile coupon service context, the location of the retailer from which consumers receive a mobile coupon offer is a factor that can influence the consumers' perceptions of not only the quality of the mobile service, but also their attitude towards the offer itself. In this regard, the existing literature highlights the interdependence of time and location in consumers' decision making process (Kang, Herr, & Page, 2003). Hence, time and location can determine consumers' perceptions of the effort required to acquire an advertised product or service (Cronin Jr., Brady, & Hult, 2000). In the service convenience model proposed by Berry and colleagues, among the five variables determining service convenience, "access convenience", and among the individual-difference determinants of service convenience, "time pressure" is more relevant to the focus of this thesis. The rationale for this is that in a mobile couponing service context, access convenience is dependent upon consumers' location at which a personalised mobile coupon is delivered, and time pressure is related to hedonic and utilitarian shoppers' perceptions of the

time available to fulfil their shopping tasks. These concepts will be expanded on in the following sections.

4.4 Access Convenience

Accessibility has been a focal concept in the field of physical planning over the last five decades (Batty, 2009). In particular, this term originates from location theories used in regional planning, and has gained more importance with the development of transport planning methods used in the design of transport networks and analysis of trip distribution patterns (Mitchell & Rapkin, 1959). Typically, accessibility is used for measuring the relative proximity or closeness of one person or place to all other places or persons (Batty, 2009). Specifically, accessibility is a measure of the spatial distribution of activities around a certain location, adjusted for the ability and desire of individuals or organisations to overcome this spatial separation (Hansen, 1959). In defining accessibility, some measure of an opportunity at a location is associated with the costs of attaining that opportunity (Batty, 2009). That is, the accessibility of a location in relation to some fixed location varies directly as a function of the amount of opportunity at some other location, and varies inversely as a function of the distance or time taken to reach the opportunities between the two locations. Nonetheless, this is a measure of accessibility from one location to another; in the more comprehensive forms, a composite index of total accessibility from one place to all other places is defined, which yields a measure of how easy or difficult it is to accomplish all of these opportunities from the place in question (Batty, 2009).

Linking the notion of accessibility to the domain of service convenience, access convenience refers to consumers' perceptions of the time and effort that they need to spend to reach a service provider to initiate a service process (Berry *et al.*, 2002; Seiders *et al.*, 2000). In this sense, the access convenience in purchasing goods also falls in the area of service convenience (Berry *et al.*, 2002). When consumers intend to receive a service, they should allocate some time and effort to request it, and then, if necessary, be present at the service site to receive it. This is the case for most services because of the inseparable nature of services. Therefore, the service provider's physical location play a prominent role in providing access convenience in the service delivery process (Seiders *et al.*, 2000). This highlights the importance of access convenience since many services require consumers' participation, in that consumers need to be present at the right time and right place. Indeed, nothing can

happen unless consumers have a convenient access to their desired service provider (Berry *et al.*, 2002). As such, a location is regarded by consumers as convenient when the consumers' travel costs to that location are minimised (Bell, Ho, & Tang, 1998). Hence, the speed and ease with which consumers can access service a delivery location or a retailer has a strong effect on their choice of the service or the retailer (Bell *et al.*, 1998; Seiders *et al.*, 2000).

Furthermore, convenient access has been recognised as a precondition for all other types of consumers' shopping convenience (Richtel, 1998; Seiders *et al.*, 2000). For example, research has provided evidence that, as a marketplace characteristic, the access convenience of a retailer's location interacts with customer satisfaction to affect customers' repurchase visits and repurchase spending. Specifically, it has been found that a higher level of convenience directly increases customers' repurchase visits to a retailer but it affects customers' repurchase spending only when customers' satisfaction with the retailer is high (Seiders *et al.*, 2007; Seiders *et al.*, 2005). As a result, the role of access convenience may be limited to a boundary condition, such that satisfied customers make more repurchase visits when they believe they can reach a service provider conveniently (Seiders *et al.*, 2007). In parallel to this, in a meta-analysis of factors affecting consumers' retail patronage behaviour, Pan and Zinkhan (2006) found convenience of location as one of the key antecedents to consumers' store choice, followed by convenient opening hours and convenient parking facilities. Research has also shown that the type of service can determine the degree of importance customers place on locational convenience. Specifically, Jones, Mothersbaugh and Beatty (2003) found that when customers' satisfaction is low, the convenience of a location is influential in customers' repurchase intentions for more standardised, less personalised services such as banks; however, regardless of customers' satisfaction, location convenience is has less effect on repurchase intentions in less standardised, more personalised services such as hairstylists.

The positive effect of convenience on key marketing outcomes has also been proven in different service contexts. For instance, in the domain of online shopping, research has found that the shopping convenience, in terms of time and place, provided by the Internet has a substantial effect on consumers' attitude towards Internet shopping (Childers *et al.*, 2001). It was shown that this effect is mediated by consumers' perceptions of usefulness, ease of use, and enjoyment of shopping via the Internet. Furthermore, the effect of convenience on

usefulness was found to be stronger when shoppers have task-oriented motivations, whereas the effect of convenience on ease of use and enjoyment was stronger when shoppers have recreational motivations. In a similar sense, the results of a study conducted by Collier and Sherrell (2010) showed that customers' perceptions of convenience influence their perceived value in the self-service technology, their satisfaction with the self-service technology, as well as their intentions to use the self-service technology in the future. Moreover, the authors found that these effects occur through the mediating roles of speed of transaction (as a utilitarian motivation), exploration (as a hedonic motivation), and the customers' trust in the service provider.

4.5 Access Convenience in Mobile Coupon Service Context

Since the emergence of modern retailing in the early twentieth century, marketers have utilised the knowledge of spatial and geographic information to decide about their store locations and distribution channels (Christensen & Tedlow, 2000). Indeed, customers' location information has been used by marketers since the early development stages of direct marketing (Petrison, Blattberg, & Wang, 1997). In response to consumers' increasing demand for more convenience (Dabholkar, Bobbitt, & Lee, 2003), organisations have made substantial investments to enhance the convenience dimensions of their products and services (Colwell *et al.*, 2008). To this end, service organisations have started to deploy advanced technological methods such as Internet commerce, interactive websites, and mobile services (Colwell *et al.*, 2008). Although consumers' location information may be less relevant in some marketing channels (e.g., the Internet), it holds a crucial role in location-based mobile services, including mobile couponing (Watson *et al.*, 2002). In general, a timely and efficient service delivery results in the consumers' perception of value in the service process (Childers et al. 2001).

Similar to the traditional retailing context, where provisioning time and effort convenience for consumers facilitates their service acquisition and consumption, mobility, as a differentiating feature of mobile services, enables consumers to obtain information and conduct transactions in a convenient way, namely, at any time and place (Balasubramanian *et al.*, 2002). Hence, it has been highlighted that, compared with other channels, a pivotal premise of mobile channels is that they enable consumers to achieve their consumption goals in a more efficient way than through other channels (Shankar, O'Droscoll, & Reibstein, 2003). In line with this, Kleijnen, Ruyter and Wetzels (2007) assessed the value propositions of mobile services and found time

convenience to be the most prominent factor affecting consumers' perceived value and their behavioural intentions to use mobile channels.

As discussed previously, one of the key enabling factors for providing personalised mobile services is their context-awareness (Liao, He, & Tang, 2004; Tarasewich, 2003). In particular, context-aware information encompasses such aspects as customers' location (Varshney, 2003), the time they receive services (Venkatesh, Ramesh, & Massey, 2003), and the tasks in which they are involved (Dey, Abowd, & Salber, 2001). This enables marketers to link to their context the information about customers' profiles such as their demographics, psychographics, and purchase history, taking into account key factors such as the customers' time, location, and situational states on a real-time basis (Unni & Harmon, 2007). Location-based advertising is deemed as one of the most promising opportunities of mobile services since it influences consumers' evaluations of the informational utility of the offers (Drossos *et al.*, 2007). Specifically, location-based services enable merchants to personalise their marketing and promotional messages for products and services that are not only preferred by consumers, but also are relevant to their locations (Kalakota & Robinson, 2002; Leppaniemi & Karjaluoto, 2005; Unni & Harmon, 2007). Some empirical research has identified consumers' locations as the most important factor affecting the effectiveness of personalised mobile offers (Drossos *et al.*, 2007; Gopal & Tripathi, 2006). However, the current mobile service platforms are commonly used for regular advertising and brand building purposes, and rarely take into account the spatial aspects of consumers' contexts (Gopal & Tripathi, 2006).

As regards coupons, using a coupon requires some redemption efforts on the part of consumers. In particular, redemption effort refers to the specific investments that need to be made by consumers to obtain the full use of the coupons (Kang, Hahn, Fortin, Hyun, & Eom, 2006). For example, consumers need to clip or print the coupons and then access the retailer to redeem the coupon (Inman *et al.*, 2009). In a mobile coupon service setting, while the need for collecting the coupons or clipping them, or printing the Internet coupons is eliminated, consumers still need to make time and effort to go to the retailer and redeem the coupon (Dickinger & Kleijnen, 2008). A higher perception of redemption effort leads to a lower level of attitude towards the coupon and its benefits (Ashworth, Darke, & Schaller, 2005; Leone & Srinivasan, 1996; Ramaswany & Srinavasan, 1998). In this sense, Dickinger and Kleijnen (2008) found that redemption effort is the most influential factor in consumers' responses to

mobile coupons, positively affecting consumers' attitude and intentions towards mobile coupons. However, the way the authors conceptualised redemption effort having to do with the cognitive effort and the time that consumers need to devote to learning about the whole redemption process for a mobile coupon. In the present research, two aspects of 'distance' and 'time' are drawn upon to conceptualise consumers' perceptions of access convenience as a major determinant of redemption effort in a mobile service context. Specifically, consumers' perceptions of distance and the time they need to devote in order to access the retailer and redeem a mobile coupon will be used operationalize the variable access convenience.

In the present thesis, it is proposed that not only do consumers' perceptions of access convenience influence their responses to mobile coupon offers, but also these perceptions interact with consumers' shopping motivations and the type of product the consumers are offered. Specifically, it is proposed that hedonic and utilitarian shoppers have different reactions to mobile coupon offers from retailers with different levels of access convenience, leading them to have different perceptions of regulatory fit in and intention to redeem the offers. In order to predict the effects of interactions among access convenience, shopping motivation and type of product on consumers' responses to mobile coupon offers, the literature on construal level theory and psychological distance, as well as the research on the association between construal level and regulatory focus will be built on.

4.6 Time Pressure

Research has shown that consumers' perceptions of convenience can be affected by their individual characteristics such as demographics (gender or income) (Bergadaa, 1990), previous experience with the service provider (Kumar, Kalwani, & Dada, 1997; Leclerc, Schmitt, & Laurette, 1995) as well as their perceived time pressure (Katz, Larson, & Larson, 1991; Taylor, 1994). Time pressure is considered as a situational variable that occurs when people perceive their available time is not sufficient for completion of their task (Landy, Rastegary, Thayer, & Colvin, 1991). When consumers are in situations where they must complete a shopping task quickly within a limited available time, for example, buying a birthday gift on the way to a birthday party, their decision-making is different from non-time pressured conditions (Berry *et al.*, 2002). In this regard, research has revealed that time pressure influences consumers' time allocation strategies (Durrande-Moreau & Usunier, 1999). For instance, it has found that when consumers are under time pressure, they are more

likely to purchase bundled products; also, it has been shown that time pressure can cause consumers to purchase one component of their shopping needs from one store and then return to the previously visited stores to buy other components (Oppewal & Holyoake, 2004). Research has also shown that in circumstances where consumers are required to spend some time in waiting, time pressure may provoke produce negative affective reactions such as impatience and lead to stronger perceptions of inconvenience (Hui & Tse, 1996).

In line with economic theories, marketing literature assumes a positive association between consumers' perceptions of time pressure and their heightened preferences for convenient products and services (Berry *et al.*, 2002). Therefore, retailers can increase the value of their products or services by saving time for time-pressured customers (Colwell *et al.*, 2008). Customers who are under time pressure attach more importance to convenient shopping trips, from pre-purchase decisions to post-purchase activities. Therefore, it is necessary for retailers to consider convenience from a customer perspective (Seiders *et al.*, 2000). Speed and time efficiency are often positioned as the main benefits that consumers can derive from the use of technology in retailing (Kleijnen *et al.*, 2007). Adopting this perspective, in the present thesis the notion of time pressure is built on to argue about how utilitarian and hedonic shoppers respond differently to mobile coupon offers sent by retailers whose location is close to or far from the consumers' current location (i.e., are convenience or inconvenient to access). Specifically, it is reasoned that, compared with hedonic shoppers, utilitarian shoppers favour easier and quicker shopping trips since utilitarian shoppers are under more time pressure.

4.7 Conclusion

In this chapter, an overview of the literature relating to the variable access convenience was provided. First, the notion of convenience and its importance in consumers' evaluations of a firm's performance was explained. Then, drawing on the notion of service convenience, access convenience was identified as a key component of a mobile coupon service delivery process. It was proposed that consumers' perceptions of access convenience can influence their responses to mobile coupon offers depending on the consumers' shopping motivations and the type of product they are offered. Besides, consumers' time pressure was linked to consumers' shopping motivations to predict their responses to mobile coupon offers with different levels of access convenience. In the next chapter, research hypotheses related to conceptual model 1 and conceptual model 2 will be proposed.

Chapter 5 : Research Model and Hypotheses

5.1 Introduction

As noted previously, for the purpose of testing the overall conceptual framework, it was split into two separate conceptual models, namely, conceptual model 1 and conceptual model 2. In Chapters 2, 3, and 4, an overview of the literature pertaining to the research questions and the variables in these two conceptual models was presented. The main purpose of this overview was to provide the relevant theoretical and empirical background for developing the research hypotheses. In this chapter, the research hypotheses pertinent to the different relationships presented in the two conceptual models are developed. First, recall, the research questions that drive the current thesis:

1) Do different types of shopping motivation induce different types of regulatory focus?

2) Do certain marketing cues associated with mobile coupons induce certain types of regulatory focuses? Specifically, does the type of product offered and the congruency of the offered product with consumers' temporal needs, prime certain types of regulatory focus?

3) Does the spatial distance of a retailer wherein a mobile coupon is to be redeemed induce a certain type of construal level?

4) Do consumers with different shopping motivations respond to compatible and incompatible personalised mobile coupons in different ways? Specifically, how do consumers with hedonic or utilitarian shopping motivations respond to mobile coupons offering:

    4.1) hedonic or utilitarian products?

    4.2) products congruent or incongruent with their current or future needs?

    4.3) products with high or low levels of access convenience?

5) What process underlies shoppers' responses to mobile coupons?

5.2 Conceptual model 1: Hypotheses

In the following sections, two sets of hypotheses are proposed for conceptual model 1 (Figure 5.1). The first set of hypotheses is intended to help answer research questions RQ1 and RQ2. Specifically, they predict that consumers' shopping motivations (as a situational factor), the type of product offered by a mobile coupon, and the congruity of the offer with consumers' temporal needs (as marketing cues associated with a mobile coupon) each prime one type of regulatory focus more than the other type.

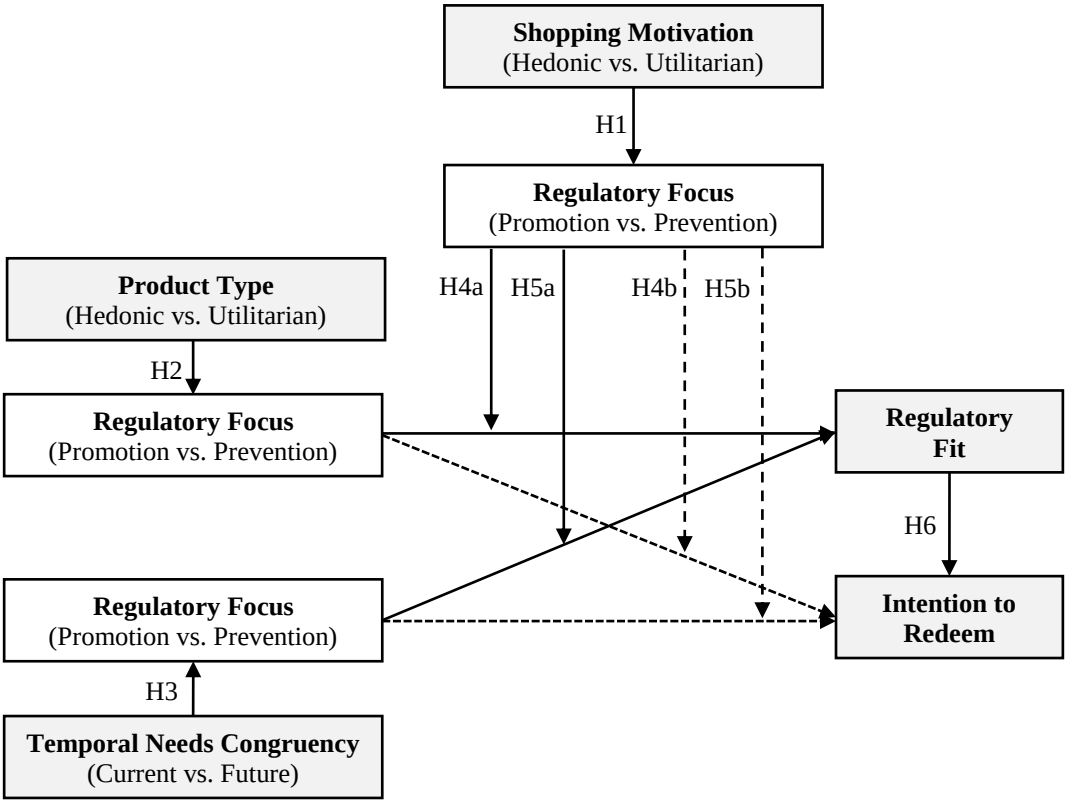

Figure 5.1: Conceptual model 1

The second set of hypotheses is intended to contribute to answering research questions RQ4.1, RQ4.2 and RQ5. Specifically, they propose that the compatibility between the type of regulatory focus primed by shopping motivation and the one primed by the type of product as well as the compatibility between the type of regulatory focus primed by shopping motivation and that primed by temporal needs congruency lead to the perception of regulatory fit in a mobile coupon offer, and consequently intention to redeem the offer. However, they also

predict that hedonic and utilitarian shoppers respond differently to compatible and incompatible personalised mobile coupons in that while utilitarian shoppers tend to be responsive to compatible offers, hedonic shoppers are likely to be responsive to both compatible and incompatible offers. Specifically, it is argued that the perception of regulatory fit is different between hedonic and utilitarian shoppers; that is, utilitarian shoppers perceive more regulatory fit in the personalised mobile coupons that are compatible with their focal shopping goals, whereas hedonic shoppers perceive similar levels of regulatory fit in compatible and less compatible offers.

5.2.1 Regulatory Focus Primed by Shopping Motivation, Type of Product, and Temporal Needs Congruency

Promotion and prevention focuses are defined as two distinct self-regulation strategies that not only reflect people's personality traits, but also can be situationally induced (Crowe & Higgins, 1997). In other words, although both self-regulatory orientations exist in an individual as chronic traits, one of them can be chronically or situationally more active than the other one (Mishra, Mishra, & Nayakankuppam, 2010). Evidence shows that while chronic promotion focus is associated with hedonic shopping value, chronic prevention focus is associated with utilitarian shopping value (Arnold & Reynolds, 2009). In a similar sense, it has been demonstrated that people with a promotion focus tend to have more situational experiential thinking styles than those with a prevention focus; in contrast, people with a prevention focus tend to have more situational rational thinking styles than those with a promotion focus (Novak & Hoffman, 2009). Correspondingly, while experiential shoppers are likely to be more affective-oriented, task-oriented shoppers tend to be more cognitive-oriented (Babin *et al.*, 1994; Novak & Hoffman, 2009). As commented by Novak & Hoffman (2009) "because dispositional thinking style is related to a number of consumer behavioral constructs, it can be expected that situational thinking style would similarly relate to situational measures of these constructs" (pp. 67-68). In line with this, it has been remarked that regulatory focus can be operationalized in terms of both dispositional processing propensities as well as cognitive states that change situationally, each having similar types of consequences (Pennington & Roese, 2003). Therefore, it is conceivable that because dispositional regulatory orientations are associated with consumers' shopping value, situational regulatory focuses are related to consumers' shopping motivations. In particular, it stands to reason that hedonic shoppers tend to be situationally more promotion-focused than

prevention focused, whereas utilitarian shoppers are more likely to be situationally prevention-focused than promotion-focused. This prediction is in line with the research illustrating that when making judgments, consumers with a promotion focus are more likely to rely on subjective affective cues of a persuasive message (i.e., attractiveness of the advertisement) than on the substance of the message; in contrast, prevention-focused consumers are more inclined to rely on substantive factual information in a persuasive message (i.e., strength of the claims in an advertisement) than on subjective affective responses (Pham & Avnet, 2004). In the same vein, research has demonstrated that when using feelings to evaluate and choose products, promotion-focused people experience fit, whereas prevention-focused people experience non-fit; conversely, when using reasons to evaluate and choose products, promotion-oriented individuals experience fit, whereas prevention-oriented individuals experience non-fit (Avnet & Higgins, 2006). Therefore, it is hypothesised that:

H1: Hedonically motivated shoppers tend to be more promotion-focused than prevention-focused, whereas utilitarian shoppers tend to be more prevention-focused than promotion-focused.

Besides shopping motivation, it is expected that whether the act of redeeming the product is hedonic or utilitarian can prime a certain type of regulatory focus. In particular, the nature of consumption goals that consumers expect to be achieved by the hedonic attributes of a product are different from those expected to be fulfilled its utilitarian benefits (Chernev, 2004a; Chitturi *et al.*, 2007). In this sense, research has shown that in a positive consumption experience situation, products with superior hedonic benefits fulfil the promotion goal of seeking pleasure by evoking the promotion-related emotions of cheerfulness and excitement; in contrast, products superior in utilitarian benefits fulfil the prevention goal of avoiding pain by inducing the prevention-related emotions of confidence and security (Chitturi *et al.*, 2008). Research has also demonstrated that while consumers expect to fulfil their prevention-focused goals by using the utilitarian attributes of a product, they seek to meet their promotion-focused goals through hedonic product attributes (Chernev, 2004a; Chitturi *et al.*, 2007). In a similar vein, it has been found that for certain groups of consumers (e.g., impulsive buyers), some objects (e.g., a hedonically framed product), can elicit a certain type of regulatory focus (i.e., promotion focus), influencing consumers' choice behaviour (Sengupta & Zhou, 2007).

In line with these findings, in the present research, it is argued that at a product category level and regardless of the specific hedonic or utilitarian attributes or benefits of a product, imagining the purchase of a hedonic product is more likely to lead people to think of their desires, aspirations, and variety, which are more consistent with a promotion focus. In contrast, reflecting on purchasing a utilitarian product is more likely to cause people to think of their oughts, duties, and safety, which are more associated with prevention focus. Therefore, it is hypothesised that:

H2: Purchasing a hedonic product is more likely to prompt a promotion focus than a prevention focus, whereas purchasing a utilitarian product is more likely to prompt a prevention focus than a promotion focus.

Research has shown that the temporal distance of a goal can affect how consumers' motivational orientations shift between promotion and prevention focus. Specifically, research has revealed that while a temporally distant perspective elicits a promotion focus, a temporally proximate perspective elicit prevention focus (Pennington & Roese, 2003). More specifically, people with a promotion-focused orientation are willing to adopt a distal temporal perspective, whereas those with a prevention-focused orientation tend to take a proximal temporal perspective (Ariely & Zakay, 2001; Liberman *et al.*, 2001). Also, research on coupon redemption has demonstrated that while a close expiry date (e.g., today) primes a prevention focus, a far expiry date (e.g., two weeks) primes a promotion focus (Ramanathan & Dhar, 2010). Drawing on these findings about the association between regulatory focus and temporal distance, in the current research, it is proposed that while a product offer congruent with current needs induces a prevention-focus more than a prevention focus, a product congruent with future needs evokes a promotion-focus more than prevention focus. For example, on a certain shopping trip, when a consumer has not purchased a certain type of product for a relatively long time, a mobile coupon offering that product induces a prevention-focused need to buy that product on the current shopping trip; in contrast, if a consumer has recently purchased a certain type of product, a mobile coupon offering that product elicits a promotion-focused need to buy that product at some other time in the future. Therefore, it is hypothesised that:

H3: A mobile coupon offer congruent with current needs primes more prevention focus than promotion focus, whereas an offer congruent with future needs primes more promotion focus than prevention focus.

Table 5.1 summarises hypotheses H1, H2 and H3. It is proposed that while hedonic shopping motivation, hedonic type of product, and offers congruent with future needs prime relatively more promotion focus than prevention focus, utilitarian shopping motivation, utilitarian type of product, and offers congruent with current needs prime relatively more prevention focus than promotion focus.

Table 5.1: Summary of research hypotheses H1, H2, and H3

Independent variable	Levels	Primed regulatory focus
H1: Shopping motivation	Hedonic	Promotion
	Utilitarian	Prevention
H2: Type of product	Hedonic	Promotion
	Utilitarian	Prevention
H3: Temporal needs congruency	Future	Promotion
	Current	Prevention

5.2.2 The Compatibility between Type of Product and Shopping Motivation

Regarding the compatibility between marketing cues and people's regulatory orientations, research has shown that different marketing cues such as the framing of a savings message in a coupon, its expiration date, or the familiarity with the promoted brand, can prompt different regulatory orientations (Ramanathan & Dhar, 2010). It was further demonstrated that the compatibility between the regulatory orientation primed by marketing cues and a person's regulatory orientation results in an increased shopping basket size which included both promoted and unpromoted brands. For example, coupons promoting well-known brands, coupons framed to emphasise saving rather than gaining, or coupons with a today expiration date prime a prevention focus and were redeemed by prevention-focused people more than promotion-focused people; on the contrary, coupons promoting unknown brands, or those framed to highlight gaining rather than saving, or those with a two-week expiration date were purchased more by promotion-focused individuals than prevention-focused ones. However, Ramanathan and Dhar did not explicitly demonstrate what the underlying explanation for these effects is. Similarly, Sengupta and Zhou (2007) have demonstrated that a hedonically

framed snack can evoke a promotion focus among impulse buyers, leading them to choose an unhealthy snack over a healthy one.

Regarding the compatibility between the attributes highlighted in a message framing and people's regulatory orientations, it has been demonstrated that people's self-regulatory goals influence how they evaluate product attributes (Chernev, 2004a). Specifically, it was shown that promotion-focused individuals are more likely to place more weight on hedonic attributes and select product offers superior in these attributes (e.g., presenting respondents with dessert menu at lunch time; highlighting tooth-whitening features in purchasing a toothpaste; focusing on hair softness in purchasing a shampoo), whereas prevention-focused people tend to attach more weight to utilitarian attributes and choose products superior in these attributes (e.g., presenting respondents with information about walking distance at lunch time; highlighting decay-prevention features in purchasing a toothpaste; focusing on cleaning effectiveness in purchasing a shampoo) by promotion-focused consumers. As argued by the author, this is because hedonic features are more compatible with the self-regulatory goal of achieving pleasure, whereas utilitarian features are more compatible with the self-regulatory goal of acquiring necessary functionalities and safeguarding against failures. In a similar sense, Zhou and Pham (2004) have shown that people prompted to become promotion focus are prompted tend to prefer products framed to highlight promotion-focused attributes (e.g., promoting high energy for grape juice; whitening ability for toothpaste; taste for chocolate cake), whereas prompting people's prevention focus causes them to prefer products framed to emphasise prevention-focused features (e.g., reducing the chance of heart disease for grape juice; cavity prevention for toothpaste; health for fruit salad). However, the focus of this stream of research is mainly on the hedonic and utilitarian attributes of different product categories. In particular, these studies do not take into account the fact that a product category can also be considered as being mainly hedonic or utilitarian, regardless of its specific attributes. For example, although a shampoo provides beauty, which is associated with its hedonic (promotion-focused) features, it may be predominately regarded as a utilitarian product. The present thesis adopts this perspective and addresses how consumers with different regulatory focuses (activated by their shopping motivations) prefer redeeming offers from differing product categories.

Building on these findings, it is expected that the compatibility between the type of regulatory focus primed by the type of product and the type of regulatory focus primed by shopping motivation results in more intention to redeem the product offer. In particular, it is expected that while utilitarian shoppers are more likely to redeem utilitarian product offers, hedonic shoppers are more likely to redeem hedonic product offers. However, it is proposed that hedonic and utilitarian shoppers respond differently to compatible and incompatible offers. Specifically, as mentioned previously, research has found that prevention-focused people adopt a vigilance strategy, according to which they tend to avoid the pursuit of alternative options with the purpose of minimising the possibility of making mistakes or incurring losses (Herzenstein *et al.*, 2007; Levine *et al.*, 2000); in contrast, promotion-focused individuals adopt an eagerness strategy, according to which they pursue more alternative options with the purpose of maximising their opportunities to achieve more gains (Crowe & Higgins, 1997; Levine *et al.*, 2000; Pham & Avnet, 2004). Related to this, it has been shown that the eagerness strategy adopted by promotion-focused people leads them to search options in a more global manner and from a broader range of opportunities; whereas the vigilance strategy adopted by prevention-focused individuals causes them to search options in a more local manner and examine only the relevant alternatives (Pham & Chang, 2010). Further, Chernev (2004b), has demonstrated that consumers' regulatory orientations impact the consumers' preferences for status quo. In particular, it was shown that compared with promotion-focused consumers, prevention-focused consumers have stronger preferences for the alternatives that are more proximate to the status quo.

Specifically, drawing on the empirical evidence reviewed above, it is argued that because utilitarian shoppers are more likely to be prevention-focused, the vigilance strategy that they adopt causes them to be concerned about achieving necessary shopping outcomes more than ideal ones. Therefore, because a utilitarian product primes a prevention focus that is compatible with the prevention regulatory orientation primed by utilitarian motivation, utilitarian shoppers perceive more regulatory fit in utilitarian products than in hedonic products, leading them to have a stronger intention to redeem utilitarian offers. On the contrary, because hedonic shoppers are more promotion-focused, they adopt an eagerness strategy, causing them to focus more on optimal goals than on immediate ones. Consequently, they are more willing to consider and experience offers that are less relevant to their main shopping motivation. As a result, even though hedonic shoppers may perceive regulatory fit

in a hedonic product (because of the compatibility between the promotion focus primed by the hedonic product and their promotion regulatory orientation), they are also responsive to personalised offers from utilitarian product categories, even though the utilitarian product offers are less compatible with the hedonic shoppers' focal regulatory orientation. In other words, building a correspondence between the preference for pursuing the focal shopping motivation and the preference for status quo (Chernev, 2004b), it is conceivable that utilitarian shoppers are more likely to pursue their primary prevention-oriented shopping goals, that is, to prefer their status quo; whereas hedonic shoppers are more likely to diverge from their focal shopping goals and pursue other alternatives that are not compatible with their primary promotion-oriented shopping goals.

Support for this argument also comes from other research findings. Lee and Ariely (2006) provided evidence that in the early stages of their shopping trips, consumers have ill-defined, abstract goals and construe product information at a higher level; as they proceed to the later stages of their shopping process, consumers' goals become more well-defined and concrete and they construe product information at a lower level. As a result, consumers with more abstract shopping goals are more influenced by contextual cues such as promotions, whereas consumers with more concrete shopping goals are more resistant to external cues. Lee, Keller, and Strenthal (2010) showed that while promotion-focused people process information at a high, abstract construal level, individuals with a prevention focus process information at a low, concrete level of construal. Integrating these findings, it can be postulated that since hedonic shoppers are more likely to be promotion-focused, they have more abstract shopping goals, leading them to be more responsive to promotions; in contrast, since utilitarian shoppers are more likely to be prevention-focused, they have more concrete shopping goals, causing them to be less responsive to variety in offers. Therefore, it is hypothesised that:

H4a: Utilitarian shoppers are more likely to perceive regulatory fit in a utilitarian product offer than a hedonic product offer, whereas hedonic shoppers are equally likely to perceive regulatory fit in a hedonic as in utilitarian product offer.

H4b: Utilitarian shoppers are more likely to redeem a utilitarian product offer than a hedonic product offer, whereas hedonic shoppers are equally likely to redeem a hedonic or a utilitarian product offer.

5.2.3 The Compatibility between Temporal Needs Congruency and Shopping Motivation

As mentioned earlier, research has found that while a temporally distant event is associated with a promotion focus, a temporally proximate goal is associated with a prevention focus (Ariely & Zakay, 2001; Liberman *et al.*, 2001; Pennington & Roese, 2003). It has also been shown that when people have a temporally distant outlook, they are more likely to envisage optimal goals, to investigate information more extensively, or to consider alternative options, representing behaviours typical of promotion focus. By contrast, imminent events or time limitations give rise to behaviours that typically represent prevention-focused orientations (Ariely & Zakay, 2001; Liberman *et al.*, 2001). Furthermore, it has been revealed that when the purchase of a product is temporally distal, it is evaluated as more attractive if presented in a promotion frame, whereas when the purchase of the product is temporally proximal, it is preferred more if presented in a prevention frame (Mogilner *et al.*, 2008; Pennington & Roese, 2003). Moreover, as mentioned previously, Ramanathan and Dhar (2010) found that the compatibility between the prevention focus primed by a coupons with a "today" expiration data, or the promotion focus primed by a coupon with a "two weeks" expiration date, and consumers' regulatory focuses results in a larger shopping basket size.

Building on the argument presented above, it is expected that intention to redeem will also be higher when there is compatibility between the type of regulatory focus primed by the likely time of purchase (i.e., temporal needs congruency) and the type of regulatory focus primed by shopping motivation. However, it is posited that hedonic and utilitarian shoppers respond differently to compatible and incompatible offers. Specifically, it is posited that because utilitarian shoppers are more prevention-focused, they attach more weight to temporally proximate events than to temporally distant ones (Pennington & Roese, 2003). As a result, they experience more regulatory fit in and consequently have more intentions to redeem an offer that is congruent with their current needs than their future needs (Ramanathan & Dhar, 2010; Zhao & Pechmann, 2007). More specifically, this is because there is compatibility between prevention focus primed by a current-needs-congruent offer and the prevention focus activated by a utilitarian shopping motivation. By contrast, since hedonic shoppers are more promotion-focused, they attach weight to temporally distant events, leading them to experience regulatory fit in offers congruent with their future needs. Nonetheless, hedonic

shoppers experience regulatory fit in a product that addresses their current needs as well. This is because their eagerness strategy on a certain shopping trip drives them to be more receptive to variety in offers and to entertain more options (Pham & Chang, 2010), even though there is compatibility between the promotion focus primed by a future-needs-congruent offer and promotion focus activated by a hedonic shopping motivation.

This argument is also supported by other research findings. Research has found that temporally distant perspectives activate high-level, more abstract construal levels, whereas temporally proximate perspectives activate low-level, more concrete levels of construal (Liberman *et al.*, 2007). Specifically, research has shown that as the deadline of occasions comes closer, people tend to shift from abstract representations of their goals to more concrete, task-specific representations (Trope & Liberman, 2000, 2003). In this regard, research has shown that the match between the type of construal level and type of regulatory focus leads to perception of regulatory fit. For example, Lee, Keller, and Strenthal, (2010) demonstrated that presenting product information at a high level of construal to promotion-focused people, or presenting product information at a low construal level to prevention-focused individuals, leads to the experience of regulatory fit, and consequently, more positive attitudes towards the offer. Further, Roehm and Roehm Jr. (2011) showed that the redemption time frame of an incentive influences the way the incentive is construed. In particular, it was shown that for incentives with a short redemption time frame, concrete features such as face value or presentation format are more effective than incentives with a long redemption time frame. In contrast, for incentives with a long redemption time frame, abstract features such as the congruity of the incentive with consumers' goals or values are more effective than incentives with a short time frame. Integrating the aforementioned insights, it is hypothesised that:

H5a: Utilitarian shoppers are more likely to perceive regulatory fit in a current-needs-congruent product offer than in a future-needs-congruent product, whereas hedonic shoppers are equally likely to perceive regulatory fit in future-needs-congruent as in current-needs-congruent offers.

H5b: Utilitarian shoppers are more likely to redeem a current-needs-congruent product offer than a future-needs-congruent offer, whereas hedonic shoppers are equally likely to redeem future-needs-congruent as they are to redeem current-needs-congruent offers.

5.2.4 The Mediating Effect of Regulatory Fit

As mentioned previously, research has revealed that the experience of regulatory fit enhances people's attitudes toward target objects (Wan *et al.*, 2009), their willingness to pay for an offered product (Higgins *et al.*, 2003), their purchase intentions (Labroo & Lee, 2006), and also their actual behaviour (White *et al.*, 2011). Hence, it is expected that for both hedonic and utilitarian shoppers the experience of regulatory fit leads to stronger intentions to redeem personalised mobile coupon offers. In particular, it is hypothesised that:

H6: Regulatory fit mediates the interaction between product type and shopping motivation, and between temporal needs congruency and shopping motivation on intention to redeem.

5.3 Conceptual Model 2: Hypotheses

In this section, the hypotheses relating to conceptual model 2 (Figure 5.2) are proposed. As can be seen, the difference between conceptual model 1 and conceptual model 2 lies in replacing the variable 'temporal needs congruency' with the variable 'access convenience'. In particular, in conceptual model 1, it is assumed that consumers have the same levels of access convenience to a retailer to redeem the mobile coupon they have been offered; whereas in conceptual model 2, it is assumed that the product offered by the mobile coupon matches the consumer's current needs. The hypotheses proposed in this section are related to research questions RQ3, RQ4.3, and RQ5. Specifically, they propose that, in a shopping centre context, the spatial distance between a retailer's location and a consumer's location where a mobile coupon is delivered activates a certain type of construal level. The hypotheses further propose that the compatibility between the type of construal level primed by spatial distance, the type of regulatory focus primed by shopping motivation, and the type of regulatory focus primed by type of product, leads to perceptions of regulatory fit, and consequently intention to redeem. However, they predict that hedonic and utilitarian shoppers respond differently to compatible and incompatible personalised mobile coupons. Specifically, similar to conceptual model 1, the main argument of conceptual model 2 is that the perception of regulatory fit differs between hedonic and utilitarian shoppers. That is, compared to utilitarian shoppers,

hedonic shoppers perceive more regulatory fit in the personalised offers that are less compatible with their main shopping motivations.

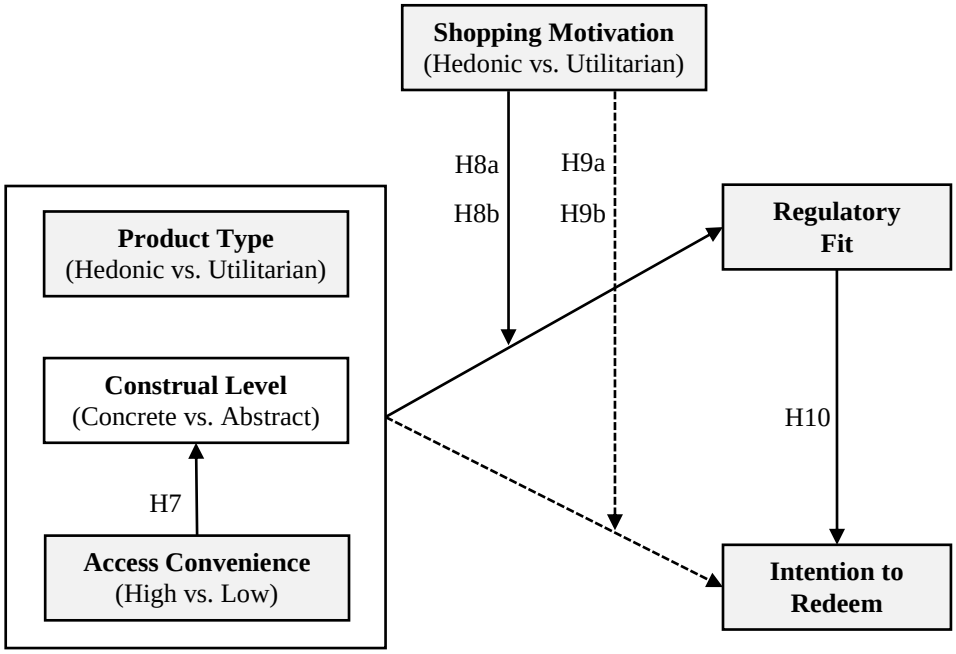

Figure 5.2: Conceptual model 2

In order to acquire a service, consumers need to interact with the service provider, which requires a certain amount of effort on the part of consumers (Suprenant & Solomon, 1987). Although making purchase decisions for both products and services entails some cognitive effort, there may be even greater amounts of physical or emotional effort required for services in which customers need to take part in the service production process (Kelley, Donnelly Jr., & Skinner, 1990). The more effort customers spend on a service, the more important the outcomes of that service will be to them and there will be a higher possibility of dissatisfaction (Hui, Thakor, & Gill, 1998). As a result, perceiving a high level of cognitive, physical, or emotional effort in consuming a service will negatively impact on consumers' perceptions of service convenience (Berry *et al.*, 2002). Extending these general insights to a mobile couponing service context, it is expected that access convenience plays a substantial role in consumers' perceptions of the time and effort involved in acquiring the product promoted by a personalised mobile coupon. In practice, in such a service context, consumers

need to participate in service delivery by going a certain distance from the location where they receive a mobile coupon to the retailer who is offering the product.

Previous retailer selection models tend to look at a store's location as a fixed component of overall shopping costs (Bell *et al.*, 1998; Brown, 1989; Craig, Ghosh, & McLafferty, 1989). In particular, one of the assumptions of these models is that consumers' choice of a store is largely determined by the time and effort associated with travelling from a person's residential location to reach a retailers' location (Bell *et al.*, 1998). Nonetheless, in a mobile couponing service context, the cost of going from the location at which a mobile coupon is delivered to the retailer's location is variable among consumers because of two reasons: First, shoppers receiving offers are on the move; this suggests that they will have differing perceptions of time and effort costs associated with the access convenience of a certain retailer, which is not on the move. Second, consumers have different shopping motivations while they are on the move, which may interact with their perceptions of the convenience of access to the retailer.

5.3.1 Construal Level as a Function of Spatial Distance

Research has demonstrated that while promotion-focused individuals are more likely to construe information at a high abstract level, those with a prevention focus tend to construe information at a low concrete level (Lee *et al.*, 2010). In parallel to this, it has been shown that a temporally distant event is associated with a promotion focus, whereas a temporally proximate event is associated with a prevention focus (Ariely & Zakay, 2001; Liberman *et al.*, 2001; Pennington & Roese, 2003). Related to this, Fujita and colleagues (2006) suggest that the relationship between spatial distance and construal level is very similar to the relationship between temporal distance and construal level. The authors further demonstrated that spatially near events (e.g., helping a friend move into a new apartment located 3 miles away) are associated with peripheral, concrete, and local features (low-level construal); whereas spatially distant events (e.g., helping a friend move into a new apartment located 3,000 miles away) are associated with central, abstract, and global features (high-level construal). Therefore, it is hypothesised that in a mobile coupon service context:

H7: A location that is perceived to be more convenient to access activates a lower construal level than a location that is perceived to be less convenient to access.

5.3.2 The Interaction between Product Type and Access Convenience for Utilitarian Shoppers

As noted earlier, it has been found that the match between regulatory focus and construal level leads to the experience of regulatory fit. For example, Lee, Keller, and Strenthal (2010) showed that compared to prevention-focused consumers, those who are promotion-focused perceive a higher degree of regulatory fit and consequently respond more positively to advertisements that present product information at a high level of construal; whereas compared to promotion-focused consumers, those with a prevention focus have higher level of regulatory fit and also more positive responses to advertisements that frame product information at a low level of construal. In the same vein, White, Macdonnell, and Dahl (2011) demonstrated that sending a message framed as a negative loss to people whose mind-set has a concrete construal level, or sending a message framed as a positive gain to those whose mind-set has an abstract construal level, results in higher processing fluency, perceived efficacy, and subsequently, more recycling intentions and actual behaviours. Drawing on these findings, it stands to reason that regulatory fit will also be experienced when there is consistency between the construal level activated by spatial distance to a retailer's location, wherein a personalised mobile coupon needs to be redeemed, and the type of regulatory focus that consumers have on a certain shopping occasion. Specifically, it is expected that because utilitarian shoppers are more likely to be prevention-focused than promotion-focused, they attach more weight to the feasibility of achieving a target goal, which is associated with a lower level of construal (Liberman *et al.*, 2007; Trope & Liberman, 2010), namely, a closer spatial distance (Fujita *et al.*, 2006; Trope & Liberman, 2010). In this sense, a far spatial distance is associated with a higher level of construal and also the desirability of a target object, which is not compatible with the prevention regulatory focus adopted by utilitarian shoppers. Therefore, utilitarian shoppers will experience a higher level of regulatory fit in and have more intentions to redeem a mobile coupon offered by a convenient-to-access retailer than an inconvenient-to-access retailer (Ramanathan & Dhar, 2010; Zhao & Pechmann, 2007).

However, it is proposed that this prediction holds only for utilitarian products. This is because, according to the notion of goal-attribute compatibility (Chernev, 2004a), utilitarian shoppers will not prefer hedonic products, whether the retailer sending the mobile coupon be

convenient or inconvenient to access. Specifically, it is predicted that because utilitarian shoppers are more likely to be prevention-focused than promotion-focused, they are more likely to adopt a vigilance strategy. Further, as suggested by Kaltcheva and Weitz (2006), utilitarian shoppers are more likely to be under more time pressure than hedonic shoppers are. Hence, they will be more cautious about not accomplishing their focal shopping goal (Herzenstein *et al.*, 2007; Levine *et al.*, 2000) and will be more likely to follow minimal goals (Freitas, Liberman, Salovey, *et al.*, 2002; Idson *et al.*, 2000). Therefore, it is expected that even when the offer is a utilitarian product, which is compatible with utilitarian shoppers' prevention focus, the vigilance strategy adopted by utilitarian shoppers will prevent them from going too far to redeem the offer. This prediction is also consistent with the mismatch-avoidance strategy that prevention-focused people adopt (Brockner & Higgins, 2001; Freitas & Higgins, 2002); that is, utilitarian shoppers will look at an inconvenient location to redeem a mobile coupon as a mismatch with their focal shopping goal that should be avoided. Therefore, the two following hypotheses are advanced. It should be noted that these two hypotheses concern the effect of the interaction between product type and access convenience on perceived regulatory fit and intention to redeem for 'utilitarian' shoppers:

H8a: Utilitarian shoppers who receive a utilitarian product offer will perceive more regulatory fit when access convenience is high than when access convenience is low, whereas they will perceive similar levels of regulatory fit in a hedonic product offer no matter if access convenience is high or low.

H9a: Utilitarian shoppers who receive a utilitarian product offer will have greater intentions to redeem when access convenience is high than when access convenience is low, whereas they will have similar levels of intention to redeem in a hedonic product offer no matter if access convenience is high or low.

5.3.3 The Interaction between Product Type and Access Convenience for Hedonic Shoppers

Since hedonic shoppers tend to be more promotion-focused than prevention-focused, they attach more value to the desirability of target objects, which is associated with a higher level of construal (Liberman *et al.*, 2007; Trope & Liberman, 2010) as well as a farther spatial distance (Fujita *et al.*, 2006; Trope & Liberman, 2010). Besides, since hedonic shoppers are

more promotion-focused than prevention-focused, they pursue an eagerness strategy. Hence, they will seek to take the full advantage of their shopping trips (Herzenstein *et al.*, 2007; Levine *et al.*, 2000) and will be more likely to pursue maximal goals (Freitas, Liberman, Salovey, *et al.*, 2002; Idson *et al.*, 2000). In addition, compared with utilitarian shoppers, hedonic shoppers are more likely to be under less time pressure (Kaltcheva & Weitz, 2006). As a result, hedonic shoppers experience similar levels of regulatory fit in and consequently have similar intentions to redeem a product offered by a conveniently accessed retailer than in a product offered by a retailer who is less convenient to access (Ramanathan & Dhar, 2010; Zhao & Pechmann, 2007). However, it is predicted that this argument holds only for utilitarian products. The reason for this prediction is that according to the notion of goal-attribute compatibility suggested by Chernev (2004a), hedonic shoppers prefer hedonic products; therefore, they are expected to be less reluctant to walk a farther distance to acquire a hedonic product offer, and as discussed above, this tendency is regardless of access convenience of the retailer's location. However, as regards utilitarian products, it stands to reason that even for hedonic shoppers, going too far to redeem a utilitarian offer, which is incompatible with their focal regulatory orientation, is too much inconsistency with their eagerness strategy. Therefore, they are more likely to redeem a utilitarian offer when the retailer's location is convenient to access than when it is inconvenient to access. Therefore, the two following hypotheses are advanced. It should be noted that these two hypotheses address the effect of interaction between product type and access convenience on perceived regulatory fit and intention to redeem for 'hedonic' shoppers:

H8b: Hedonic shoppers who receive a hedonic product offer will perceive similar levels of regulatory fit no matter if access convenience is high or low, whereas they will perceive more regulatory fit in a utilitarian product offer when access convenience is high than when access convenience is low.

H9b: Hedonic shoppers who receive a hedonic product offer will have similar levels of intention to redeem no matter if access convenience is high or low, whereas they will have greater intentions to redeem in a utilitarian product offer when access convenience is high than when access convenience is low.

5.3.4 The Mediating Effect of Regulatory Fit

Similar to the prediction made in hypothesis H6, it is predicted that the effect of compatibility between shopping motivation, type of product, and access convenience on consumers' intention to redeem takes place through the mediating effect of the perceived regulatory fit in a personalised mobile coupon. Specifically, in the same way that the experience of regulatory fit affects consumers' attitudes toward a product offer (Wang & Lee, 2006), their perceived monetary value in the offered product (Higgins *et al.*, 2003), their purchase intentions (Labroo & Lee, 2006), and also actual behaviour (Roehm & Roehm Jr., 2011), it is hypothesized that:

H10: Regulatory fit mediates the interaction effect between shopping motivation, product type, and temporal needs congruency on intention to redeem.

5.4 Conclusion

In the present chapter, the research hypotheses related to the cause and effect relationships specified in conceptual model 1 and conceptual model 2 were proposed. Conceptual model 1 addresses the effect of compatibility between shopping motivation, type of product, and temporal needs congruency on intention to redeem a personalised mobile coupon through the mediating role of regulatory fit. Conceptual model 2 addresses the effect of compatibility among shopping motivation, type of product, and access convenience on intention to redeem a personalised mobile coupon through the mediating role of regulatory fit. As can be noted, the focus of the research hypotheses proposed for conceptual model 1 is on the two-way interactions between shopping motivation and type of product, and between shopping motivation and temporal needs congruency; whereas the focus of the research hypotheses proposed for conceptual model 2 is on the three-way interaction between shopping motivation and type of product and access convenience. To justify the developed hypotheses, a review of the research conducted in similar contexts was provided. The main theories that were applied to develop the hypotheses in the present thesis included regulatory focus, construal level, and regulatory fit, in conjunction with the literature on the association between construal level, psychological (temporal and spatial) distance, and regulatory focus. The next chapter presents in detail the research design used to test conceptual model 1 and conceptual model 2.

Chapter 6 : Research Design

6.1 Introduction

This chapter details the research methodology and design used to test conceptual model 1 and conceptual model 2. It starts by specifying the research approach and the research method. Then, it details the different sections of the questionnaires used for data collection. Specifically, the research methodology and research instruments related to conceptual models 1 and 2 are explained separately. Afterwards, data analysis techniques deployed to test research hypotheses are explained.

6.2 Research Approach

Depending on the extent to which knowledge about the research topic has advanced The approach or the nature of a study can be categorized into three main types: exploratory research, descriptive research, or causal research (Sekaran, 2003).

Exploratory research is conducted when the researcher is seeking to gain insights into the general nature of a problem, the relevant variables that need to be considered, and the possible decision alternatives. In this type of research, since the existing knowledge about the topic of interest is limited, the researcher explores the problem without prior assumptions about possible findings. Therefore, exploratory research methods tend to be: highly flexible (i.e., data collection methods usually allow the researcher to pursue new directions of research as they arise); unstructured (i.e., the details and procedures are not structured); and qualitative (i.e., the type of the data collected for this type of research is qualitative such as judgments, ideas, and opinions) (Aaker, Kumar, Day, Lawley, & Stewart, 2007). In-depth interviews and focus groups are two of the main methods used to carry out exploratory research (Aaker *et al.*, 2007; Malhotra, Hall, Shaw, & Oppenheim, 2008).

The main objective of descriptive research, however, is to describe something, which in marketing usually concerns characteristics of market or consumer phenomena. In a descriptive research, the presumption is that the researcher has enough prior knowledge about the problem situation under investigation. Unlike exploratory research, descriptive research is characterized by clear-cut statements regarding the research problem, specific hypotheses, and

detailed information needs (Malhotra *et al.*, 2008). Although the hypotheses are tentative and speculative, the development of hypotheses guides the researcher to engage in more detailed speculations about the research question. One important note concerning descriptive research designs is that they merely describe; that is, they do not attempt to establish cause-and-effect relationships between variables (Aaker *et al.*, 2007). Survey research is the main method of conducting descriptive research (Aaker *et al.*, 2007; Malhotra *et al.*, 2008).

A causal research approach is adopted when the researcher intends to show that one variable causes or determines the values of other variables. To do so, descriptive research is not sufficient, because it can only show that there is a relation or association between two or more variables. Although the evidence of a relationship or an association between two variables is useful, there would be no basis for inferring that a causal effect might exist if there was not such evidence. In order to confirm this inference, there must be a reasonable proof that one variable precedes the other and that there are no other causal factors that can explain the relationship (Aaker *et al.*, 2007). Experimentation is the main method of conducting causal research (Aaker *et al.*, 2007; Malhotra *et al.*, 2008).

Considering the preceding descriptions, the research approach adopted in the present thesis can be categorized as causal research. The reason is that this thesis examines the effects of compatibility (or incompatibility) between consumers' shopping motivations (as a situational state) and the type of product offered by a personalised mobile coupon, the congruency of the offer with the consumers' temporal needs, as well as the access convenience provided by the retailer who is offering the mobile coupon (as marketing cues associated with a personalised mobile coupon) on the consumers' perceptions of regulatory fit in and their intention to redeem mobile coupons.

6.3 Research Method

As mentioned above, compared to non-experimental methods (i.e., exploratory and descriptive research), experimental research is the best way to establish that there is a real cause and effect relationship between two variables (Aronson, Ellsworth, Merrill, & Gonzales, 1990; Shadish, Cook, & Campbell, 2002). Specifically, an experiment is a study in which the researcher manipulates and controls one or more independent variables and then observes the effects of the manipulated variables on one (or more) dependent variables, while

controlling for the influence of extraneous variables (Aaker *et al.*, 2007; Malhotra *et al.*, 2008; Oppewal, 2010b). Before detailing the experimental research methodology that was applied in the present thesis, the following section details the common features of experiments and the terminologies typically used in experimental studies.

6.3.1 Independent vs. dependent variables and empirical realisation

After identifying the research question and formulating a theoretical framework, one or more testable propositions are derived, comprising the hypotheses. A hypothesis is a prediction about the a causal sequence, or an enquiry made about the effect of an independent variable on a dependent variable (Aronson *et al.*, 1990). Independent variables, also synonymous with cause or treatment, are the variables that are manipulated by the researcher, (i.e., the researcher changes their levels) and their effects are measured and compared (Aaker *et al.*, 2007; Malhotra *et al.*, 2008). It is named 'independent' because the experimenter creates and controls it variation, which is supposed to be independent of all other causative influences (Aronson *et al.*, 1990; Shadish *et al.*, 2002). Dependent variables, also synonymous with effect or outcome, are the variables that measure the effect of the independent variable (Aaker *et al.*, 2007; Malhotra *et al.*, 2008). It is called 'independent' because the experimenter expects its value to vary depending on the changes in the levels of the independent variable (Aronson *et al.*, 1990; Shadish *et al.*, 2002).

Having formulated research question and hypotheses, the researcher needs to decide how to turn the predicted effects into a set of experimental procedures. In this sense, one of the important transformations involves translating the constructs or conceptual variables contained in hypotheses into specific and observable events. This procedure is referred to as 'empirical realisation' or 'operationalisation' (Aronson *et al.*, 1990; Shadish *et al.*, 2002). It is important that different empirical realisations of a concept produce similar kinds of behaviour; otherwise, it would indicate that the operationalisation of the original construct has been too general and needs to be separated into a number of less general variables (Aronson *et al.*, 1990).

6.3.2 Extraneous variables and randomisation

In practice, it is almost impossible to design an experiment in which nothing except for the independent variable affects the dependent variable (Aronson *et al.*, 1990). Hence, variables

other than the manipulated variable that affect the response of the subjects (units) are called 'extraneous' or 'confounding' variables; these variables interfere with the changes in the dependent variable and consequently confound the results of the experiment (Aaker *et al.*, 2007; Malhotra *et al.*, 2008); this is because extraneous variables may co-vary with outcome variables (Shadish *et al.*, 2002). Because the experimenter has no direct control over extraneous variables, they can be sources of two types of error: random error and systematic error. Random error is an extraneous variable that influences the outcome variable in the same direction across all conditions. Systematic error, on the other hand, is more dangerous because it affects all the scores of the outcome variable in one condition in the same direction, but either affects or does not affect, the scores of the outcome variable in other conditions in a different direction (Aronson *et al.*, 1990, pp. 15-16).

However, an important tool to control the effect of extraneous variables (especially systematic error) on the dependent variable is random assignment. Also referred to as randomisation, it involves assigning subjects to different experimental conditions on chance, with every subject having a non-zero probability of being assigned to one of the conditions (Aronson *et al.*, 1990; Shadish *et al.*, 2002). In fact, random allocation of participants (and test occasions) to conditions is a way of ensuring that the particular characteristics of participants have an equal chance of affecting the mean score in either condition (Sani & Todman, 2006). In other words, randomisation ensures the researcher that potential extraneous variables are random. This allows the researcher to infer that the differences observed in the means of the dependent variable in different conditions can be accounted for by the effects of the independent variable and mere sampling error, thereby enhancing the internal validity of the experiment (Oppewal, 2010a; Sani & Todman, 2006).

6.3.3 Experimental validity

In an experiment, 'validity' refers to the degree to which differences indicated by a measure of a dependent variable correspond to real differences in the dependent variable as conceptualised by the researcher (Aronson *et al.*, 1990). In order to interpret findings as a valid test of the hypothesised relationship between independent and dependent variables, the researcher needs to be concerned about four issues: statistical conclusion validity, internal validity, external validity, and construct validity. Statistical conclusion validity is the appropriate use of statistical procedures to infer whether the presumed independent and

dependent variables covary (Cook & Campbell, 1979), including whether randomisation has been properly implemented (Oppewal, 2010b). An experiment has internal validity when the differences in dependent variable measures are the result of the manipulation of independent variables (Aronson *et al.*, 1990). In other words, it indicates whether there is a significant difference between or among the effects of the conditions of the experiment, assuming that the experiment has not been affected by extraneous variables (Campbell, 1957). Internal validity may be increased by designing a well-controlled experiment that allows the researcher to control for the effects of confounding extraneous variables, and reduces the sources of random error (Aronson *et al.*, 1990). External validity exists when the inferences made about a causal relationship are generalizable to other persons, settings, treatment variables, or measurement variables (Shadish *et al.*, 2002). External validity may be enhanced by increasing the heterogeneity of the sample and experimental situations, by conducting more studies to purify the empirical realisation of the conceptual variables, or by using multiple response measures (Aronson *et al.*, 1990). Of the two types of validity, internal validity is more important, because if there is no conclusion about the causal relationship of interest, the question of generalizability will not be raised (Campbell, 1957). Construct validity refers to providing an indication that the dependent variable, such as a specific behaviour, in the experiment is validly represented by corresponding conceptual construct used to measure the behaviour (Aronson *et al.*, 1990). Construct validation involves the research setting, the experimental manipulations, and the way dependent variables are operationalized (Oppewal, 2010b).

6.3.4 Laboratory and field experiments

Experimental research can be broadly categorised into two main types: laboratory experiments and field experiments. In a laboratory experiment, the experimental treatments are introduced in an artificial setting removed from the ordinary situations of routine life. In this type of research study, the experimenter is able to minimise the variance of the extraneous variables. This is achieved by conducting the experiment in an isolated physical situation by manipulating independent variables under rigorously specified, operational, and controlled conditions. In contrast, in a field experiment, the experimental treatments are introduced in a completely natural environment, where the variables of interest normally occur. In this type of research, the independent variables are manipulated by the researcher under carefully controlled conditions to the extent that the situation allows. Usually, the

respondents may not be aware that an experiment is being conducted, leading to more natural responses (Aaker & Lee, 2006). Laboratory experiments tend to have a higher level of internal validity than do field experiments because they allow experimenters to have more control over the setting; whereas, field experiments have more external validity than do laboratory experiments because the researcher has less control over the extraneous variables (Aaker & Lee, 2006; Malhotra, 2005).

6.3.5 Randomised and quasi-experiments

An attribute common to all experiments is the control of treatments' levels (Shadish *et al.*, 2002) This means that the researcher controls the application of different levels of different independent variables to observe their effects on one or more dependent variables (Yaremko, Harari, Harrison, & Lynn, 1986). However, in response to the needs of different disciplines, other types of experimental research have developed (Winston & Blais, 1996), two of which include: randomised experiments and quasi-experiments. Randomised experiments are those in which units are assigned to treatment levels, or treatments are assigned to units, on a random basis, for example, by the toss of a coin or use of a table of random numbers. Random assignment results in two or more groups of units that are similar to each other on average. Therefore, any differences observed in outcomes across groups are likely to be due to the treatment, not to the pre-existing differences between groups (Shadish *et al.*, 2002). Quasi-experiments are experiments in which there is no random assignment; instead, the assignment of units to conditions is by selection; that is, either the researcher decides which subject should receive which treatment, or subjects choose treatments for themselves (Campbell & Stanley, 1963). In quasi-experiments, the cause is manipulable and occurs before the effect is measured; however, a quasi-experimental design provides less compelling support for drawing conclusions about causal effect. Therefore, the researcher needs to offer plausible alternative explanations, and then use logic, design, and measurement to assess whether any of the independent variables is affecting the outcome variable that can explain any observed effect (Shadish *et al.*, 2002).

A relevant type of experimental design is factorial design. In factorial designs, the effects of two or more independent variables are tested so that every level of one variable occurs with every level of the other variables. Each different combination of the levels is named an interaction effect and represents a separate condition. Specifically, an interaction occurs when

the effect of one independent variable depends on the value of the other (Aronson *et al.*, 1990). From another perspective, one variable moderates the effect of the other. A moderator variable addresses the question about "when" or "for whom" an independent variable most strongly predicts or causes a dependent variable. More specifically, a moderator is a variable that modifies the direction or strength of a relation between a predictor and an outcome (Baron & Kenny, 1986). Thus, a moderator effect is equal to an interaction whereby the effect of one independent variable depends on the level of another (Frazier, Baron, & Tix, 2004).

6.3.6 Real behaviour and scenario-based experiments

In the current literature on marketing research, the experimental designs being applied can also be categorised from another perspective: scenario-based experiments and real-behaviour experiments. In a scenario-based experiment, the respondents are asked to imagine themselves in a hypothetical situation which corresponds to one of the experimental conditions that the researcher has manipulated with the intention of examining its effects on consumers' reactions. Then the respondents are asked to respond to the questions related to the simulated condition in the questionnaire. This type of experiment has been used by many researchers (Fujita *et al.*, 2006; Kaltcheva & Weitz, 2006; Oppewal & Koelemeijer, 2005) in various retailing studies. The main advantage of this type of experimental design is that it is more convenient and efficient to implement in terms of time and costs. On the other hand, its disadvantage is that it is difficult for some consumers to imagine themselves in certain conditions. As a consequence, their responses to the related measures may not be based on realistic situations as intended by the researcher, thereby limiting the external validity of the study. In a real-behaviour experiment, consumers are exposed to a real marketing stimulus in a real-life setting and then their reactions to that condition are observed or their perceptions towards that condition are measured with a questionnaire. This is the main type of experimental research approach adopted by many authors in different retailing studies (Iyengar & Lepper, 2000; Mishra *et al.*, 2010; Okada, 2005). Unlike scenario-based experimental design, the advantage of real-behaviour experiment is that it can yield more realistic results since the study subjects are exposed to real experimental conditions. Therefore, the external validity is more easily ensured. On the whole, the main difference between the two types of experiment is the setting in which they are conducted and the phenomenon they are studying.

The main objective of the present thesis is to examine the effects of the interactions among different levels of consumers' shopping motivations (as a situational state variable), type of product, temporal needs congruency, and access convenience (as three marketing variables) on consumers' perceptions of regulatory fit in and their intention to redeem mobile coupon offers. Therefore, there is an explicit need to use a technique that is able to enhance the internal validity of the investigation as much as possible. In this regard, a core advantage of an experimental research is its ability to control for the measurement errors through random allocation of respondents to experimental conditions. Therefore, to test these cause-and-effect relationships, an experiment will be the most relevant method (Aronson *et al.*, 1990; Oppewal, 2010b; Shadish *et al.*, 2002).

Indeed, due to the context of the thesis, conducting a real-life experiment would be somewhat difficult. Therefore, for the present thesis, a scenario-based experiment is the primary method used for testing the hypotheses pertaining to conceptual model 1 and conceptual model 2. In particular, the experiments conducted in this thesis to test conceptual model 1 involve the manipulation of the variables of: shopping motivation, type of product, and temporal needs congruency; and the experiments conducted to test conceptual model 2 involve the manipulation of the variables of: shopping motivation, type of product, and access convenience in conceptual model 2. These variables are manipulated across different conditions by presenting the participants with hypothetical scenarios and by changing the wording of the scenarios. After reading a scenario, the respondents are asked to answer the questions measuring dependent variables, namely, regulatory fit and intention to redeem. In the following sections, the design of the experiments conducted to test conceptual model 1and conceptual model 2 are detailed.

6.4 Scenario-Based Experiment: Conceptual Model 1

Conceptual model 1 addresses the moderating role of shopping motivation in the effects of type of product and temporal needs congruency on intention to redeem through the mediating effect of regulatory fit. As noted in Chapter 5, it was proposed that: first, consumers' shopping motivations (hedonic or utilitarian), type of product offered by a mobile coupon (hedonic or utilitarian), and the congruity of the offer with temporal needs (current or future) prime a certain type of regulatory focus (promotion or prevention) superior in strength to the other type. It was further proposed that the compatibility between the type of regulatory focus

activated by shopping motivation, product type, and temporal needs congruency leads to the experience of regulatory fit and consequently intention to redeem the mobile coupons. However, it was predicted that hedonic and utilitarian shoppers would respond differently to compatible and incompatible offers, in that while utilitarian shoppers are responsive to compatible offers more that they are to incompatible offers, hedonic shoppers are responsive to both compatible and incompatible offers.

6.4.1 Independent variables

There are three independent variables in conceptual model 1, including:

1. *Product type*: represents the type of product offered by a personalised mobile coupon, which has two treatment levels: hedonic (e.g., movie DVD, movie ticket) and utilitarian (e.g., detergent, shampoo).

2. *Temporal needs congruency*: refers to the congruity of the offered product with the temporality of consumers' needs, which has two treatment levels: current needs (e.g., when a particular product has not been purchased for a while) and future needs (e.g., when a particular product has been purchased recently).

3. *Shopping motivation*: represents consumers' primary shopping goal on a certain shopping trip, which has two treatment levels: hedonic shopping (e.g., when consumers visit a shopping centre to browse around, have fun, have a time-out from their daily routines and so on) and utilitarian shopping (e.g., when consumers visit a shopping centre to buy in an efficient and timely manner some necessary items that they need). As another independent variable, shopping motivation interacts with product type and temporal needs congruency to affect consumers' perceived regulatory fit and their intention to redeem.

6.4.2 Type of experimental design

As noted above, the experimental research designed to test conceptual model 1 includes three independent variables, each with two treatment levels. Each respondent responded to the questions related to only one experimental condition, and all combinations of all levels of all independent variables were included in the study. Therefore, it was a 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (temporal needs

congruency: current vs. future) between-subjects full factorial design (Tabachnick & Fidell, 2007a). This resulted in 8 different experimental conditions, as presented in Table 6.1.

Table 6.1: Experimental design for conceptual model 1

Condition	Shopping Motivation	Product Type	Temporal Needs Congruency
1	Hedonic	Hedonic	Current needs
2			Future needs
3		Utilitarian	Current needs
4			Future needs
5	Utilitarian	Hedonic	Current needs
6			Future needs
7		Utilitarian	Current needs
8			Future needs

6.4.3 Study subjects and sampling procedure

The sampling frame for collecting data to test conceptual model 1 consisted of the members of an international online panel recruited by a company that hosts online surveys. The sampling criterion for recruiting sampling units was that the subjects should be over 18 years old. Experimental practice suggests that for every experimental condition at least 30 sampling units are required. In the experiments conducted to test conceptual model 1, there were 8 conditions whose differences were to be tested. Therefore, the number of participants required was at least 8 * 30 = 240. In order to increase the internal validity of the experiments, the distribution of different questionnaires (each containing a different scenario) among the sample units was randomised. Randomisation was performed using the survey research tool 'Qualtrics'.

6.4.4 Research questionnaire to test conceptual model 1

The following subsections present the details of the different parts of the research questionnaire designed for collecting data to test conceptual model 1. The order of the subsections explained below is of the same order as they were presented to the respondents.

6.4.4.1 Section A: General questions

After reading the explanatory statement and a general introduction to the survey, participants answered three general questions about their coupon usage. Specifically, the questions asked

respondents whether in the last six months they had redeemed any paper-based, Internet-based, or SMS coupon. The three general questions are presented in Table 6.2.

Table 6.2: General questions about coupon usage*

This study is about mobile coupons. *Coupons generally offer price savings on a specific product, are valid for a certain time period, and can be redeemed in specified retail stores.*

1) In the last six months, have you redeemed any paper-based coupons (clipped from newspapers, magazines, brochures or on sales receipts, etc.)?

2) In the last six months, have you redeemed any Internet-based coupons (found on the web or that were sent to you by email)?

3) In the last six months, have you redeemed any SMS-based coupons (sent to you by SMS)?

* All the questions were answered on a 2-point "*Yes/No*" scale

6.4.4.2 Section B: Describing a typical mobile coupon service

Having answered general questions, participants were presented with a general description of a typical mobile couponing service. The aim of providing this description was to familiarise the participants with this type of service due to its novelty in many countries. The description was derived from the current explanations of such a technological platform in mobile marketing literature (Dickinger & Kleijnen, 2008; Gopal & Tripathi, 2006; Xu *et al.*, 2009). This description was followed by four questions asking about the respondents' awareness, usage, perceived usefulness, and perceived attractiveness of such a service. The description of the mobile service technology and the subsequent questions incorporated in the research questionnaire are presented in Table 6.3.

Table 6.3: Description of a typical mobile coupon service and related questions

Specifically, this study is about a particular SMS coupon service.

This service involves sending SMSs containing discounted offers to consumers who visit participating shopping centres.

To use this service, consumers need to subscribe only once and subscription is free. Users subscribe by sending a code via SMS to the mobile service company.

In turn, they receive a bar code sticker or tag to put on their key ring or mobile phone.

To receive SMS offers, users need to swipe (or scan) this bar code at self-service kiosks strategically located within the shopping centre, again free of charge.

This means users receive offers only when they are shopping and when they are willing to, so there is no possibility of spamming.

The offers can be redeemed instantly at the indicated retail store, or they can be stored in the user's mobile phone for use during a later visit to the centre.

1) Are you aware of such a mobile service existing in any shopping centre? [a, b]
2) Are you subscribing to this type of service in any shopping centre? [a]
3) How useful would you regard such a mobile service? [c]
4) How appealing would you regard such a mobile service? [d]

[a] Answered on a 2-point *Yes/No* scale
[b] If answered "*No*", the respondent would skip the second question
[c] Measured on a 7-point bipolar scale *1 = not useful at all, 7 = very useful*
[d] Measured on a 7-point bipolar scale *1 = not appealing at all, 7 = very appealing*

6.4.4.3 Section C: Shopping scenarios

In this section, participants were provided with a hypothetical shopping scenario. Since the study had a full factorial between-subjects design with eight conditions, each respondent was randomly assigned to one of the eight questionnaires. The participants were asked to imagine themselves in the described situation. In the following subsections, the way that the variables of shopping motivation, type of product, and temporal needs congruency were manipulated is explained.

6.4.4.3.1 Manipulation of shopping motivation

The moderating variable shopping motivation was manipulated using written hypothetical scenarios in which the respondents were asked to imagine themselves visiting a shopping centre for a specific purpose, namely, either doing some specific shopping tasks or for recreation. This manipulation was borrowed from the existing literature (Kaltcheva & Weitz, 2006). Other research has also proved this method of manipulation of shopping goals to be successful (Chowdhury, Ratneshwar, & Mohanty, 2009; Spears, 2006). Table 6.4 demonstrates how hedonic and utilitarian shopping motivations were manipulated.

Table 6.4: Manipulation of shopping motivation

You will now be presented with a hypothetical shopping scenario. Please read through the scenario and try to imagine yourself in the described situation. Take your time as keeping the details in mind throughout the survey is important:
Hedonic Shopping Condition
It is a weekend and you feel somewhat bored. It is pouring rain and you cannot do anything outdoors. You also do not find anything interesting on TV or the Internet. As you have not much else to do, you think that visiting a nearby shopping centre could be a good way to amuse yourself. So, you decide to go to the shopping centre ... Now you are at the shopping centre.
Hedonic Shopping Condition
It is a weekend and you are doing your weekly grocery shopping at a nearby shopping centre. All you intend to do is to complete your shopping tasks as soon as possible and go back home right away.

6.4.4.3.2 Manipulation of product type

In order to manipulate the independent variable type of product respondents were asked to imagine themselves requesting and receiving a mobile coupon offering them a certain product. Specifically, for the hedonic product type condition, respondents were presented with a movie DVD offer; while for utilitarian products, the respondents were presented with a detergent offer. Table 6.5 displays the excerpts from the scenarios associated with the manipulation of product type.

Table 6.5: Manipulation of product type

Hedonic product condition
Recently, you have subscribed to a mobile coupon service similar to the one described above. While you are browsing around, you decide to see whether there is any offer available for today. You swipe your mobile phone to receive an SMS coupon, and after a couple of seconds, you receive the following offer on your mobile phone: • *Come to Movie Land and buy any of the latest new releases of movie DVDs with 30% price off (Valid: Four weeks).*
Utilitarian product condition
Recently, you have subscribed to a mobile coupon service similar to the one described earlier. While you are hanging around, you decide to see whether there is any offer available for today. You swipe your mobile phone to receive an SMS coupon, and after a couple of seconds, you receive the following offer on your mobile phone: • *Come to All Stuff and buy any type of detergent of your choice with 30% price off (Valid: four weeks).*

6.4.4.3.3 Manipulation of temporal needs congruency

The independent variable temporal needs congruency was manipulated by changing the wording of scenarios to convey the suitability of the offer to the participants' either current or future needs. According to Table 6.6, it was expected that when a certain type of product has not been purchased for a relatively long time, it leads the respondents to think that they need the offer now (indicating current needs congruency of the offer); whereas, when the product has been purchased recently, it may cause the respondents to think that they do not need the offer now, but at some other time in the future (indicating future needs congruency of the offer).

Table 6.6: Manipulation of temporal needs congruency

Type of Product	Temporal needs congruency	Stimulus
Hedonic (movie DVD)	Current needs	*Suppose it has been a while since you bought a movie DVD.*
	Future needs	*Suppose, however, you just bought a movie DVD yesterday.*
Utilitarian (detergent)	Current needs	*It has been a while since you bought some detergent.*
	Future needs	*Suppose, however, you just bought some detergent yesterday.*

In order to control for the respondents' specific preferences for certain types of movies or brands of detergent, in the scenarios offering a hedonic product, participants were asked to suppose that Movie Land offers all of their favourite types of movies; similarly, in the scenarios offering a utilitarian product, participants were asked to suppose that All Stuff offers all of their favourite brands of detergent. "Movie Land" and "All Stuff" were the names of two fictitious retailers. The reason for using fake brands was that some consumers might have their own brands of interest, which might influence their reactions to product offers, as proven in the literature (Chaudhuri & Holbrook, 2001; Ramanathan & Dhar, 2010). These excerpts are displayed in Table 6.7.

Table 6.7: Controlling for the effect of specific preferences

Product offer	Excerpt from scenario
Hedonic (movie DVD)	*Suppose the latest new releases offered by Movie Land include all of your favourite types of movies.*
Utilitarian (detergent)	*Suppose All Stuff stocks all of your favourite brands of detergent.*

The "30%" discount for face value as well as the "four weeks" for expiry date were fixed in all scenarios. Again, they were chosen on the basis of personal discussions in pre-tests.

Specifically, respondents agreed that a 30% discount on such products is a moderate level; they also agreed that four weeks is a sufficient time to redeem a coupon.

As mentioned previously, in order to test conceptual model 1, studies 1 and 2 followed by studies 3 and 4 were conducted. As will be detailed in the following sections, study 3 and study 4 were the replications of study 1 and study 2, respectively, but with different products. In particular, in studies 3 and 4, instead of a movie DVD and detergent, a movie ticket and shampoo were used as hedonic and utilitarian products, respectively. The choice of a movie DVD and movie ticket as hedonic products and detergent and shampoo as utilitarian products was based on pre-tests through both online questionnaires as well as face-to-face discussions. In both cases, the participants were presented with one of the hypothetical shopping situations described above and then asked to specify the types of product offers that would match their main shopping goal. Table 6.8 exhibits some of the examples of the product offers preferred by participants in such a context.

Table 6.8: Examples of types of product offers participants preferred to receive

Hedonic Product	Utilitarian Product
Books	Body soap
Bowling	Clothes/Dress
Candles	Cologne/Deodorant
Computer games/Video games	Detergent
Foods/Drinks/Snacks	Grocery
Ice cream/Shakes	Lotion
Movie DVDs/CDs	Shampoo
Movie tickets	Shaving cream
Music stores/Music albums	Toilet paper
Theme parks	Toothpaste

6.4.4.4 Section D: Dependent variables

As predicted in hypotheses H1, H2, and H3, while hedonic shopping motivation, hedonic product type, and future needs congruency prime a promotion focus, utilitarian shopping motivation, utilitarian product type, and current needs congruency prime a prevention focus. These hypotheses were tested by conducting study 1, and its replication, study 3. Hypotheses H4a, H4b, H5a, H5b, and H6 addressed the effects of compatibility (and incompatibility) between consumers' shopping motivation, type of product, and temporal needs congruency on their intention to redeem via the mediating role of regulatory fit. These hypotheses were tested

by conducting study 2, and its replication, study 4. The hypothetical scenarios and the manipulation check measures for studies 1 and 3 were the same as those for studies 2 and 4, correspondingly. However, as depicted in Table 6.9, in studies 1 and 3, the dependent variables were consumers' perceptions of regulatory focus separately primed by shopping motivation, product type, and temporal needs congruency; whereas in studies 2 and 4, the dependent variables comprised consumers' perceptions of regulatory fit in the offered personalised mobile coupon and their intention to redeem the offer. In the following subsections, first the dependent variables for studies 1 and 3, and then, the dependent variables for studies 2 and 4 are outlined.

Table 6.9: Dependent variables in studies 1 and 2 and their replications, studies 3 and 4

Study 1 and Study 3 (Hypotheses H1, H2, and H3)	
Independent variables	**Dependent variables**
Shopping motivation (hedonic vs. utilitarian)	Regulatory focus primed by shopping motivation
Product type (hedonic vs. utilitarian)	Regulatory focus primed by type of product
Temporal needs congruency (current vs. future)	Regulatory focus primed by temporal needs congruency
Study 2 and Study 4 (Hypotheses H4a, H4b, H5a, H5b, H6)	
Independent variables	**Dependent variables**
Shopping motivation (hedonic vs. utilitarian) Product type (hedonic vs. utilitarian) Temporal needs congruency (current vs. future)	Regulatory fit Intention to redeem

6.4.4.4.1 Regulatory focus primed by each independent variable

In study 1 (and study 3), after being presented with hypothetical shopping scenarios, respondents answered a number of questions which measured the regulatory focus primed by each of the independent variables separately. Specifically, three different sets of measurement scales were adopted from the literature on regulatory focus theory and modified in wording. The main aim of using these scales was to measure whether consumers' shopping motivation, the type of product they have been offered, and the congruency of the offer with their temporal needs, each prime a relatively more promotion or prevention focus. The measures of regulatory focus primed by shopping motivation, type of product, and temporal needs congruency are displayed in Table 6.10. The research questionnaires for study 1 and study 3 are given in Appendix 1 and Appendix 3, respectively.

Table 6.10: Measures of regulatory focus primed by independent variables [a]

Regulatory focus primed by shopping motivation (Mishra *et al.*, 2010; Mogilner *et al.*, 2008; Pennington & Roese, 2003; Ramanathan & Dhar, 2010)
Considering the purpose of my visit to the shopping centre, if I were on this shopping trip, I would mainly focus on:
1) All the things I need to do to act sensibly vs. All the things I could do to enjoy myself 2) Pursuing my oughts and duties vs. Pursuing my ideals and desires 3) Pursuing the things that I need vs. Pursuing all the things that I want 4) Avoiding making mistakes vs. Taking the full advantage of opportunities
Regulatory focus primed by type of product (Mishra *et al.*, 2010; Ramanathan & Dhar, 2010)
Imagining myself purchasing a movie DVD/movie ticket (detergent/shampoo) makes me think of:
1) Something I ought to buy to fulfil my obligations and responsibilities vs. Something I aspire to buy for pleasure and happiness 2) Pursuing my oughts and duties vs. Pursuing my ideals and desires 3) Following my needs vs. Following my wants 4) Assuring my safety vs. Having variety
Regulatory focus primed by temporal needs congruency (Mishra *et al.*, 2010; Mogilner *et al.*, 2008; Pham & Chang, 2010; Ramanathan & Dhar, 2010)
Imagining that "it has been a while since I bought a movie DVD/movie ticket (detergent/shampoo) (I just bought a movie DVD/movie ticket (detergent/shampoo) yesterday)" makes me think of:
1) Buying a movie DVD/movie ticket (detergent/shampoo) now vs. Buying a movie DVD/movie ticket (detergent/shampoo) in the future 2) Not missing the opportunity to buy this movie DVD/movie ticket (detergent/shampoo) vs. Making the most of the opportunity to buy this movie DVD/movie ticket (detergent/shampoo) 3) The least things I can have vs. The most things I can gain 4) Avoiding a negative decision outcome vs. Gaining a positive decision outcome

[a] Measured on 7-point bipolar scales with the left anchor indicating prevention focus and the right anchor indicating promotion focus.

6.4.4.4.2 Perceived regulatory fit and redemption intention

In study 2 (and study 4), after being exposed to hypothetical shopping scenarios, participants were asked questions addressing their perceptions of regulatory fit in the personalised mobile coupon offer they had received and their intentions to redeem the offer (Table 6.11). In this thesis (conceptual model 1), the variable 'perceived regulatory fit' indicates the degree to which consumers perceive that the type of product they have been offered or the congruency of the offer with the consumers' temporal needs helps the consumers accomplish their focal shopping goals. The variable 'intention to redeem' refers to the likelihood of redeeming the personalised mobile coupon offer.

In order to measure regulatory fit, eight items were used. Specifically, four items (items 1 to 4 in Table 6.11) were adopted from the literature on regulatory fit (Freitas & Higgins, 2002; Lee *et al.*, 2010) and modified in wording. The other four items were generated drawing on the definition of the concept of regulatory fit in the literature (Aaker & Lee, 2006; Avnet & Higgins, 2006) (items 5 to 8 in Table 6.11). The rationale for self-generating these four items was to capture a broader definition of regulatory fit that applies to a mobile coupon service context. This broader conceptualisation of regulatory fit incorporates two components: first, the compatibility between regulatory orientations induced by mobile coupons' cues (i.e., type of product or temporal needs congruency) and regulatory orientations elicited by consumers' shopping motivations; second, the compatibility between the outcomes achieved by redeeming a mobile coupon offer and consumers' regulatory goals. The questionnaires for study 2 and study 4 are given in Appendix 2 and Appendix 4, respectively.

Table 6.11: Intention to redeem and perceived regulatory fit

Regulatory fit [a] (Freitas & Higgins, 2002; Lee *et al.*, 2010)
Considering the scenario as described above, I would say this mobile coupon offer:
1) Increases the enjoyment of my shopping 2) Makes me feel right about redeeming it 3) Is just right for me 4) Keeps me engaged in my main shopping motivation 5) Is in harmony with my shopping purpose 6) Helps me achieve my intended shopping outcome 7) Makes it easy for me to accomplish what I am in the shopping center for 8) Concerns what I need on this shopping trip
Intention to redeem [b] (Dickinger & Kleijnen, 2008)
Considering the scenario as described above, I would say this mobile coupon offer:
• How likely would you be to go to Movie Land/All Stuff and redeem this offer during your current visit?

[a] Measured on 7-point Likert scales 1= strongly disagree, 7 = strongly agree
[b] Measured on a 7-point bipolar scale 1= very unlikely, 7 = very likely

6.4.4.5 Section E: Manipulation checks

Subsequent to the measures of dependent variables were manipulation checks for the participants' perceptions of shopping motivation, the type of product offered, and the congruity of the offer with temporal needs. In order to verify the manipulation of shopping motivation, six items were adopted from the existing literature (Arnold & Reynolds, 2003; Babin *et al.*, 1994; Ganesh *et al.*, 2007) and their wording modified. Three items measured the respondents' perceptions of hedonic shopping and three items measured their perceptions of utilitarian shopping. In order to confirm the manipulation of type of product, six items available in the extant literature (Voss *et al.*, 2003) were used. Three items measured the participants' perceptions of the hedonic nature of purchasing the offered product, and three items measured the participants' perceptions of the utilitarian nature of purchasing the offered product. Finally, to verify the manipulation of temporal needs congruency, three scale items were generated by the researcher. The reason for self-generating the items was that, to the best of the researcher's knowledge, there were no published scales for temporal needs congruency.

Table 6.12 indicates the manipulation check measures for shopping motivation, product type, and temporal needs congruency.

Table 6.12: Manipulation check measures

Shopping motivation [a]: (Arnold & Reynolds, 2003; Babin *et al.*, 1994; Ganesh *et al.*, 2007)
According to the scenario, the main purpose of my visit to the shopping center is:
Hedonic: 1) To relieve my sense of boredom 2) To feel better 3) To amuse myself **Utilitarian:** 4) To purchase only the necessary items that I need in the least amount of time 5) To get my shopping tasks done in the most efficient way 6) To find what I need to buy and not to go to other shops
Type of product [a]: (Voss *et al.*, 2003)
Purchasing a movie DVD(movie ticket)/detergent(shampoo) is:
Hedonic: 1) Fun 2) Amusing 3) Enjoyable **Utilitarian:** 4) Necessary 5) Functional 6) Practical
Temporal needs congruency [b]: (Newly developed)
Considering to the scenario as described above, I would say:
1) I may need to buy movie DVD (movie ticket)/detergent (shampoo) now vs. I may need to buy movie DVD(movie ticket)/detergent (shampoo) in the future 2) This mobile coupon is offering me something that I may need now vs. This mobile coupon is offering me something that I may need in the future 3) This offer suits what I may need in the current shopping situation vs. This offer suits what I may need in a future visit to the shopping center

[a] Measured on 7-point Likert scales 1= strongly disagree, 7 = strongly agree
[b] Measured on 7-point bipolar scales: 1= current needs congruent ; 7= future needs congruent

6.4.4.6 Section F: Regulatory focus primed by shopping motivation

In studies 2 and 4, in order to reconfirm that a certain type of regulatory focus that is relatively superior in strength to the other type is primed by consumers' shopping motivation, the regulatory focus primed by shopping motivation was measured using the same items as the ones in the first part of Table 6.10. In particular, it was presumed that while hedonic shopping motivation primes relatively more situational promotion focus than prevention focus, utilitarian shopping motivation primes relatively more situational prevention focus than promotion focus.

6.4.4.7 Section G: Controlling for the effect of coupon proneness

Previous research has shown that consumers' coupon proneness can interact with other features of a coupon (e.g., the coupon's face value or stipulating the final price to be paid on the coupon) to affect the consumers' responses to coupons (Guimond, Kim, & Laroche, 2001; Swaminathan & Bawa, 2005). Therefore, in order to control for the effect of coupon proneness, the measure of coupon proneness developed by Lichtenstein, Netemeyer, and Burton (1990) was incorporated in the questionnaire. The measurement items are displayed in Table 6.13. However, only the first four items were used in the research questionnaire. The rationale for removing the four items is that the focus of the current research is on a product category level, instead of a brand level, so items 7 and 8 were not used. In addition, item 6 was not relevant to a mobile coupon context. Finally, in a pre-test, a reliability analysis using Cronbach's alpha indicated that removing item 5 would strengthen the internal consistency of the scale to a large scale; therefore, item 5 was removed from the measure.

Table 6.13: Measure of coupon proneness [a]

1) Redeeming coupons makes me feel good.
2) When I use coupons, I feel that I am getting a good deal.
3) I enjoy using coupons, regardless of the amount I save by doing so.
4) Beyond the money I save, redeeming coupons gives me a sense of joy.

5) Coupons have caused me to buy products I normally would not buy.
6) I enjoy clipping coupons out of the newspapers.
7) I have favourite brands, but most of the time I buy the brand I have a coupon for.
8) I am more likely to buy brands for which I have a coupon.

[a] Measured on 7-point Likert scales 1= strongly disagree, 7 = strongly agree

6.4.4.8 Section H: Task checks

Before collecting the participants' demographics information, the participants' perceptions of the experimental task they had undertaken were evaluated. Specifically, the respondents assessed the extent to which the scenario was realistic, the degree of difficulty they had imagining themselves in the described scenario, the extent to which the price discount on that type of product was common, and the amount of time they had to redeem the coupon given its expiration date. Finally, the respondents were asked about the purpose of the study. The task check questions are presented in Table 6.14.

Table 6.14: Task check questions

1) How realistic do you think is the scenario? [a]
2) How difficult was it for you to imagine yourself in the described situation? [b]
3) How common do you think this price discount is on the offer for this type of product? [c]
4) Given the expiry date of the coupon, how much time do you think you would have to redeem the offer? [d]
5) What do you think the purpose of this study was? [e]

[a] 7-point Likert scale anchoring from "not realistic at all" to "very realistic"
[b] 7-point Likert scale anchoring from "very difficult" to "not difficult at all"
[c] 7-point Likert scale anchoring from "very uncommon" to "very common"
[d] 7-point Likert scale anchoring from "very little time" to "a lot of time"
[e] Open-ended question

6.4.4.9 Section I: Demographics

Finally, the participants' demographic data was collected. This included data regarding the respondents' gender, age, education, income, employment status, and life-stage. The details of all the items incorporated in the research questionnaires relating to studies 1 to 4 are presented in Appendices 1 to 4, respectively.

6.5 Test Conceptual Model 2: Scenario-based Experiment

Conceptual model 2 addresses the moderating role of shopping motivation on the effects of type of product and access convenience on the intention to redeem through the mediating effect of regulatory fit. As noted in Chapter 5, first, it was proposed that access convenience of a retailer's location (high vs. low) elicits a certain type of construal level (concrete vs. abstract) at which the retailers' location is represented. Then, it was proposed that the compatibility among shopping motivation, product type, and the construal level induced by

the retailer's spatial distance results in the experience of regulatory fit and subsequently intention to redeem. However, it was predicted that hedonic and utilitarian shoppers would have different responses to compatible and incompatible offers. In conceptual model 2, it is assumed that the products offered by a personalised mobile coupon are congruent with current needs. In the following sections, the experimental and quasi-experimental methodologies designed to test these propositions are described.

6.5.1 Independent variables

Conceptual model 2 is comprised of three independent variables. Two of these independent variables (i.e., product type and shopping motivation) are the same as the ones for conceptual model 1, while the third one is 'access convenience, which has replaced the variable temporal needs congruency. Access convenience indicates: the convenience of access to the retailer's location to redeem the coupon given the consumers' current location. This variable has two treatment levels: low access convenience (e.g., the retailer's store is one store away and it takes less than one minute to reach it) and high access convenience (e.g., the retailer's store is at the other end of a shopping mall and it takes about 10 minutes to reach it).

6.5.2 Type of experimental design

Conceptual model 2 was tested by conducting two different types of experiments. The first type of experiment was similar to the ones conducted to test conceptual model 1. In particular, this included a 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (access convenience: high convenience vs. low convenience) between-subjects full factorial design (Field, 2009; Tabachnick & Fidell, 2007a). This resulted in 8 different experimental conditions, as depicted in Table 6.15. The second type of experiment was a quasi-experiment. In this experiment, instead of manipulating the independent variable shopping motivation, the participants' shopping motivation was measured after asking them to reveal their shopping motivations on their last (most recent) visit to a major shopping mall.

Table 6.15: Experimental design for conceptual model 2

Condition	Shopping Motivation	Product Type	Access Convenience
1	Hedonic	Hedonic	High
2			Low
3		Utilitarian	High
4			Low
5	Utilitarian	Hedonic	High
6			Low
7		Utilitarian	High
8			Low

6.5.3 Study subjects and sampling procedure

The sampling framework for collecting data to test conceptual model 2 was the members of an international online panel recruited by a company that hosts online surveys. The main criterion for recruiting the participants was that the subjects should be over 18 years old. For the 8 experimental conditions resulting from the full-factorial between subjects design of the experiments, a sample size of at least 8 * 30 = 240 was required. The questionnaires were randomised among sample units using the survey research tool Qualtrics.

6.5.4 Research questionnaire to test conceptual model 2

In the following sub-sections, the different parts of the questionnaire designed for collecting data to test conceptual model 2 are explained. The order of the following sub-sections is of the same sequence as they were presented to the participants. It should be mentioned that in all of the questionnaires used to test conceptual model 2 (studies 5 through 8), section A (general questions) and section B (explaining a typical mobile coupon service) were identical to the ones in the research questionnaires designed to test conceptual model 1(studies 1 to 4).

6.5.4.1 Section C: Shopping scenarios

As mentioned above, conceptual model 2 was tested using two different types of experimental designs. The first type was a scenario-based full factorial between subjects design in which all the three independent variables (i.e., shopping motivation, product type, and access convenience) were manipulated (study 5 and study 6). The second type of experimental design was a scenario-based quasi-experiment in which the participants were asked to reveal their shopping motivations on their most recent visit to a major shopping mall and then their shopping motivation was measured (study 7 and study 8).

6.5.4.1.1 Manipulation of shopping motivation

In study 5 and study 6 (the full-factorial between subjects experiments), the manipulation of shopping motivation type was similar to the ones in the previous studies. In study 7 and study 8 (the quasi-experiments), in order to measure the respondents' revealed shopping motivation, first, they were asked to think of the last time they visited a major shopping mall. Then, they answered some general questions about their last visit. The rationale for asking the general questions was to make their memory of their last visit more concrete. The respondents were then asked to specify their shopping motivations using measurement scales. In doing so, 9 scale items were adopted from the literature (Arnold & Reynolds, 2003; Babin *et al.*, 1994; Ganesh *et al.*, 2007) and modified in wording, with four items measuring utilitarian shopping motivation and five items measuring hedonic shopping motivation. The items are exhibited in Table 6.16. The questionnaires designed for studies 5 and 6 are given in Appendix 5 and Appendix 6, and the questionnaires designed for studies 7 and 8 are given in Appendix 7 and Appendix 8, respectively.

Table 6.16: Measuring revealed shopping motivation

General Questions

Please try to remember the last time you went to a major shopping mall. You may have visited the shopping mall for various reasons.

- How long ago was this visit? [a]
- How often do you visit this shopping center? [a]
- Did you visit by yourself or did you have company? [a]
- What was your perception of the time you had available for that visit? [b]

  1) I was not under time pressure vs. I was under time pressure
  2) I had enough time vs. I didn't have enough time
  3) I had plenty of time vs. I had very little time

- How long did your visit take? [a]

Measures of shopping motivation [c]

Now, please indicate the degree to which each of the following statements represents the main purpose of your last visit to that major shopping mall.

I visited that shopping mall:

Utilitarian (Babin *et al.*, 1994; Ganesh *et al.*, 2007)

1) To buy something that I needed
2) To find some items that I was looking for and leave the mall right away
3) To buy some necessary items
4) To find exactly what I wanted in the least amount of time

Hedonic (Arnold & Reynolds, 2003; Babin *et al.*, 1994; Ganesh *et al.*, 2007)

1) To socialize with others (friends, family members, etc.)
2) To browse around
3) To have a time-out from my daily routines
4) To relieve my sense of boredom
5) To make me feel better when I was in a down mood

Now, imagine that currently you are in a major shopping mall with a similar purpose as you specified above for your most recent visit to a mall.

[a] Multiple-choice single-answer questions
[b] Measured on 7-point bipolar scales: 1= under low time pressure ; 7= under low time pressure
[c] Measured on 7-point Likert scales 1= strongly disagree, 7 = strongly agree

6.5.4.1.2 Manipulation of product type

After being exposed to the manipulation of shopping motivation in the randomised experiments, or revealing shopping motivations in their last visit in the quasi-experiments, the respondents were presented with the manipulations of product type and access convenience. The manipulation of product type was similar to the ones in the previous studies. Specifically, in studies 5 and 6, movie ticket was used for a hedonic product offer and shampoo was used for a utilitarian product offer. Also, instead of Movie Land and All Stuff, two other fictitious brand names were used - Ciny Wood and My Pharmacy - for the hedonic and utilitarian product offers, respectively (Appendices 5 and 6). Likewise, in studies 7 and 8, magazine was used for a hedonic product offer and deodorant was used for a utilitarian product offer. Also, instead of Ciny Wood, the fictitious brand name Mag Hub was used for the hedonic product offer; whereas, the same fictitious brand name (My Pharmacy) was used for hedonic product offer (Appendices 7 and 8).

6.5.4.1.3 Manipulation of access convenience

According to the literature on service convenience (Berry *et al.*, 2002; Seiders *et al.*, 2007), shopping convenience (Huang & Oppewal, 2006; Seiders *et al.*, 2000) and also the literature on the factors influencing consumers' coupon redemption behaviour (Chiou-Wei & Inman, 2008; Soman, 1998), it is argued that consumers' perceptions of access convenience in a shopping mall context comprises two components: first, the distance from the point at which the consumers receive a mobile coupon offer to a retailer's location where the coupon can be redeemed; second, the time taken to reach the retailer's location. Previous research has demonstrated that for shopping trip decisions in urban contexts, the correlation between consumers' estimated time and distance are relatively high, even though the actual correlation between time and distance is low (Kang *et al.*, 2003). Therefore, to present the respondents with the treatment level pertaining to high access convenience, they were asked to suppose that the retailer (i.e., Ciny Wood or My Pharmacy) was one store away from their current location and it would take them less than one minute to reach there. In contrast, to expose the participants to the treatment level pertaining to low access convenience, they were asked to suppose that the retailer was located at the other end of the mall and it would take them about 10 minutes to get there.

In order to choose more realistic manipulations of time, a number of online pre-tests were conducted. First, the respondents were presented with a hypothetical shopping scenario. Then, they were asked to determine their perceptions of the length of time taken to reach the retailer as specified in the scenario. Most of the respondents agreed that 1-2 minutes would be a short time, whereas more than 10 minutes would be a long time to reach a retailer from their current location in a large shopping mall setting. In addition to specifying spatial distance and time to manipulate access convenience the phrase "next to main entrance" was included in the hypothetical mobile coupon message. The parts of the scenarios used in study 5 and study 6 in which the variables product type and access convenience were manipulated are displayed in Table 6.17.

Table 6.17: Manipulation of access convenience (study 5 and study 6)

Product Type	**Access Convenience**	**Excerpt from scenario**
Hedonic (movie ticket)	High	*… Come to Ciny Wood and buy a ticket for any of our movies now showing with 30% price off (to main entrance; Valid: four weeks).* *Suppose Ciny Wood is just one store from your current location (it will take you less than a minute to get there).*
	Low	*… Come to Ciny Wood and buy a ticket for any of our movies now showing with 30% price off (Next to main entrance; Valid: four weeks).* *Suppose Ciny Wood is located at the other end of the mall (it will take you about 10 minutes to get there).*
Utilitarian (shampoo)	High	*… Come to MyPharmacy and buy any shampoo of your choice with 30% price off (Next to main entrance; Valid: four weeks).* *Suppose My Pharmacy is just one store from your current location (it will take you less than a minute to get there).*
	Low	*… Come to MyPharmacy and buy any shampoo of your choice with 30% price off (Next to main entrance; Valid: four weeks).* *Suppose My Pharmacy is located at the other end of the mall (it will take you about 10 minutes to get there).*

Similar to the previous studies, in order to control for the respondents' preferences for certain types of movies or brands of shampoo, in the scenarios offering a hedonic product, participants were asked to suppose that Ciny Wood is a newly-opened cinema chain that shows all of their favourite types of movies; likewise, in the scenarios offering a utilitarian product, participants were asked to suppose that My Pharmacy is a newly-opened retailer that stocks all of their favourite brands of shampoo. Finally, as mentioned earlier, the variable temporal needs congruency was fixed to current needs. Table 6.18 exhibits the associated pieces from the written hypothetical scenarios.

Table 6.18: Controlling for the effect of specific preferences

Product Offer	**Excerpt from scenario**
Hedonic (movie ticket)	*Suppose Ciny Wood is a successful cinema chain that has recently started its business in your area and the movies it is showing now include your favorite choices.* *Also, suppose that it has been a while since you watched a movie.*
Utilitarian (shampoo)	*Suppose My Pharmacy is a successful retailing chain that has recently started its business in your area and it stocks all your favorite brands of shampoo.* *Also, suppose that it has been a while since you purchased a shampoo.*

6.5.4.2 Section D: Dependent variables

In conceptual model 2, the independent variables: construal level, regulatory fit, and intention to redeem. Hypothesis H7 predicted that the spatial distance from a retailer activates a certain type of construal level (concrete vs. abstract) which is relatively stronger than the other type. Specifically, it was predicted that a convenient location activates relatively more concrete than abstract construals, whereas an inconvenient location primes relatively more abstract construal than concrete construals. This hypothesis was tested by conducting study 5 and study 7. Hypotheses H8a, H8b, H9a, and H9b addressed the effects of compatibility among consumers' shopping motivation, type of product, and access convenience on the consumers' intention to redeem via the mediating role of regulatory fit. These hypotheses were tested by conducting study 6 and study 8.

6.5.4.2.1 Construal level activated by spatial distance

Having been presented with a shopping scenario, participants were asked to specify their preferences between two alternative descriptions or action identifications of some general activities. The activities were adopted from the Behaviour Identification Form developed by Vallacher and Wegner (1989). This is a questionnaire designed to measure individual differences in action identification. Each questionnaire item presents a target behaviour and asks respondents to choose between the two alternative descriptions of the target behaviour: one alternative describes the behaviour at a low-level action identification in terms of how it is performed, and the other one describes the behaviour at a high-level action identification in terms of why it is performed. Therefore, a convenient-to-access location is expected to activate concrete construals leading the participants to prefer low-level rather than high-level action identifications; in contrast, an inconvenient-to-access location is expected to activate abstract construals leading the participants to prefer high-level rather than low-level action identifications. While the original questionnaire contains 25 items, 5 items were removed since they were not relevant to the context of the study. The items are shown in Table 6.19. When collecting data, the order of presenting the behavioural descriptions was randomised using the online survey tool Qualtrics.

Table 6.19: Choosing between low- or high-level action identifications depending on access convenience

Behavioural Identification Items	Low-level (concrete) Description	High-level (abstract) Description
1) Making a list	Writing things down	Getting organized
2) Reading	Following lines of print	Gaining knowledge
3) Washing clothes	Putting clothes into the machine	Removing odours from clothes
4) Measuring a room for carpeting	Using a yardstick	Getting ready to remodel
5) Cleaning the house	Vacuuming the floor	Showing one's cleanliness
6) Painting a room	Applying brush strokes	Making the room look fresh
7) Paying the rent	Writing a check	Maintaining a place to leave
8) Caring for houseplants	Watering plants	Making the room look nice
9) Locking a door	Putting a key in the lock	Securing the house
10) Voting	Marking a ballot	Influencing the election
11) Filling out a personality test	Answering questions	Revealing what you are like
12) Tooth brushing	Revealing what you are like	Preventing tooth decay
13) Taking a test	Answering questions	Showing one's knowledge
14) Greeting someone	Saying “hello”	Showing friendliness
15) Resisting temptation	Saying "no"	Showing moral courage
16) Eating	Chewing and swallowing	Getting nutrition
17) Travelling by car	Following a map	Seeing countryside
18) Having a cavity filled	Going to the dentist	Protecting your teeth
19) Talking to a child	Using simple words	Teaching a child something
20) Pushing a doorbell	Moving a finger	Seeing if someone is home

6.5.4.2.2 Perceived regulatory fit and redemption intention

In study 6, the scales used to measure “regulatory fit” and “intention to redeem” were identical to those used in the previous studies (Table 6.11). However, in study 8, instead of using one item to measure intention to redeem, three items were adopted from the literature (Dabholkar & Bagozzi, 2002; Kleijnen *et al.*, 2007). Specifically, the respondents answered the question: “How likely would you be to go to Mag Hub/My Pharmacy to redeem this coupon during your current visit?” on three 7-point bipolar scales consisting of: 1= “Very unlikely”, 7= “Very likely”; 1= “Improbable”, 7= “Probable”; 1= “Definitely would not redeem”, 7= “Definitely would redeem”.

6.5.4.3 Section E: Manipulation checks

In the research questionnaires designed for the studies conducted in this thesis, manipulation checks appeared after measuring dependent variables, namely, perceptions of regulatory fit and intention to redeem. Manipulation check questions for the independent variables shopping motivation and type of product were similar to those in previous studies. To verify the manipulation of access convenience, four 7-point bipolar items were used. Three items were adopted from the relevant literature (Huang & Oppewal, 2006; Seiders *et al.*, 2007) and their wordings were modified to match the context of the current study. One item was self-generated, drawing on the definitions of spatial distance and location convenience in the relevant literature (Chiou-Wei & Inman, 2008; Fujita *et al.*, 2006). Table 6.20 displays the manipulation check measures for access convenience.

Table 6.20: Manipulation check measures for access convenience [a]

Considering to the scenario as described above:
1) Ciny Wood (My Pharmacy) would be far from my current location vs. Ciny Wood (My Pharmacy) would be close to my current location [b]
2) I cannot get to Ciny Wood (My Pharmacy) quickly and easily vs. I cannot get to Ciny Wood (My Pharmacy) quickly and easily [c]
3) Going to Ciny Wood (My Pharmacy) would not be convenient vs. Going to Ciny Wood (My Pharmacy) would not be convenient [c]
4) Having access to Ciny Wood (My Pharmacy) would be time-consuming vs. Having access to Ciny Wood (My Pharmacy) would be time-consuming [b]

[a] Adopted from Huang and Oppewal (2006) and Seiders, Voss, and Godfrey (2007)
[b] Self-developed
[c] Measured on 7-point bipolar scales: 1= low convenience, 7= high convenience.

6.5.4.4 Section F: Control variables

Similar to studies 2 and 4, consumers' coupon proneness was measured to control for its effect using the same measures. In studies 5 and 6, in addition to coupon proneness, participants' chronic regulatory orientation was measured using the scale validated by Haws, Dholakia and Bearden (2010). The items used are displayed in Table 6.21. The rationale for measuring chronic regulatory focus was to control for the effect of this type of personal trait on the regulatory focus situationally activated by shopping motivation. Evidence from the literature suggests that consumers' dispositional regulatory orientations can influence their product evaluation and choice (Herzenstein *et al.*, 2007) and their responses to promotions

(Ramanathan & Dhar, 2010). A point to mention is that the original chronic regulatory focus scale contains 10 items, with 5 items pertaining to promotion focus scale and 5 items pertaining to prevention focus scale. However, a pre-test conducted prior to main data collection (n=80) indicated that the removal of two items from each scale would increase Cronbach's alpha substantially. Therefore, in the main data collection, only three remaining items for each scale were used.

Table 6.21: Measuring chronic regulatory focus [a]

Please indicate the degree of your agreement with the following statements about yourself.
Promotion focus: 1) When I see an opportunity for something I like, I get excited right away. 2) I frequently imagine how I will achieve my hopes and aspirations. 3) I see myself as someone who is primarily striving to reach my "ideal self"—to fulfil my hopes, wishes, and aspirations. **Prevention focus:** 4) I worry about making mistakes. 5) I frequently think about how I can prevent failures in my life. 6) I frequently think about how I can prevent failures in my life.

[a] Measured on 7-point Likert scales 1= strongly disagree, 7 = strongly agree

In studies 7 and 8, magazine and deodorant were used as hedonic and utilitarian product offers, respectively. It was probable that some of the participants were heavy magazine readers or deodorant users. Hence, in addition to coupon proneness, the respondents' purchase frequency of and purchase spending on these two products were measured and included in the data analysis as covariates. **Table 6.22** demonstrates the way these two control variables were measured.

Table 6.22: Measuring the control variables Purchase Spending and Purchase Spending

How often do you purchase magazines (deodorant) in a retail store?
1) Once a week 2) One every second week 3) One every three weeks 4) Once a month 5) Once every second month 6) Once every three to four months 7) Once every five to six months 8) Less frequently
How much do you usually spend on magazines (deodorant) on each purchase occasion?
1) Less than $5 2) $5 - $10 3) $11 - $15 4) $16 - $20 5) $21 - $25 6) $21 - $30 7) $31 - $50 8) More than $50

The last two sections of the research questionnaires designed for studies 5 to 8 were identical to those designed for the previous studies. The full details of questionnaire materials associated with studies 5 to 8 are presented in Appendices 5 to 8, respectively.

6.6 Pre-testing the questionnaires

Pre-tests provide the researcher with the opportunity to revise the developed questionnaire scales and resolve some of the problematic measurement errors and, as a result, enhance the validity and reliability of the questionnaire (Cooper & Schindler, 2003). In the present thesis, before the main data collection was carried out, the final draft of each questionnaire (related to conceptual model 1 and conceptual model 2) underwent two phases of pre-tests: First, in order to enhance the face validity and content validity of the questionnaire, a comprehension and flow analysis was conducted. Two groups of people participated in this pre-test, including non-academic people, as they are more likely to resemble the sampling framework of the main study, and academic people, who had previous expertise in conducting research. This pre-test required the participants to complete the paper-based versions of the questionnaires.

Then, the participants were asked for their comments on the comprehensibility, flow, and the timing of the questionnaire. This resulted in some minor changes being made to the content of the questionnaire, including some grammatical corrections, re-phrasing of questions and so on. The average completion time was 15 minutes, which participants did not consider to be lengthy. The second pre-testing phase involved an online survey to test for timing, validity and reliability of the constructs, and other possible issues. Specifically, before collecting data for each main study (i.e., studies 1 to 4 for conceptual model 1, and studies 5 to 8 for conceptual model 2), a sample comprising 80 respondents from an international online panel was collected using online research tool Qualtrics. The average completion time was around 8 minutes for studies 1 and 3; 12 minutes for studies 2 and 4; 10 minutes for study 5; 12 minutes for study 6; 12 minutes for study 7; and 14 minutes for study 8.

6.7 Human ethics approval

Prior to starting the first data collection in the pre-test stage, the research questionnaire related to conceptual model 1 was submitted to Monash University Human Research Ethics Committee (MUHREC). All types of research activity that deal with or concern people, regardless of the funding source, must be reviewed by MUHREC. The approvals are granted by MUHREC in accordance with the guidelines and legislative frameworks set out in the 'National Statement on Ethical Conduct in Human Research'. The application contained a detailed explanation of the research objectives, sampling population and criteria for recruiting sampling units, research instrument, recruitment process, and issues related to the anonymity of the participants. In particular, it was highlighted that an international online panel company would undertake the responsibility of recruiting and paying the participants; and that those panel members recruited by the online panel company would be presented with the explanatory statement, in which they were reassured about their anonymity as well as their right to quit the survey at any stage. In order to collect the data to conduct studies 5 through 8 (to test conceptual model 2), the questionnaire used to conduct studies 1 through 4 was resubmitted to MUHREC for amendments. It involved making the necessary changes to the previous research questionnaire and going through a similar process as before.

6.8 Testing the Validity and Reliability of Measures: Exploratory Factor Analysis

In order to confirm the validity and reliability of the conceptual constructs in the research questionnaire, exploratory factor analysis was used (Hair, Black, Babin, Anderson, & Tatham,

2006). Factor analysis is a technique used to condense the information contained in a number of original variables into a smaller set of fundamental constructs or composite dimensions assumed to underlie the original variables (Goursuch, 1983; Rummel, 1970). In other words, factor analysis provides tools for analysing the structure of the correlations among variables by defining sets of variables that are highly interrelated. These sets of interrelated variables are referred to as "factors" and are assumed to represent differing dimensions within data (Hair *et al.*, 2006). In conducting and interpreting the results of exploratory factor analyses, the following criteria were applied:

6.8.1 Sample size

It has been suggested that the minimum absolute sample size should be at least 50 observations and preferably 100 or larger (Hair *et al.*, 2006; Sapnas & Zeller, 2002). However, as a general rule, it is recommended having at least five times as many cases as the number of variables included in factor analysis, and a more acceptable ratio is 10 cases for each variable (Hair *et al.*, 2006).

6.8.2 Measures of intercorrelation

These measures are used to assess if there is sufficient correlations among variables to produce representative factors. The first method involves the visual inspection of "correlation matrix". If there is no substantial number of correlations greater than .30, then factor analysis is probably not appropriate. The second method of determining the appropriateness of factor analysis is "Bartlett test of sphericity". This test examines the entire correlation matrix and provides a statistical significance level testing whether the correlation matrix contains significant correlations among at least some of the variables. The third method of determining the appropriateness of factor analysis is the "Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy". This index ranges from 0 to 1, approaching 1 when each variable is perfectly predicted without error by the other variables. A value of .80 or above is regarded as meritorious, while a value of.70 or above is considered as middling and a value of .60 or above as mediocre. However, a value of .50 or above is poor, and below .50 is unacceptable (Kaiser, 1970, 1974).

6.8.3 Factor extraction method

The factor extraction method refers to the method used for defining (i.e., extracting) the factors that represent the structure of the variables in the analysis (Hair *et al.*, 2006). Two factor extraction methods are: common factor analysis and principal component analysis. Principal components analysis is used when the objective of factor analysis is data reduction for prediction purposes; whereas, common factor analysis is used to identify underlying factors that reflect what the variables share in common. Principal component analysis is the default method of most statistical software (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b). In the present research, the principal component analysis method will be used to test the validity and reliability of constructs.

6.8.4 Number of factors to extract

The aim of factor analysis is to extract the best few factors that can represent a substantial proportion of the total variance across all the variables (Hair *et al.*, 2006). In deciding on the number of factors to extracted, the following criteria were used in the present thesis (Goursuch, 1983; Zwick & Velicer, 1986): (1) Latent root criterion: In principal components analysis, each variable contributes a value of 1 to the total eigenvalues. However, in assessing the number of factors extracted by principal component analysis, only the factors with eigenvalues of greater than 1 are considered significant. (2) A priori criterion: This criterion is used when the researcher already knows how many factor to extract. Hence, the researcher instructs the computer program to terminate the factor analysis once the specified number of factors has been extracted. This approach can be applied when testing a theory or hypothesis regarding the number of factors to be extracted, and also when replicating other research to extract the same number of factors that has previously been found. (3) Percentage of variance criterion: This approach is used to ensure that the extracted factors explain a certain cumulative percentage of total variance across all the variables. A solution that accounts for 60% of the total variance in the data is considered as satisfactory.

6.8.5 Rotation methods

In unrotated factor solutions, the factors are extracted in the order of the variance they explain. The first factor is a general factor with substantial factor leadings for almost all variables. While the first factor accounts for the largest amount of variance, the subsequent factors are based on the residual amounts of variance and successively account for smaller

amounts of variance. The aim of rotating the factor matrix is to achieve a simpler , theoretically more meaningful factor pattern; this is done by redistributing the variance from earlier factors to later ones (Hair *et al.*, 2006). The two procedures for rotating factors are: orthogonal rotation and oblique rotation. In orthogonal rotation, it is assumed that the theoretically underlying factors are independent (i.e., uncorrelated); whereas, in oblique rotation they are assumed to be correlated. Therefore, the oblique rotation method is more flexible and more accurate. Orthogonal methods are used when the goal of factor analysis is data reduction to a set of uncorrelated measures for subsequent use in other data analysis. On the other hand, oblique methods are suitable when the goal of factor analysis is to obtain theoretically meaningful constructs, because, in reality, few uncorrelated constructs exist in the real world (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b). Three major orthogonal approaches include: Quartimax, Varimax, and Equimax. However, Varimax has proved to be the most successful and acceptable in obtaining invariant orthogonal factor solutions (Hair *et al.*, 2006; Kaiser, 1970, 1974). Oblique methods vary among different statistical programs and include: Oblimin, Promax, Orthoblique, Dquart, Doblimin (Hair *et al.*, 2006). In the present thesis, the orthogonal method Varimax will be applied.

6.8.6 Interpreting factor loadings and communalities

In a factor matrix, factor loadings are the correlation between each variable and its factor, with higher leadings indicating that the variable better represents the factor. Therefore, the squared loadings indicate the amount of the variable's total variance explained by the factor. Factor leadings in the range of .30 and .40, especially for large sample sizes, are considered as the minimal acceptable level for interpretation of a factor structure; loadings of .50 or greater are considered to be practically significant; and loadings above .70 are regarded to be ideal. Statistically, a larger sample size requires a smaller factor leading (Hair *et al.*, 2006). Communalities represent the amount of variance explained by the factor solution for each variable. Communalities of less than .50 indicate that the variable does not have sufficient explanation (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b).

6.8.7 Creating summates scales

When the objective of factor analysis is to identify appropriate variables for subsequent data analysis, then some form of data reduction will be employed, one of which is the creation of summated scales, also referred to as composite measures. A summated scale is formed by

averaging all of the variables loading highly on a factor, and using the new variable as a replacement for the existing variables (Hair *et al.*, 2006). In the construction of composite measures, two issues must be considered: reliability and validity.

Reliability is an assessment of the degree of consistency between multiple measurements of a variable. One of the commonly used measures of reliability is internal consistency. High internal consistency means that items of a scale are measuring the same scale and are highly intercorrelated (Churchill Jr., 1979; Nunnaly, 1978). In order to assess internal consistency, a number of diagnostic measures are deployed. The first two measures are related to each separate item and include: item-total correlations and inter-item correlations. It has been suggested that, for each variable, the former be above .50, and the latter be above .30 (Robinson, Shaver, & Wrightsman, 1991a). The second measure of internal consistency is a reliability coefficient that assesses the internal consistency of the whole scale by calculating Cronbach's alpha (Cronbach, 1951; Nunnaly, 1978; Peter, 1979). The generally accepted lower limit for Cronbach's alpha is .70 (Peterson, 1994; Robinson *et al.*, 1991a; Robinson, Shaver, & Wrightsman, 1991b).

Validity is an assessment of the extent to which a scale or a set of scales accurately represents the concept it is measuring (Hair *et al.*, 2006). Convergent validity and discriminant validity are among the measures widely used for assessing validity (Campbell & Fiske, 1959; Peter, 1981). Convergent validity assesses the degree to which two measures of the same concept are correlated. High correlations among the measures of a concept indicate a high level of convergent validity. Discriminant validity assesses the degree to which two concepts are distinct. Low correlations between a summated scale and the measures of conceptually similar measures indicate a high level of discriminant validity.

6.8.8 Data analysis

The main statistical procedure to test the hypotheses conceptual models 1 and 2 were the analysis of variance (ANOVA) as well as multivariate analysis of variance (MANOVA) (Tabachnick & Fidell, 2007a, 2007b). ANOVA tests whether there are significant mean differences among different groups of scores. The different group means may correspond to different levels of a single independent variable (IV), or to different combinations of levels of two or more IVs. While in the former case one-way ANOVA is the appropriate test to use, in

the latter case, factorial ANOVA is the proper test to be used. The groups of scores may come from different cases, where a between-subjects ANOVA is applied, or from the same cases measured repeatedly, where a repeated-measures ANOVA is used. By deploying ANOVA techniques, the questions relating to the main effects of the IVs, effects of interactions among the IVs, parameter estimates, and specific planned or post hoc comparisons can be answered (Field, 2009; Tabachnick & Fidell, 2007a). MANOVA is a generalisation of ANOVA in which there are several dependent variables (DVs). It asks if a combination of DVs measured after applying treatments varies as a function of a treatment or interactions between treatments. Specifically, ANOVA tests whether mean differences between groups on a single DV are likely to have occurred by chance; whereas MANOVA tests whether mean differences between groups on a combination of DVs are likely to have occurred by chance (Tabachnick & Fidell, 2007b).

However, as noted previously, the variables coupon proneness, chronic promotion focus, chronic prevention focus, purchase frequency, and purchase spending were included in data analyses as covariates. Therefore, the main tests of significance in the current research were analysis of covariance (ANCOVA) as well as multivariate analysis of covariance (MANCOVA) (Tabachnick & Fidell, 2007a, 2007b). ANCOVA is an extension of ANOVA whereby the main effects and interaction effects of IVs are assessed after DV scores have been adjusted for differences associated with one or more covariates. Covariates are continuous variables that are measured before measuring the DV and are correlated with it. MANCOVA is the multivariate extension of ANCOVA. It asks if there are statistically significant mean differences among groups after adjusting a combined DV for differences on one or more covariates (Field, 2009; Tabachnick & Fidell, 2007b). In both ANCOVA and MANCOVA, controlling for the effect of covariates serves as a noise-reducing tool where the variance associated with the covariate(s) is removed from the analysis, providing a more powerful test of mean differences between groups (Tabachnick & Fidell, 2007b).

In order to test the mediating effects hypothesised in conceptual models 1 and 2, instead of the traditional approach developed by Baron & Kenny (1986), the bias-corrected and accelerated bootstrapping approach suggested by Preacher and Hayes (2008) to test multiple mediation effects was used (Zhao, Lynch Jr., & Chen, 2010). This test produces a confidence interval for the indirect effect in such a way that no assumptions are made about the distribution of the

indirect effect. The results of this method are interpreted by determining whether the produced confidence interval contains the value “zero”; if it does, it means that the mediation effect is not sufficiently significant. It has been suggested that this mediation test be conducted based on 5000 bootstrap samples and with a 95% confidence interval (Preacher & Hayes, 2008).

6.9 Conclusion

In this chapter, the research design was detailed. It consisted of an outline of the research methods used to test research hypotheses associated with conceptual model 1 and conceptual model 2. Specifically, the type and stages of the scenario-based and quasi-experiments, as well as the methods used to analyse the data, were explained. In explaining the experimental studies, the definition of independent variables, the type of experimental design, study subjects and sampling procedure, the details of research questionnaire, as well as data analysis techniques were elaborated on. In doing so, first, the details of the hypothetical experimental studies conducted to test conceptual models 1 and 2 and their associated hypotheses were explained. These involved eight studies: study 1, and its replication, study 3 were designed to test hypotheses H1, H2, and H3 which are pertinent to conceptual model 1. Study 2 and its replication, study 4 were designed to test hypotheses H4a, H4b, H5a, H5b, and H6 which are also pertinent to conceptual model 1. Next, studies 5 and 6, and their extensions, studies 7 and 8, respectively, were designed to test conceptual model 2 and its associated hypotheses, namely, hypotheses H7, H8a, H8b, H9a, H9b, and H10. In order to analyse the data, the techniques used include: ANCOVA and MANCOVA to test interaction effects; and the bootstrapping approach to test the predicted mediation effects. In the next two chapters, the results of data analysis and findings relating to conceptual model 1 and conceptual model 2 are reported.

Chapter 7 : Data Analysis and Findings (Conceptual Model 1)

7.1 Introduction

In the previous chapter, the research methodology and design used for testing conceptual model 1 and conceptual model 2 were explained. In this chapter, the results of data analyses conducted to test the hypotheses related to the conceptual model 1 are detailed. Specifically, for each study, this chapter reports: data collection and data cleaning procedures together with sample characteristics; the results of factor analyses performed to test the validity and reliability of the measurement scales; the results of manipulation checks; the results of testing research hypotheses; and finally, the results of a number of exploratory data analyses conducted in studies 2 and 4. In the next chapter, the results of data analysis performed to test hypotheses associated with conceptual model 2 are reported.

As noted previously, the main premise of the present thesis is that while both utilitarian and hedonic shoppers are responsive to personalised mobile coupons that are compatible with their focal shopping motivations, compared to utilitarian shoppers, hedonic shoppers are responsive to personalized mobile coupons that are less compatible with their focal shopping motivations as well. It was argued that this difference between hedonic and utilitarian shoppers is explained by the mediating role of regulatory fit. Specifically, it was proposed that utilitarian shoppers perceive more regulatory fit in compatible offers (i.e., utilitarian products and current-needs-congruent offers) than in incompatible offers (i.e., hedonic products and future-needs-congruent offers). Hence, utilitarian shoppers are more likely to redeem compatible rather than incompatible offers. In contrast, hedonic shoppers have similar perceptions of regulatory fit in both compatible (i.e., hedonic products and future-needs-congruent offers) and incompatible offers (i.e., utilitarian products and current-needs-congruent offers). Thus, they have similar intentions to redeem compatible and incompatible offers. These predictions are tested in this chapter.

7.2 Study 1

To recall, conceptual model 1 is presented again in Figure 7.1. In this model, hypotheses H1, H2, and H3 predicted that: consumers are likely to become relatively more promotion focused than prevention-focused when they have a hedonic shopping motivation, receive a hedonic product offer, or when an offer is congruent with their future needs; on the contrary, consumers are likely to become relatively more prevention-focused than promotion-focused when they have a utilitarian shopping motivation, receive a utilitarian product offer, or when an offer is congruent with their current needs. To test these hypotheses, two scenario-based experiments, namely, study 1 and study 3, were carried out. In this section, the results of study 1 are detailed.

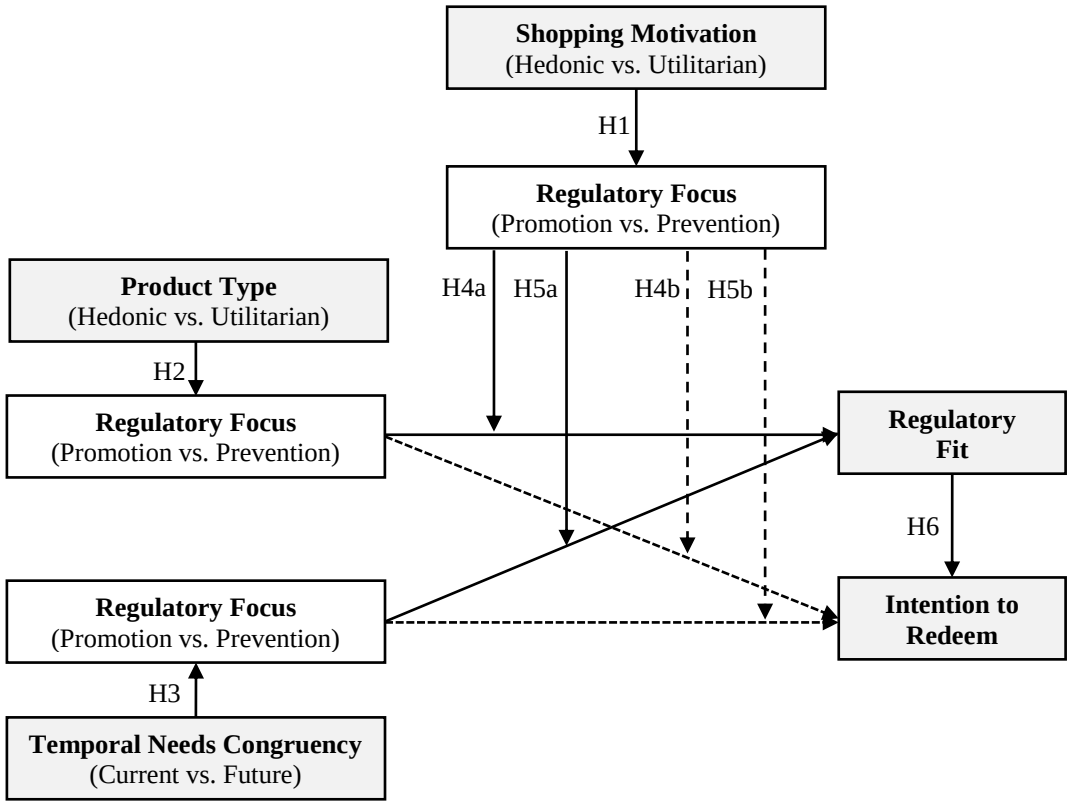

Figure 7.1: Conceptual model 1(Copied from Figure 5.1)

7.2.1 Data collection, data cleaning, and sample characteristics

One hundred and forty-three panel members were recruited by an international organisation that hosts online surveys. Of these, 16 respondents did not complete the survey, resulting in a completion rate of 89 percent, with 127 participants completing the survey. Similar to the

results of the pre-tests, the average survey completion time for study 1 was about 8 minutes. As a data cleaning strategy, the subjects who had too many missing values in their responses, those with too many repetitions in their rating scores on different measures, or those with too fast (e.g., 2 minutes or less) or too lengthy completion times were excluded from the main data analysis. This resulted in 3 participants (2 percent) with high levels of item non-response or identical ratings across all questions being removed, and 124 respondents remaining for the main data analysis. The distribution of the respondents across the 8 experimental conditions is presented in Table 7.1.

Table 7.1: Distribution of respondents among conditions

Shopping Motivation	Type of Product	Temporal Needs Congruency	n
Hedonic	Hedonic	Current	13
		Future	18
		Total	31
	Utilitarian	Current	16
		Future	15
		Total	31
	Total	Current	29
		Future	33
		Total	62
Utilitarian	Hedonic	Current	17
		Future	13
		Total	30
	Utilitarian	Current	17
		Future	15
		Total	32
	Total	Current	34
		Future	28
		Total	62

In the remaining 124 participants, there were more males than females, with 59 percent males and 41 percent females, respectively. The sample was comprised mostly of young respondents, with 47 percent aged between 18 and 24 years old, 37 percent between 25 and 34, and 11 percent between 35 and 44. A large proportion of the participants (85 %) had a university degree (Table 7.2). On the whole, the demographic characteristic of the sample indicate that the participants are mostly young and have a university degree. These two characteristics correspond with the characteristics of the samples in other studies on

consumers' usage of mobile services (ATKearney, 2005; Dickinger & Kleijnen, 2008; Okazaki, 2006).

Table 7.2: Sample demographics

Demographic variable	Categories	Percentage (N=124)
Gender	Female	41
	Male	59
Age	18-24	47
	25-34	37
	35-44	11
	45-54	4
	55-64	1
	65 and above	0
Education	Lower than high school diploma	8
	High school diploma	7
	Associate's degree	11
	Bachelor's degree	47
	Master's degree or higher	27

7.2.2 Exploratory factor analyses

Prior to testing the manipulation checks and research hypotheses of study 1, the five manipulation check measures of hedonic shopping motivation, utilitarian shopping motivation, hedonic product, utilitarian product, and temporal needs congruency, as well as the three measures of regulatory focus primed by the independent variables shopping motivation, product type, and temporal needs congruency, were subjected to two exploratory factor analyses (EFA). The rationale for conducting EFA was to confirm that there are five different factors representing manipulation check measures and three different factors representing regulatory focus primed by independent variables.

The first factor analysis was run on manipulation check measures. First, the correlation matrix containing manipulation check measures was assessed. Most of the correlations among the items measuring their respective factor were significant and above .30, indicating that there were sufficient correlations among the variables to produce their representative factors (Hair *et al.*, 2006). The extraction method used to perform EFA was Principal Component Analysis and the rotation method used was the orthogonal method Varimax. The KMO measure of sampling adequacy was .72 (Kaiser, 1970, 1974); Bartlett's test of sphericity was statistically

significant ($p < .001$) (Bartlett, 1954). Therefore, the appropriateness of the data before proceeding to the factor analysis was ensured. Five factors were extracted with eigenvalues greater than one explaining 82 percent of the variance in the data (Goursuch, 1983; Zwick & Velicer, 1986). The rotated component matrix with factor loadings of above .40 is shown in Table 7.3. As can be seen, all factor loadings were above .70; also, all communalities were greater than .50. This indicated that the manipulation check measures had validity. Furthermore, all items loaded to their respective factors without any cross-loading items. This indicated that the manipulation check measures had both convergent and discriminant validity. The alpha coefficient for all factors was higher than .70 and all individual items representing each factor had inter-item correlations of greater than .30 and item-total correlations of greater than .50 (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b). This indicated that the manipulation check measures had a high level of reliability. Hence, the item scores relating to the five manipulation check measures were summated and averaged to form five separate indices for hedonic shopping motivation, utilitarian shopping motivation, hedonic product, utilitarian product, and temporal means congruency.

Table 7.3: Factor loadings for manipulation check measures [a]

Factor	Utilitarian Product (α = .90)	Hedonic Product (α = .89)	Utilitarian Motivation (α = .88)	Needs Congruency (α = .87)	Hedonic Motivation (α = .87)
Utilitarian Product 2	.88				
Utilitarian Product 3	.85				
Utilitarian Product 1	.84				
Hedonic Product 3		.88			
Hedonic Product 1		.87			
Hedonic Product 2		.84			
Utilitarian Motivation 2			.88		
Utilitarian Motivation 3			.86		
Utilitarian Motivation 1			.83		
Hedonic Motivation 2				.91	
Hedonic Motivation 3				.88	
Hedonic Motivation 1				.85	
Needs Congruency 3					.89
Needs Congruency 2					.84
Needs Congruency 1					.81

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 1

The second factor analysis was run on the measures of regulatory focus. In the correlation matrix encompassing the three measures of regulatory focus, most of the correlations among the items measuring their corresponding factor were significant and above .30. The KMO measure of sampling adequacy was .77; Bartlett's test of sphericity was statistically significant ($p < .001$). Three factors with eigenvalues of greater than one were extracted by principal component analysis and Varimax rotation explaining 65 percent of the variability in the data. The rotated component matrix with factor leadings of above .40 is displayed in Table 7.4. It can be seen that all factor loadings were above .50. Also, all communality values were greater than .50, indicating that the three measures of regulatory focus had validity. Moreover, all items loaded to their corresponding factors with no item having cross-loadings, indicating that the three measures of regulatory focus had both convergent and discriminant validity. In addition, the alpha coefficient for all factors was higher than .70 and all individual items representing each factor had inter-item correlations of greater than .30 and item-total correlations of greater than .50, indicating that the three measure of regulatory focus had a high level of reliability. Hence, the item scores pertaining to the three regulatory focus measures were summated and averaged to form three composite scales for regulatory focus primed by shopping motivation, type of product, and temporal means congruency.

Table 7.4: Factor loadings for regulatory focus measures [a]

Factor	**Product Regulatory** (α =.80)	**Motivation Regulatory** (α =.86)	**Needs Regulatory** (α =.75)
Product Regulatory 4	.87		
Product Regulatory 2	.86		
Product Regulatory 1	.79		
Product Regulatory 3	.70		
Motivation Regulatory 3		.79	
Motivation Regulatory 2		.77	
Motivation Regulatory 1		.72	
Motivation Regulatory 4		.70	
Needs Regulatory 2			.80
Needs Regulatory 3			.78
Needs Regulatory 4			.70
Needs Regulatory 1			.70

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 1

7.2.3 Manipulation checks for independent variables

In this section, the validity of the manipulations of independent variables is examined. The experiment consisted of a 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (temporal needs congruency: current needs vs. future needs) full factorial between-subjects design. Each participant was randomly assigned to one of the 8 experimental conditions. One point to mention is that although the number of conditions required a sample size of at least 240, the main objective of study 1 (and also study 3) was to establish the main effects of shopping motivation, product type, and temporal needs congruency on their respective measures of regulatory focus. Therefore, sample size was not a cause of concern in studies 1 and 3.

7.2.3.1 Manipulation check for shopping motivation

The manipulation check items for shopping motivation were adopted from the existing literature (Arnold & Reynolds, 2003; Babin *et al.*, 1994; Ganesh *et al.*, 2007) and modified in wording to match the scenarios. Specifically, the manipulation questions consisted of six items, with three items measuring the perception of hedonic shopping situation and three items measuring the perception of utilitarian shopping trip. The items were measured on a 7-point Likert scale (1=”Strongly agree”, 7=”Strongly disagree”). The mean shopping motivation index for the two hedonic and utilitarian conditions is depicted in Figure 7.2.

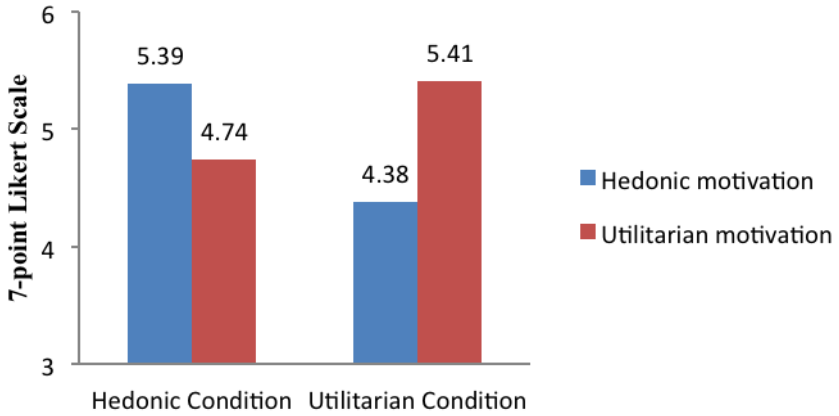

Figure 7.2: Manipulation check for shopping motivation

In order to test whether respondents allocated to hedonic or utilitarian shopping conditions perceived the shopping scenarios differently, two one-way ANOVA tests were performed. In

the first test, the categorical variable shopping motivation was included as the independent variable and the hedonic shopping motivation index was the dependent variable. In the second test, the categorical variable shopping motivation was included as the independent variable and the utilitarian shopping motivation index was the dependent variable. As displayed in Figure 7.2, the mean hedonic shopping motivation index for the hedonic shopping motivation conditions was significantly higher than that for the utilitarian shopping motivation conditions ($M_H = 5.39$ vs. $M_U = 4.74$, $F(1,122) = 7.40$, $p<.01$). In contrast, the mean utilitarian shopping motivation index for the utilitarian motivation conditions was significantly higher than that for hedonic motivation conditions ($M_U = 5.41$ vs. $M_H = 4.38$, $F(1,122) = 16.23$, $p<.001$). Therefore, the manipulation of shopping motivation was confirmed.

7.2.3.2 Manipulation check for type of product

To check the manipulation of type of product, six items were adopted from the measurement scales developed by Voss and colleagues (Voss *et al.*, 2003). Three items measured the hedonic nature of purchasing a product, and three items measured the utilitarian nature of purchasing the product. The items were measured on a 7-point Likert scale (1=”Strongly agree”, 7=”Strongly disagree”). Figure 7.3 illustrates the mean product type index for hedonic and utilitarian product type conditions.

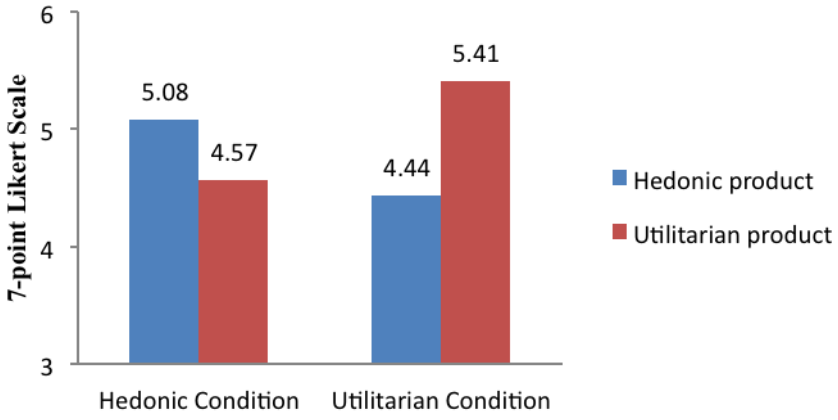

Figure 7.3: Manipulation check for product type

In order to test whether the participants presented with hedonic or utilitarian product offers had different perceptions of the nature of the activity involved in purchasing the offered product, two one-way ANOVA tests were performed. In the first test, the categorical variable type of product was included as the independent variable and the hedonic product type index

was included as the dependent variable. In the second test, type of product was the independent variable and the utilitarian product type index was the dependent variable. As shown in Figure 7.3, the mean hedonic purchase activity score for the hedonic product offer (movie DVD) was significantly higher than that for the utilitarian product offer (detergent) (M_H = 5.08 vs. M_U = 4.57, F (1,122) =4.14, p<.05); conversely, the mean utilitarian purchase activity score for the detergent was higher than that for the movie DVD offer (M_U = 5.41 vs. M_H = 4.44, F (1,122) =16.41, p<.001). These results validated the manipulation of the independent variable, type of product.

7.2.3.3 Manipulation check for temporal needs congruency

The respondents in the current-needs-congruent condition were asked to assume that they had purchased the offered product on the previous day, and the respondents in the future-needs-congruent condition were asked to assume that they had not purchased the offered product for a while. In order to check the manipulation of temporal needs congruency, three 7-point bipolar scales were generated with the left anchor relating to current needs congruency and the right anchor relating to future needs congruency. The mean temporal needs congruency index for current-needs-congruent and future-needs-congruent conditions is depicted in Figure 7.4.

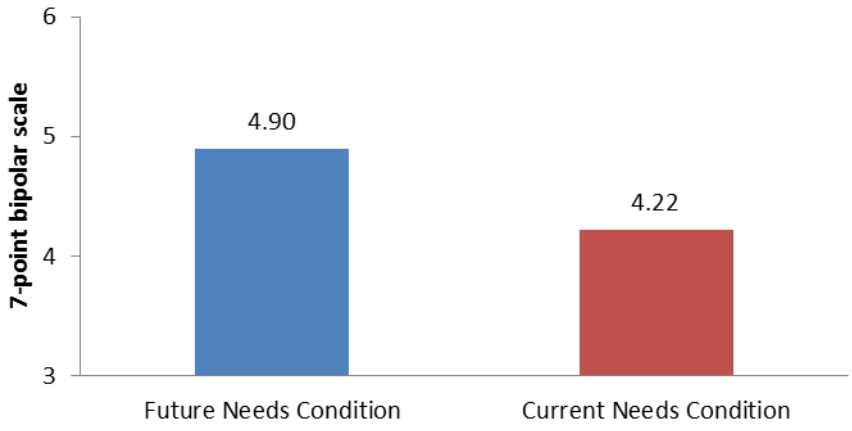

Figure 7.4: Manipulation check for temporal needs congruency

In order to test whether the subjects who were offered current- or future-needs-congruent products had different perceptions of their needs to purchase the offered product currently or in the future, a one-way ANOVA test was performed, with the categorical variable temporal

needs congruency as the independent variable and the temporal needs congruency index as the dependent variable. As illustrated in Figure 7.4, the respondents in the future-needs-congruent scenarios had a significantly higher mean on the temporal needs measure, indicating a greater future need, than those in the current-needs-congruent scenarios ($M_F = 4.90$ vs. $M_C = 4.22$, $F(1,122) = 5.21$, $p<.05$), confirming the successful manipulation of temporal needs congruency.

7.2.4 Task checks

Task check questions consisted of four 7-point bipolar scale questions and one open-ended question. The first four questions asked the participants about their perceptions of: the degree to which the scenario was realistic (1="Not realistic at all", 7="Very realistic"); how difficult it was for them to image themselves in the scenario (1="Not difficult at all", 7="Very difficult"); how common the price discount for the offered product was (1="Very uncommon", 7="Very common"); and how much time they thought they had to redeem the coupon given its expiry date (1="Very little time", 7="A lot of time"). The open-ended question was asked in order to ascertain whether the respondents could guess the purpose of the study. One-sample t-tests with a test value of 4 (i.e., the mid-point of the 7 point scale) showed that the respondents regarded the scenarios to be realistic ($M=5.47$, $t = 8.44$, $df = 123$, $p<.001$), and did not have difficulty imagining themselves in the scenarios ($M=5.55$, $t = 10.36$, $df = 123$, $p< .001$). The respondents considered the discounted offers to be common ($M=5.38$, $t = 6.19$, $df = 123$, $p< .001$) with a large amount of time to redeem the coupons ($M=5.08$, $t = 7.64$, $df = 123$, $p< .001$). Finally, an assessment of the responses to the open-ended question showed that none of the respondents realized the purpose of the study.

7.2.5 Testing hypotheses

Hypotheses H1, H2, and H3 involved shopping motivation, type of product, and temporal needs congruency as independent variables, and the regulatory focus primed by shopping motivation, type of product, and temporal needs congruency as dependent variables, respectively. In the following sections, the results of testing these hypotheses are detailed.

7.2.5.1 Regulatory focus primed by shopping motivation

In order to measure the regulatory focus primed by shopping motivation, four items were adopted from the literature on regulatory focus theory (Mishra *et al.*, 2010; Mogilner *et al.*, 2008; Pennington & Roese, 2003; Ramanathan & Dhar, 2010) and their wordings were

modified to match the scenarios. The items were measured on a 7-point bipolar scale with the left side of the scales referring to prevention focus and the right side referring to promotion focus (Appendix 1). The mean regulatory focus index primed by hedonic and utilitarian shopping motivations is presented in Figure 7.5.

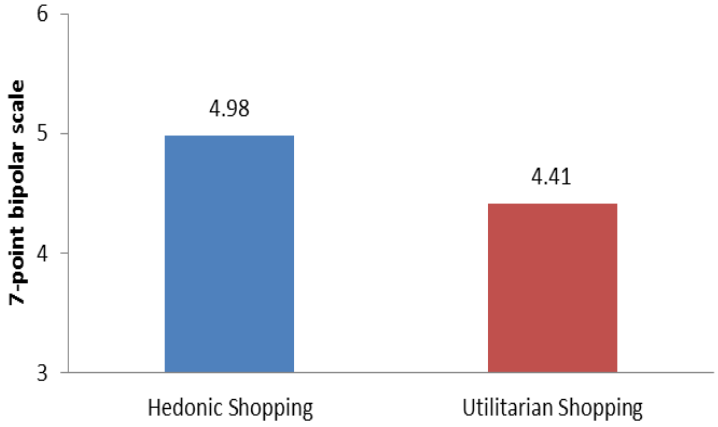

Figure 7.5: Regulatory focus primed by shopping motivation

To test hypothesis H1, an ANOVA test was performed, in which the categorical variable shopping motivation was included as the independent variable and the index relating to regulatory focus primed by shopping motivation as the dependent variable. The result was significant (M_{UM}=4.41 vs. M_{HM}=4.98, F (1,122) = 5.33, $p<0.05$), indicating that while hedonic shoppers are relatively more promotion-focused than prevention-focused, utilitarian shoppers relatively more prevention-focused than promotion-focused, as illustrated by Figure 7.5. This supports hypothesis H1.

7.2.5.2 Regulatory focus primed by type of product

In order to measure the regulatory focus prompted by type of product, four items were adopted from the literature on regulatory focus theory (Mishra *et al.*, 2010; Ramanathan & Dhar, 2010) and their wordings were modified to match the scenarios. The items were measured on 7-point bipolar scales with the left side of the scales representing prevention focus and the right side representing promotion focus (Appendix 1). Figure 7.6 presents the mean regulatory focus index primed by hedonic and utilitarian product types.

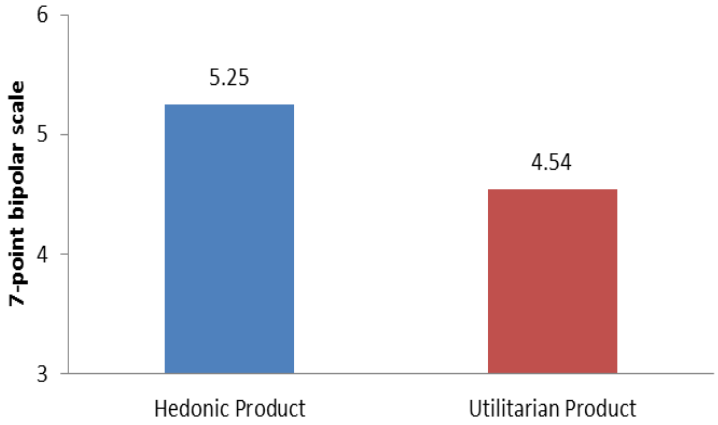

Figure 7.6: Regulatory focus primed by type of product

To test hypothesis H2, an ANOVA test was performed, with the categorical variable type of product as the independent variable and the index corresponding to regulatory focus primed by product type as the dependent variable. The result was significant (M_{UP}=4.54 vs. M_{HP}=5.25, F (1,122) = 7.01, $p<0.05$), indicating that when consumers think of a hedonic purchase activity, this induces a relatively promotion focus more than a prevention focus; however, when they think of a utilitarian purchase activity, this elicits relatively more prevention focus than promotion focus, as depicted by Figure 7.6. This supports hypothesis H2.

7.2.5.3 Regulatory focus primed by temporal needs congruency

To measure the regulatory focus primed by temporal needs congruency, four items were adopted from the literature on regulatory focus theory (Mishra *et al.*, 2010; Mogilner *et al.*, 2008; Pham & Chang, 2010; Ramanathan & Dhar, 2010) and their wordings were modified to match the context. The items were measured on 7-point bipolar scales with the left side of the scales referring to prevention focus and the right side referring to promotion focus (Appendix 1). The mean regulatory focus index primed by current and future needs congruent offers is presented in Figure 7.7.

Data Analysis (Model 1)

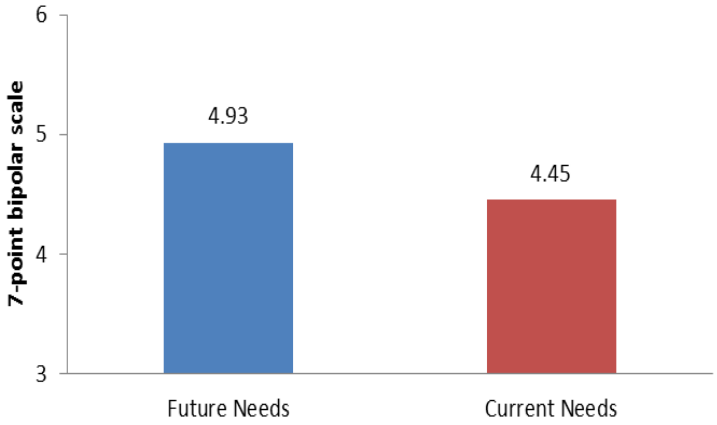

Figure 7.7: Regulatory focus primed by temporal needs congruency

To test hypothesis H3, the one-way ANOVA test with the categorical variable temporal needs congruency as the independent variable and regulatory focus index belonging to temporal needs congruency as the dependent variable was performed. The test result verified that while an offer that is congruent with future needs is likely to induce relatively more promotion focus than prevention focus, an offer congruent with current needs is likely to elicit relatively more prevention focus than promotion focus (M_{CN}=4.45 vs. M_{FN}=4.93, F (1,122) = 4.95, p<.05). Therefore, hypothesis H3 is also supported, suggesting that offering subjects a product that has been purchased recently is likely to induce them to adopt a promotion orientation more than a prevention orientation, whereas offering the subjects a product that has not been purchased for a relatively long time is likely to elicit a prevention orientation more than a promotion orientation.

7.3 Study 2

In conceptual model 1 (Figure 7.1), hypotheses H4a, H4b, H5a, H5b, and H6 proposed that hedonic and utilitarian shoppers perceive different degrees of regulatory fit in and have differing levels of intention to redeem the mobile coupons offering hedonic or utilitarian products and in the offers congruent with their current or future needs. Prior to testing these hypotheses, it had to be established that while hedonic shopping motivation, hedonic products, and offers congruent with future needs are likely to prime more promotion focus than prevention focus, utilitarian shopping motivation, utilitarian products, and offers congruent with current needs are likely to prime more prevention focus than promotion focus. These assumptions were supported by conducting study 1. Study 2 tests whether the

experience of regulatory fit, and consequently intention to redeem, depends on the compatibility (or incompatibility) between the type of regulatory focus primed by shopping motivation and the type of regulatory focus primed by mobile coupon cues. Further, study 2 tests whether the perception of regulatory fit in and intention to redeem compatible and incompatible offers differs for hedonic and utilitarian shoppers.

7.3.1 Data collection, data cleaning, and demographics

Two hundred and ninety-eight members of an online panel were recruited by an international organisation that hosts online surveys. The survey completion rate was 89% since 32 respondents started but did not complete their surveys. Similar to the results of the pre-tests, the average survey completion time for study 2 was about 12 minutes. Of the 266 subjects who finished the survey, 11 subjects (4%) were identified as extreme outliers and eliminated from the data set because they had too many missing values, or too many identical ratings across different measures, either too short or too long survey completion times was, or a combination of these criteria. Therefore, 255 cases remained available for the main data analysis. Similar to study 1, the participants consisted of more males than females (63 percent vs. 37 percent, respectively). A large proportion of the respondents (43 percent) fell within the age range of 25 to 34, followed by those whose ages ranged between 18 and 24 (38 percent), and those aged between 35 and 24 (14 percent). A high percentage of the respondents had a university degree (81 percent) (Table 7.5). As can be seen, the demographic characteristic of the sample for study 2 are comparable to that for study 1, which include mostly young people with a university degree.

Table 7.5: Sample demographics

Demographic Variable	Categories	Percentage (N=255)
Gender	Female	37
	Male	63
Age	18-24	38
	25-34	43
	35-44	14
	45-54	2
	55-64	1
	65 and above	1
Education	Lower than high school diploma	7
	High school diploma	6
	Associate's degree	6
	Bachelor's degree	43
	Master's degree or higher	38

7.3.2 Exploratory factor analyses

Similar to study 1, two separate exploratory factor analyses (EFA) were performed. Specifically, the first EFA was performed on manipulation check measures and the second was performed on the dependent and control variable measures. The rationale for conducting EFA was to confirm that in the research questionnaire there are five different theoretical constructs relating to manipulation check measures and three different theoretical constructs relating to the dependent variable regulatory fit, the control variable coupon proneness, and the variable regulatory focus primed by shopping motivation.

The rotated component matrix with factor leadings above .40 for the first EFA is shown in Table 7.6. In the correlation matrix containing manipulation check measures, most of the correlations among the items measuring their respective factor were significant and above .30. The KMO measure of sampling adequacy was .77; and Bartlett's test of sphericity was statistically significant ($p < .001$). Five factors with eigenvalues of greater than one were extracted by the extraction method Principal Component Analysis and the orthogonal rotation method Varimax, explaining 81 percent of the variance in the data. As can be seen in Table 7.6, all factor loadings were above .70; also, all communalities were higher than .50. Furthermore, all items loaded to their respective factors with no cross-loadings. For each factor, the alpha coefficients was above .70 and all items representing each factor had inter-item correlations of higher than .30 and item-total correlations of greater than .50 (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b). Therefore, it was re-confirmed that the manipulation

check measure had both convergent and discriminant validity as well as a high level of reliability.

Table 7.6: Factor loadings for manipulation check measures [a]

Factor	Hedonic Motivation (α = .87)	Hedonic Product (α = .89)	Needs Congruency (α = .87)	Utilitarian Product (α = .90)	Utilitarian Motivation (α = .88)
Hedonic Motivation 2	.90				
Hedonic Motivation 3	.89				
Hedonic Motivation 1	.86				
Hedonic Product 3		.89			
Hedonic Product 1		.89			
Hedonic Product 2		.87			
Needs Congruency 2			.92		
Needs Congruency 3			.90		
Needs Congruency 1			.87		
Utilitarian Product 2				.89	
Utilitarian Product 3				.88	
Utilitarian Product 1				.81	
Utilitarian Motivation 2					.89
Utilitarian Motivation 3					.88
Utilitarian Motivation 1					.80

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 2

Table 7.7 displays the rotated component matrix with factor leadings above .40 for the second EFA. An assessment of the correlation matrix encompassing the measures of regulatory fit, coupon proneness, and regulatory focus showed most of the correlations among the items measuring their corresponding factor to be significant and above .30. The KMO measure of sampling adequacy was .86; and Bartlett's test of sphericity was statistically significant ($p < .001$). Three factors were extracted by Principal Component Analysis and Varimax rotation, explaining 64 percent of the variability in the data. As can be seen in Table 7.7, except for one, all factor loadings were above .60; also, all communalities were higher than .50. This indicated that the measures of regulatory fit, coupon proneness, and regulatory focus had validity. Moreover, all items loaded to their corresponding factors without any item having cross-loading. This indicated that the three measures had both convergent and discriminant

validity. The alpha coefficient for all factors was above .70 and all the items representing each factor had inter-item correlations of higher than .30 and item-total correlations of greater than .50 (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b), indicating that the three measures of regulatory focus had a high level of reliability. Thus, the item scores pertaining to manipulation check measures as well as those pertaining to the measures of regulatory fit, coupon proneness, and regulatory focus were summated and averaged to form separate indices for their respective factors.

Table 7.7: Factor loadings for dependent and control variable measures [a]

Factor	Regulatory Fit (α = .90)	Regulatory Focus (α = .86)	Coupon Proneness (α = .82)
Regulatory Fit 3	.84		
Regulatory Fit 2	.84		
Regulatory Fit 4	.79		
Regulatory Fit 8	.71		
Regulatory Fit 1	.70		
Regulatory Fit 7	.67		
Regulatory Fit 6	.62		
Regulatory Fit 5	.61		
Regulatory Focus 1		.90	
Regulatory Focus 3		.89	
Regulatory Focus 2		.87	
Regulatory Focus 4		.58	
Coupon Proneness 2			.83
Coupon Proneness 1			.78
Coupon Proneness 3			.77
Coupon Proneness 4			.72

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 2

7.3.3 Manipulation and Task Checks

This section tests if the manipulations of independent variables have been effective in the intended direction. Similar to study 1, the experiment consisted of a 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (temporal needs congruency: current needs vs. future needs) full factorial between-subjects design resulting in 8 different experimental conditions. The way the three independent variables were

manipulated and their manipulation check measures are the same as those in study 1. The participants were randomly assigned to one of the 8 experimental conditions.

7.3.3.1 Manipulation check for shopping motivation

Figure 7.8 illustrates the mean shopping motivation index for hedonic and utilitarian conditions. The items were measured on a 7-point Likert scale (1=”Strongly agree”, 7=”Strongly disagree”). A one-way ANOVA test with the categorical variable shopping motivation as the independent variable and the hedonic shopping motivation index as the dependent variable showed that the mean hedonic motivation index for the hedonic shopping motivation scenarios was significantly higher than for the utilitarian shopping motivation scenarios (M_{HM} = 5.71, M_{UM} = 4.07, F (1,253) = 118.15). Similarly, an ANOVA test with shopping motivation as the independent variable and the utilitarian shopping motivation index as the dependent variable showed that the mean utilitarian shopping motivation index was significantly higher for the utilitarian shopping conditions than that for hedonic shopping conditions (M_{UM} = 5.09, M_{HM} = 4.24, F (1,253) = 23.21, p<.001). These results suggest that the respondents assigned to hedonic or utilitarian shopping conditions perceived the shopping scenarios differently, confirming the manipulation of shopping motivation.

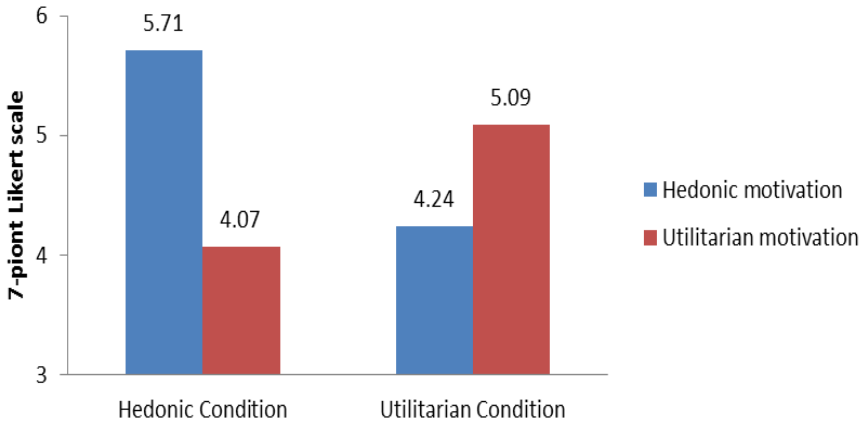

Figure 7.8: Manipulation check for shopping motivation

7.3.3.2 Manipulation check for type of product

The mean product type index for hedonic and utilitarian conditions is depicted in Figure 7.9. The items were measured on a 7-point Likert scale (1=”Strongly agree”, 7=”Strongly disagree”). A one-way ANOVA test with the categorical variable type of product as

independent variable and the hedonic product type index as dependent variable showed that the mean hedonic purchase activity scores for the hedonic product (movie DVD) conditions was significantly higher than that for utilitarian product (detergent) conditions (M_{HP} = 5.33, M_{UP} = 4.02, F (1, 253) = 65.04, p<.001). Another ANOVA with type of product as the independent variable and the utilitarian product type index as the dependent variable showed that the mean utilitarian purchase activity scores for the detergent offer was higher than that for the movie DVD offer (M_{UP} = 5.26, M_{HP} = 4.37; F (1, 253) = 34.40, p<.001). These results denote that the respondents presented with hedonic or utilitarian product offers perceived the nature of the activity involved in purchasing the offered product differently, verifying the manipulation of product type.

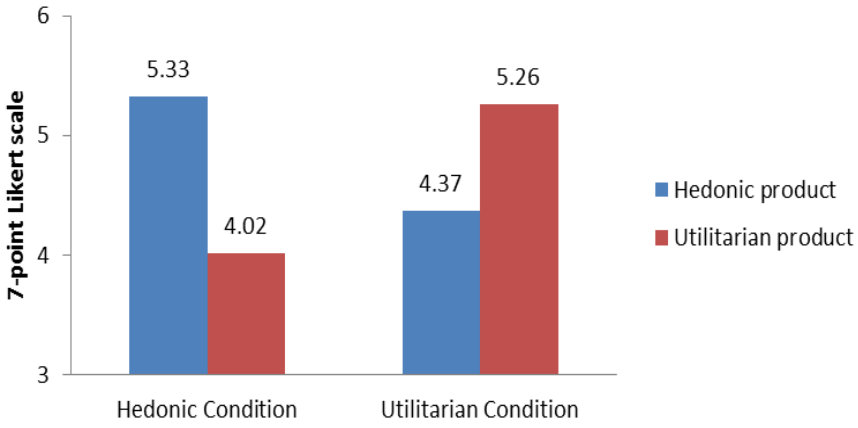

Figure 7.9: Manipulation check for type of product

7.3.3.3 Manipulation check for temporal needs congruency

The respondents in the current-needs-congruent conditions were asked to assume that they had purchased the offered product on the previous day, and the respondents in the future-needs-congruent condition were asked to assume that they had not purchased the offered product for a while. Figure 7.10 presents the mean temporal needs congruency index for current-needs-congruent and future-needs-congruent conditions. The items were measured using three 7-point bipolar scales with the left anchor relating to current needs congruency and the right anchor relating to future needs congruency. A one-way ANOVA test with the categorical variable temporal needs congruency as the independent variable and the temporal needs congruency index as the dependent variable showed that the participants in the future-needs-congruent scenarios had a significantly higher mean on the temporal needs measure,

indicating a greater future need, than those in the current- needs-congruent scenarios (M_{FN} = 4.83 vs. M_{CN} = 3.91, F (1, 253) =19.99, p<.001). This result signifies that the subjects offered current- or future-needs-congruent products had different perceptions of their need to purchase the offered product on their current shopping occasion or some other time in the future, thereby validating the manipulation of temporal needs congruency.

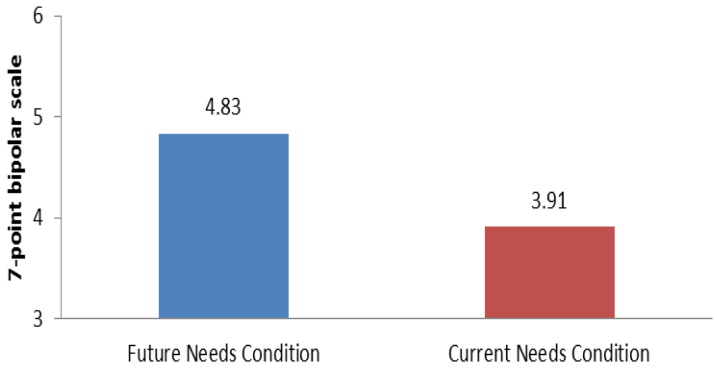

Figure 7.10: Manipulation check for temporal needs congruency

7.3.3.4 Task checks

Similar to study 1, task check questions consisted of four 7-point bipolar scale questions and one open-ended question. One-sample t-tests with a test value of 4 showed that the participants regarded the scenarios to be realistic (M=5.48, t = 17.15, df = 254, p<.001), did not have difficulty imagining themselves in the scenarios (M=5.08, t = 16.90, df = 254, p< .001), and considered the discounted offers to be common (M=5.47, t = 11.66, df = 254, p< .001). Also, all the respondents considered the four-week expiry date to be long enough to redeem the coupon (M=4.79, t = 8.23, df = 254, p< .001). Finally, an investigation of the answers to the open-ended question showed that none of the respondents realized the purpose of the study.

7.3.4 Testing the hypothesised effects

In order to investigate the overall main and interaction effects, a 2 (shopping motivation: hedonic vs. utilitarian) * 2 (product type: hedonic vs. utilitarian) * 2 (temporal needs congruency: current needs vs. future needs) full-factorial MANOVA was run with regulatory fit and intention to redeem as dependent variables, and coupon proneness as a covariate. The results revealed significant main effects for shopping motivation (Wilk's Lambda=.92, F

(2,245) = 10.89, p < .001) and temporal needs congruency (Wilk's Lambda=.97, F (2,245) = 4.29, p < .05). Also, there were significant interaction effects between shopping motivation and product type (Wilk's Lambda=.96, F (2,245) = 4.85, p < .01) and between shopping motivation and temporal needs congruency (Wilk's Lambda=.98, F (2,245) = 2.80, p < .10). Finally, the main effect of coupon proneness was significant (Wilk's Lambda=.80, F (2,245) = 29.82, p < .001). None of the other main and interaction effects was significant.

To examine the effects of compatibility (and incompatibility) between shopping motivation, the type of product category offered, and the congruency of the offer with temporal needs on regulatory fit and intention to redeem, two separate ANOVA models were estimated. Specifically, both models were a 2 (shopping motivation: hedonic vs. utilitarian) * 2 (product type: hedonic vs. utilitarian) * 2 (temporal needs congruency: current needs vs. future needs) full-factorial ANOVA. However, the first model included regulatory fit as the dependent variable and the second one included intention to redeem as the dependent variable. In both models, coupon proneness was included as a covariate. The results of the two model estimations are detailed as follows.

7.3.4.1 Dependent variable: Regulatory fit

The first ANOVA with regulatory fit as the dependent variable showed a significant interaction effect between shopping motivation and product type (F (1,246) = 7.61, p<.05) as well as a significant interaction effect between shopping motivation and temporal needs congruency (F (1,246) = 4.51, p<.05). Also, there was a significant main effect for coupon proneness (F (1,246) = 29.11, p<.001). None of the other main and interaction effects was significant (p> .10). The descriptive statistics, consisting of the distribution of the respondents across the 8 experimental conditions together with the mean and standard deviation of the dependent variable regulatory fit in each condition, are presented in Table 7.8. The ANOVA results are presented in Table 7.9.

Data Analysis (Model 1)

Table 7.8: Regulatory fit: Descriptive statistics

Shopping Motivation	Product Type	Needs Congruency	Mean*	Std. Deviation	n
Hedonic	Hedonic	Current	5.13	1.17	33
		Future	5.28	0.91	33
		Total	5.20	1.04	66
	Utilitarian	Current	5.09	0.71	33
		Future	4.98	0.89	30
		Total	5.04	0.80	63
	Total	Current	5.11	0.96	66
		Future	5.14	0.91	63
		Total	5.12	0.93	129
Utilitarian	Hedonic	Current	4.65	1.13	30
		Future	4.19	1.22	32
		Total	4.41	1.19	62
	Utilitarian	Current	5.21	0.98	32
		Future	4.84	1.261	32
		Total	5.02	1.14	64
	Total	Current	4.94	1.09	62
		Future	4.51	1.27	64
		Total	4.72	1.20	126

* 7-point Likert scale

Table 7.9: Regulatory fit ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	78.31[a]	8	9.79	10.83	.000
Intercept	58.23	1	58.23	64.41	.000
Coupon Proneness	49.33	1	49.33	54.56	.000
Shopping Motivation	3.08	1	3.08	3.41	.066
Product Type	1.30	1	1.30	1.44	.232
Needs Congruency	1.37	1	1.37	1.51	.220
Shopping Motivation * Product Type	6.88	1	6.88	7.61	.006
Shopping Motivation * Needs Congruency	4.08	1	4.08	4.51	.035
Product Type * Needs Congruency	.13	1	.13	.14	.704
Shopping Motivation * Product Type * Needs Congruency	.09	1	.09	.10	.759
Error	222.41	246	.904		
Total	6480.98	255			
Corrected Total	300.72	254			

[a] R Squared = .188 (Adjusted R Squared = .162)

7.3.4.2 Dependent variable: Intention to redeem

In the second ANOVA, with intention to redeem as the dependent variable, the main effects of shopping motivation ($F(1,246) = 21.78$, $p<.001$) and temporal needs congruency ($F(1,246) = 8.56$, $p<.05$) were significant. Similar to the first model, there were significant interaction effects between shopping motivation and product type ($F(1,246) = 5.30$, $p<.05$) and between shopping motivation and temporal needs congruency ($F(1,246) = 2.80$, $p<.10$). There was also a significant main effect for coupon proneness ($F(1,246) = 29.11$, $p<.001$). The descriptive statistics, including the distribution of the participants across the 8 experimental conditions together with the mean and standard deviation of the dependent variable intention to redeem for each condition are presented in Table 7.10, followed by the ANOVA results given in Table 7.11.

Table 7.10: Intention to redeem: Descriptive statistics

Shopping Motivation	Product Type	Needs Congruency	Mean*	Std. Deviation	N
Hedonic	Hedonic	Current	5.82	1.33	33
		Future	5.64	1.19	33
		Total	5.73	1.26	66
	Utilitarian	Current	5.79	1.32	33
		Future	5.40	1.00	30
		Total	5.60	1.18	63
	Total	Current	5.80	1.31	66
		Future	5.52	1.11	63
		Total	5.67	1.22	129
Utilitarian	Hedonic	Current	4.67	1.52	30
		Future	4.00	1.63	32
		Total	4.32	1.60	62
	Utilitarian	Current	5.53	1.11	32
		Future	4.62	1.86	32
		Total	5.08	1.59	64
	Total	Current	5.11	1.38	62
		Future	4.31	1.76	64
		Total	4.71	1.63	126

* 7-point likert scale

Table 7.11: Intention to redeem: ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	139.31[a]	8	17.41	9.68	.000
Intercept	84.07	1	84.07	46.76	.000
Coupon Proneness	39.12	1	39.12	21.76	.000
Shopping Motivation	39.15	1	39.15	21.78	.000
Product Type	3.63	1	3.628	2.02	.157
Needs Congruency	15.38	1	15.38	8.56	.004
Shopping Motivation * Product Type	9.52	1	9.52	5.30	.022
Shopping Motivation * Needs Congruency	5.02	1	5.02	2.80	.096
Product Type * Needs Congruency	.81	1	.81	.45	.504
Shopping Motivation * Product Type * Needs Congruency	.18	1	.18	.10	.750
Error	442.28	246	1.80		
Total	7456.00	255			
Corrected Total	581.58	254			

[a] R Squared = .240 (Adjusted R Squared = .215)

In addition, a three-way ANOVA test was performed with shopping motivation, product type, and temporal needs congruency as independent variables and regulatory focus primed by shopping motivation as the dependent variable. The results revealed only a significant main effect for shopping motivation ($M_{HM} = 5.07$, $M_{UM} = 3.75$, $F(1,247) = 58.78$, $p<.001$). None of the other main or interaction effects was significant ($p>.10$). This corroborates the previous proposition that being in a hedonic shopping mode elicits a relatively more promotion-focused than prevention-focused regulatory orientation, whereas being on a utilitarian shopping mode elicits a relatively more prevention-focused than promotion-focused regulatory orientation.

In order to further examine the interaction effects revealed by the two ANOVA estimations above, that is, to test hypotheses H4a, H4b, H5a, and H5b, the sample was divided into two groups of hedonic and utilitarian shoppers; then, separate data analyses were conducted on the two groups. The results of data analyses are presented in the following sections. A point to mention is that henceforth, in the rest of the data analyses, the variable coupon proneness

continues to be included in the analysis as a covariate, and the main effect of coupon proneness on the dependent variables under investigation continues to be significant.

7.3.4.3 Shopping Motivation and Product Type

Hypothesis H4a proposed an interaction effect between shopping motivation and product type on regulatory fit. Specifically, it was predicted that hedonic shoppers perceive similar levels of regulatory fit in both hedonic and utilitarian product offers, whereas utilitarian shoppers have higher perceptions of regulatory fit in utilitarian offers than in hedonic offers. To test this prediction, for each group of hedonic and utilitarian shoppers, a separate ANOVA model was estimated. In each model, product type was included as the independent variable and regulatory fit was included as the dependent variable. The results showed that, as depicted in Figure 7.11, when the participants had a utilitarian shopping motivation, they perceived regulatory fit in a utilitarian product offer more than in a hedonic product offer (M_{UP} = 5.02 vs. M_{HP} = 4.41, F (1, 123) = 6.43, p<.05). In contrast, when the respondents were hedonically motivated, their perception of regulatory fit in hedonic and utilitarian products was not significantly different (M_{HP} = 5.20 vs. M_{UP} = 5.04, F (1, 126) = 1.62, p>.10). Therefore, hypothesis H4a is supported.

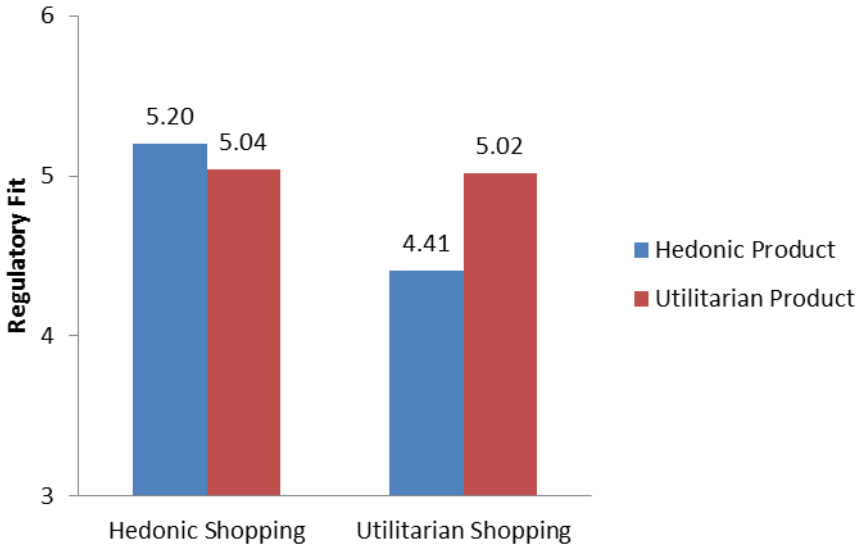

Figure 7.11: Regulatory fit for shopping motivation and product type conditions

Hypotheses H4b proposed an interaction for the effect of shopping motivation and product type on intention to redeem. In particular, it was anticipated that hedonic shoppers would be

similarly likely to redeem both hedonic and utilitarian product offers, whereas utilitarian shoppers would be more likely to redeem utilitarian products than hedonic products. To test this anticipation, a separate ANOVA model was estimated for each hedonic and utilitarian shopper group, with product type as the independent variable and intention to redeem as the dependent variable. The results revealed that, as illustrated in Figure 7.12, when their shopping motivation was utilitarian, the respondents had a higher intention to redeem a utilitarian product than a hedonic product (M_{UP} = 5.08 vs. M_{HP} = 4.32, F (1, 123) = 5.62, p<.05). In contrast, when they were hedonically motivated, the participants' intention to redeem hedonic or utilitarian products was not significantly different (M_{HP} = 5.73 vs. M_{UP} = 5.60., F (1, 126) = 0.570, p>.10). This supports hypothesis H4b.

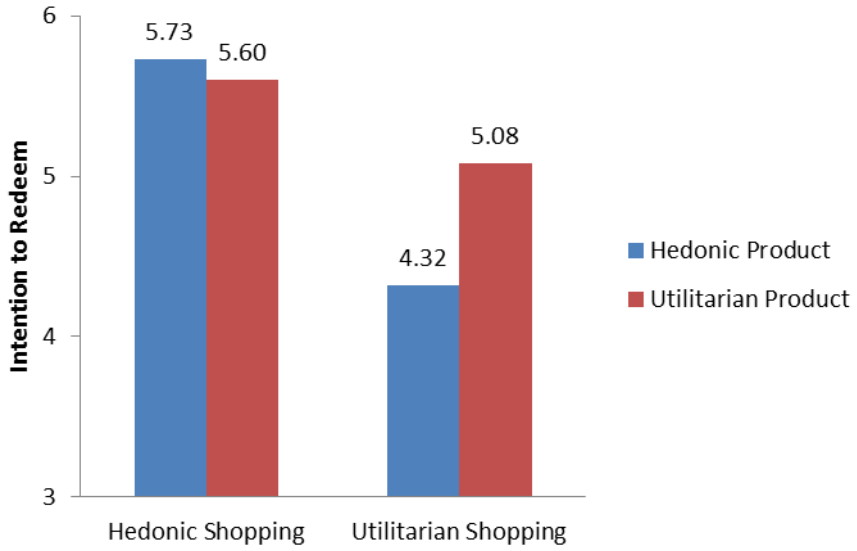

Figure 7.12: Intention to redeem for shopping motivation and product type conditions

7.3.4.4 Shopping Motivation and Temporal Needs Congruency

Hypotheses H5a predicted an interaction between shopping motivation and temporal needs congruency in their effect on regulatory fit. That is, while hedonic shoppers perceive similar levels of regulatory fit in offers congruent with their current or future needs, utilitarian shoppers perceive regulatory fit in offers congruent with their current needs more than in offers congruent with their future needs. To test this prediction, for each group of the hedonic and utilitarian shoppers a separate ANOVA model was estimated. In the models, temporal needs congruency was incorporated as the independent variable and regulatory fit as the dependent variable. As Figure 7.13 depicts, when the participants had a utilitarian shopping

motivation, they perceived regulatory fit in an offer that is congruent with their current needs more than in one congruent with their future needs (M_{CN} = 4.94 vs. M_{FN} = 4.51, F (1, 123) = 4.56, p<.05). Conversely, when the respondents had a hedonic shopping motivation, their perception of regulatory fit in offers congruent with their current needs was not significantly different from that in offers congruent with their future needs (M_{CN} = 5.11 vs. M_{FN} = 5.13, F (1, 126) = 0.643, p>.10). Therefore, hypothesis H5a is supported.

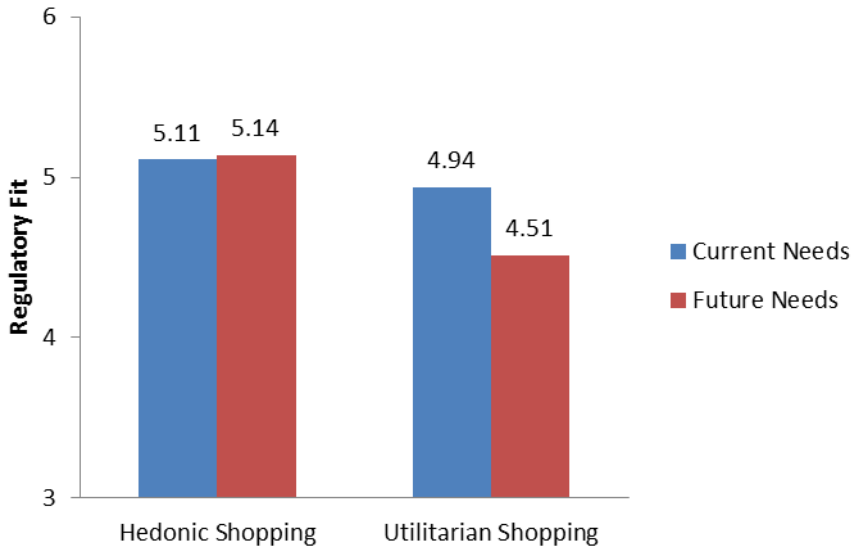

Figure 7.13: Regulatory fit for shopping motivation and temporal needs congruency conditions

Hypotheses H5b anticipated an interaction for the effect of shopping motivation and temporal needs congruency on intention to redeem. That is, while hedonic shoppers would be similarly likely to redeem offers congruent with their current or future needs, utilitarian shoppers would be more likely to have higher intentions to redeem offers congruent with their current needs than the ones congruent with their future needs. To test this anticipation, a separate ANOVA model was estimated for each of the hedonic and utilitarian shopper groups, with temporal needs congruency as the independent variable and intention to redeem as the dependent variable. As Figure 7.14 illustrates, when their shopping motivation was utilitarian, the respondents had a higher intention to redeem a current-needs-congruent offer than a future-needs-congruent one (M_{CN} = 5.11 vs. M_{FN} = 4.31, F (1, 123) = 8.18, p<.005). In contrast, when they were hedonically motivated, their intention to redeem offers congruent with their current needs was not significantly different from their intention to redeem offers congruent

with their future needs (M_{CN} = 5.80 vs. M_{FN} = 5.52., F (1, 126) = 0.780, p>.10). This supports hypothesis H5b.

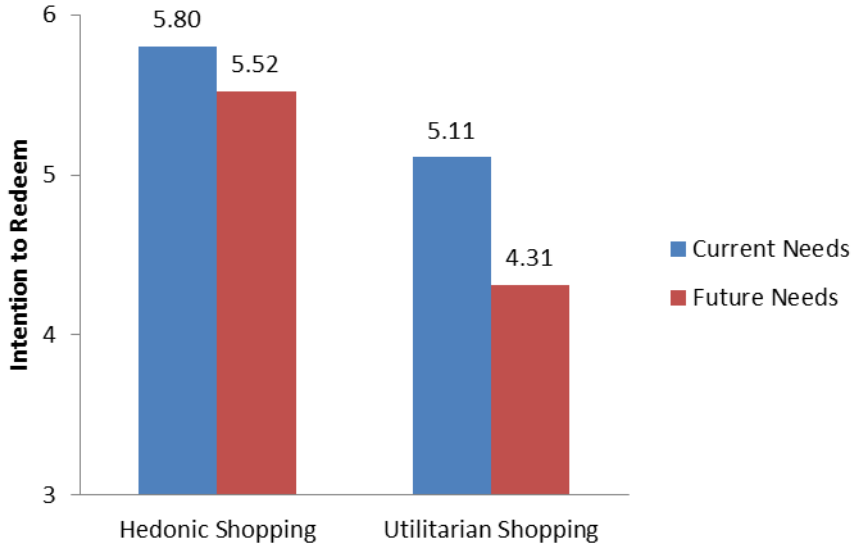

Figure 7.14: Intention to redeem for shopping motivation and temporal needs congruency conditions

7.3.4.5 The Mediating Effect of Regulatory Fit

In hypothesis H6, it was proposed that the effect of compatibility between shopping motivation and a mobile coupon's cues (the type of product offered and the congruency of the offer with temporal needs) on intention to redeem is mediated by the perception of regulatory fit. In order to test this mediating effect, the bootstrapping method suggested by Preacher and Hayes (2004, 2008) was used. This test produces a confidence interval for the indirect effect of the predictor variable on the outcome variable in a way that makes no assumptions about the distribution of the indirect effect. The results of this method are interpreted by determining whether the produced confidence interval contains the value of zero; if it does, it means that the mediation effect is not significant enough.

In testing the mediating effect of regulatory fit, a dummy coding approach was used to code the categorical variables of shopping motivation, type of product, and temporal needs congruency. In particular, hedonic shopping motivation, hedonic product, and current needs congruency were coded to one; and utilitarian shopping motivation, utilitarian product, and

future needs congruency were coded to zero. In addition to these three independent variables, two new variables were defined, the first one representing the interaction between shopping motivation and product type, and the second representing the interaction of shopping motivation and temporal needs congruency. Here they are referred to as "interaction variables". Then, five separate mediation tests were conducted. In each test, one of the two interaction variables (i.e., 'shopping*product type' or 'shopping motivation*temporal needs congruency') or one of the three predictor variables (i.e., product type, temporal needs congruency, shopping motivation) was included as the independent variable; intention to redeem was included as the dependent variable; and regulatory was included as the mediating variable. Also, when running each test, the other four independent variables were included in the model as covariates. The results of these five tests are shown in Table 7.12.

Table 7.12: Coefficients for Testing the Mediation Effect of Regulatory Fit [a]

IV	M	DV	a	b	c	c'	a*b	CI [b] (Lower-Upper)	
Shopping Motivation * Product Type	Regulatory Fit	Intention to Redeem	.66**	.48***	.77**	.46	.31	.09	.65
Shopping Motivation * Needs Congruency	Regulatory Fit	Intention to Redeem	-.51**	.48***	-.57*	-.33	-.24	-.56	-.04
Product Type	Regulatory Fit	Intention to Redeem	-.47***	.48***	-.63***	-.40*	-.23	-.48	-.05
Needs Congruency	Regulatory Fit	Intention to Redeem	.40**	.48***	.78***	.58**	.20	.03	.44
Shopping Motivation	Regulatory Fit	Intention to Redeem	.15	.4***	.70**	.63**	.07	-.09	.33

[a] Bootstrap samples: 5000
[b] 95% confidence interval
IV: Independent variable
M: Mediating variable
DV: Dependent variable
a: Effect of IV on M
b: Effect of M on DV
c: Total effect
c': Direct effect
* Significant at p< .10
** Significant at p< .05
*** Significant at p< .01

As can be seen, the confidence interval for the mediating role of regulatory fit in the effect of the interaction variable 'shopping motivation*product type' on intention to redeem does not contain a zero value. Similarly, the confidence interval for the mediating role of regulatory fit in the effect of the interaction variable 'shopping motivation*needs congruency' on intention to redeem does not cross the zero value. Also, the direct effects (c prime paths) for these two mediating effects are not significant. These indicate that regulatory fit fully mediates the effects of the two interaction variables on intention to redeem. In addition, the confidence

intervals for the effects of product type and temporal needs congruency on intention to redeem through the mediating effect of regulatory fit do not include zero. However, the direct effects for these two effects are still significant. Thus, regulatory fit partially mediates the effects of product type and temporal needs congruency on intention to redeem. Finally, the confidence interval for the effect of shopping motivation on redemption intention through regulatory fit crosses the zero value. Overall, these results indicate that hypothesis H6 is supported.

7.3.5 Summary of Study 1 and Study 2

In study 1, it was shown that consumers' shopping motivation, the type of product offered to the consumers by a mobile coupon, and the congruency of the offer with the consumers' temporal needs, each prime a certain type regulatory focus (i.e., promotion vs. prevention). In particular, it was confirmed that utilitarian shopping motivation, utilitarian products, and offers fulfilling current needs more strongly prime prevention focus than promotion focus; on the contrary, hedonic shopping motivation, hedonic products, and offers addressing future needs more strongly prime promotion focus than prevention focus, thus supporting hypotheses H1, H2, and H3, respectively.

Building on these results, in study 2 it was demonstrated that first, the compatibility between the type of regulatory focus primed by shopping motivation and the type of regulatory focus primed by mobile coupon's cues (i.e., the type of product it offers and the congruency of the offer with temporal needs) results in the experience of regulatory fit and consequently intention to redeem. However, it was shown that hedonic and utilitarian shoppers have different perceptions of regulatory fit, and consequently have different intentions to redeem personalised mobile coupons that are compatible or incompatible with their focal shopping motivations. These results were explained by establishing the mediating role of regulatory fit in the effect of the interaction between mobile coupons' cues and consumer's shopping motivation on the consumers' intentions to redeem the offers. Specifically, it was illustrated that both utilitarian shoppers perceive regulatory fit in, and redeem mobile coupons offering products that compatible with their shopping goals (i.e., utilitarian products and offers congruent with their current needs) more than incompatible offers (i.e., hedonic products and offers congruent with their future needs); whereas hedonic shoppers perceive regulatory fit in, and redeem, offers that are either compatible (i.e., hedonic products and offers congruent with

their future needs) or incompatible (i.e., utilitarian products and offers congruent with their current needs) with their shopping goals. These results supported hypotheses H4a, H4b, H5a and H5b, as well as H6.

7.4 Study 3

In the experiments conducted to test conceptual model 1 (study 1 and study 2), movie DVD and detergent were used as hedonic and utilitarian product offers, respectively. One possibility is that the findings of studies 1 and 2 are due to the specific types of products offered to the respondents. Therefore, in order to eliminate this possibility, that is, to support the generalizability of the findings, studies 3 and 4 were conducted. In particular, study 3 was carried out to validate hypotheses H1, H2, and H3, and study 4 was carried out to validate hypotheses H4a, H4b, H5a, H5b, and H6. In doing so, the experiments conducted in studies 1 and 2 were similar to those conducted in studies 1 and 2, except that two different types of products were used. Specifically, instead of movie DVD and detergent, movie ticket and shampoo were offered to respondents as hedonic and utilitarian products, respectively. In the following sections, the results of studies 3 and 4 are reported.

7.4.1 Data collection, data cleaning, and sample characteristics

One hundred and sixty-four panel members were recruited by an international organisation that hosts online surveys. Of these, 12 participants did not complete the survey, resulting in a completion rate of 93%, with 155 participants completing the survey. According to pre-tests, the average survey completion time for study 3 was about 8 minutes. Therefore, the subjects with too many missing values in their responses, those with too many repetitive ratings on different measures, as well as those with too short or too lengthy survey completion times were removed from the main data analysis. This resulted in removing 13 subjects (8%), retaining 142 respondents for the main data analysis. The distribution of the respondents across the 8 experimental conditions is shown in Table 7.13.

Table 7.13: Distribution of respondents among conditions

Shopping Motivation	Type of Product	Temporal Needs Congruency	n
Hedonic	Hedonic	Current	19
		Future	18
		Total	37
	Utilitarian	Current	17
		Future	17
		Total	34
	Total	Current	36
		Future	35
		Total	71
Utilitarian	Hedonic	Current	18
		Future	18
		Total	36
	Utilitarian	Current	17
		Future	18
		Total	35
	Total	Current	35
		Future	36
		Total	71

Of the remaining participants, 59 percent were males and 41 percent females; 44 percent of the respondents were between 25 and 34 years of age, followed by those aged between 18 and 24 (39 percent) and those between 35 and 44 years of age (11 percent). Also, 87 percent of the participants had a university degree (Table 7.14). Similar to the previous studies, the sample for this study consisted mainly of young participants with a university degree.

Table 7.14: Sample demographics

Demographic variable	Categories	Percentage (N=142)
Gender	Female	41
	Male	59
Age	18-24	38
	25-34	43
	35-44	11
	45-54	2
	55-64	3
	65 and above	4
Education	Lower than high school diploma	9
	High school diploma	4
	Associate's degree	8
	Bachelor's degree	55
	Master's degree or higher	24

7.4.2 Stimuli and Material

As noted earlier, the experimental scenarios, the way independent variables were manipulated, and the measurement scales used in study 3 were identical to those used in study 1. The only change made was in the type of product presented to the respondents. Specifically, instead of movie DVD and detergent, movie ticket and shampoo were used as hedonic and utilitarian offers, respectively (Appendix 3).

7.4.3 Exploratory factor analyses

The manipulation check and regulatory focus measures were subjected to two exploratory factor analyses. The first factor analysis was run on manipulation check measures. In the correlation matrix, most of the correlations among the items measuring their respective factor were significant and above .30. The KMO measure of sampling adequacy was .73; Bartlett's test of sphericity was statistically significant ($p < .001$). The extraction method Principal Component Analysis and the orthogonal rotation method Varimax extracted five factors with eigenvalues of higher than 1 explaining 81 percent of the variance in the data. Table 7.15 exhibits the rotated component matrix with factor loadings of above .40. As can be seen, all factor loadings were higher than .70; also, all communalities were above .50. Furthermore, all items loaded to their respective factors without any cross-loading items. The alpha coefficient for all factors was greater than .70 and all individual items representing each factor had inter-item correlations of higher than .30 and item-total correlations of higher than .50.

Table 7.15: Factor loadings for manipulation check measures [a]

Factor	Hedonic Motivation (α = .90)	Needs Congruency (α = .88)	Hedonic Product (α = .88)	Utilitarian Product (α = .85)	Utilitarian Motivation (α = .85)
Hedonic Motivation 3	.91				
Hedonic Motivation 2	.87				
Hedonic Motivation 1	.86				
Needs Congruency 3		.91			
Needs Congruency 2		.88			
Needs Congruency 1		.86			
Hedonic Product 1			.87		
Hedonic Product 3			.85		
Hedonic Product 2			.82		
Utilitarian Product 2				.91	
Utilitarian Product 3				.91	
Utilitarian Product 1				.75	
Utilitarian Motivation 2					.90
Utilitarian Motivation 1					.86
Utilitarian Motivation 3					.80

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 3

The second factor analysis was run on the measures of regulatory focus. An assessment of the correlation matrix showed that most of the correlations between the items measuring their corresponding factor were significant and above .30. The KMO measure of sampling adequacy was .78; Bartlett's test of sphericity was statistically significant ($p < .001$). Principal component analysis and Varimax rotation extracted three factors with eigenvalues of greater than one explaining 69 percent of the variability in the data. Table 7.16 displays the rotated component matrix with factor leadings of above .40. All factor loadings were above .70 and all communality values were greater than .50. Moreover, all items loaded to their corresponding factors without any items having cross-loading. In addition, the alpha coefficient for all factors was higher than .70 and all individual items representing each factors had inter-item correlations of greater than .30 and item-total correlations of greater than .50. Therefore, it was concluded that the manipulation check measures as well as the three measure of regulatory focus had both convergent and discriminant validity as well as a high level of reliability. The items associated with each of the five manipulation check

measures as well as those associated with each of the three measures of regulatory focus were summated and averaged to form an index for their corresponding factors.

Table 7.16: Factor loadings for regulatory focus measures [a]

Factor	Product Regulatory (α =.88)	Motivation Regulatory (α =.87)	Needs Regulatory (α =.77)
Product Regulatory 2	.87		
Product Regulatory 4	.86		
Product Regulatory 3	.77		
Product Regulatory 1	.76		
Motivation Regulatory 2		.84	
Motivation Regulatory 3		.83	
Motivation Regulatory 1		.76	
Motivation Regulatory 4		.76	
Needs Regulatory 3			.81
Needs Regulatory 1			.77
Needs Regulatory 2			.74
Needs Regulatory 4			.73

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 2

7.4.4 Manipulation and task checks

The participants in hedonic shopping motivations conditions had a significantly higher mean on the hedonic shopping motivation index than those in utilitarian shopping scenarios (M_H = 5.39 vs. M_U = 4.61, F (1,140) = 9.81, p<.01). Conversely, the respondents in utilitarian shopping motivation conditions had a significantly higher mean on utilitarian shopping motivation index than those in hedonic shopping scenarios (M_U = 5.39 vs. M_H = 4.85, F (1,140) = 5.90, p<.05), confirming the manipulation check for shopping motivation. Regarding the type of product, the participants presented with a movie ticket offer had a higher mean score on their ratings of the hedonic purchase activity index than those presented with a shampoo (M_H = 5.31 vs. M_U = 4.78, F (1,140) = 5.79, p<.05). In contrast, the respondents presented with a shampoo had a higher mean score on utilitarian purchase activity index than those presented with a movie ticket (M_U = 5.43 vs. M_H = 4.79, F (1,140) = 8.88, p<.01), verifying the manipulation of product type. As for temporal needs congruency, the participants in future-needs-congruent conditions had a significantly higher mean on the temporal needs congruency index, indicating a greater future need, than those in the current-

needs-congruent scenarios (M_{FN} = 5.29 vs. M_{CN} = 4.40, F (1, 140) =9.53, p<.01). Hence, manipulation of temporal needs congruency was also confirmed. Moreover, the respondents regarded the scenarios to be realistic (M=5.48, t (141) = 10.28, p<.001), did not have difficulty imagining themselves in the scenarios (M=5.59, t (141) = 13.18, p<.001), considered the discounted offers to be common (M=5.59, t (141) = 5.20, p<.001), and believed that they had enough time to redeem the offered mobile coupon (M=4.92, t (141) = 6.78, p<.001). Finally, none of the respondents was aware of the purpose of the study.

7.4.5 Testing the hypothesised effects

In order to test hypotheses H1, H2, and H3, three separate one-way ANOVA tests were performed. The results are illustrated in Figure 7.15. The items were measured on a 7-point bipolar scale with the left anchor of the scales referring to prevention focus and the right anchor referring to promotion focus (Appendix 3). An ANOVA test with shopping motivation as the independent variable and regulatory focus primed by shopping motivation as the dependent variable, was significant (M_{HM} = 4.96 vs. M_{UM} = 4.11; F (1,140) =10.11, p<.01). This corroborates the proposition that while hedonic shoppers are more likely to be situationally promotion-focused than prevention-focused, utilitarian shoppers tend to have relatively more prevention-focused than promotion-focused orientations, supporting hypothesis H1. Likewise, an ANOVA test with product type as the independent variable and regulatory focus primed by type of product as the dependent variable, was significant (M_{HP} = 5.12 vs. M_{UP} = 4.60; F (1,140) =4.85, p<.05). This supports hypothesis H2 which proposes that offering to consumers a hedonic purchase activity (by redeeming a hedonic product) leads them to adopt a promotion-focused orientation more than a prevention-focused orientation, whereas offering the consumers a utilitarian purchase activity (by redeeming a utilitarian product) causes them to adopt relatively more prevention focus than promotion focus. Finally, an ANOVA test with temporal needs congruency as the independent variable and regulatory focus primed by temporal need as the dependent variable was significant (M_{FN} = 5.17 vs. M_{CN} = 4.74; F (1,140) =3.58, p<.10). This result supports hypothesis H3 which posits that thinking of purchasing a discounted offer that is congruent with future needs (e.g., has been purchased recently) induces relatively a promotion focus more than a prevention focus, whereas thinking of purchasing a discounted product that is congruent with current needs (e.g., has been purchased relatively a long time ago) induces relatively a prevention focus more than a promotion focus.

Data Analysis (Model 1)

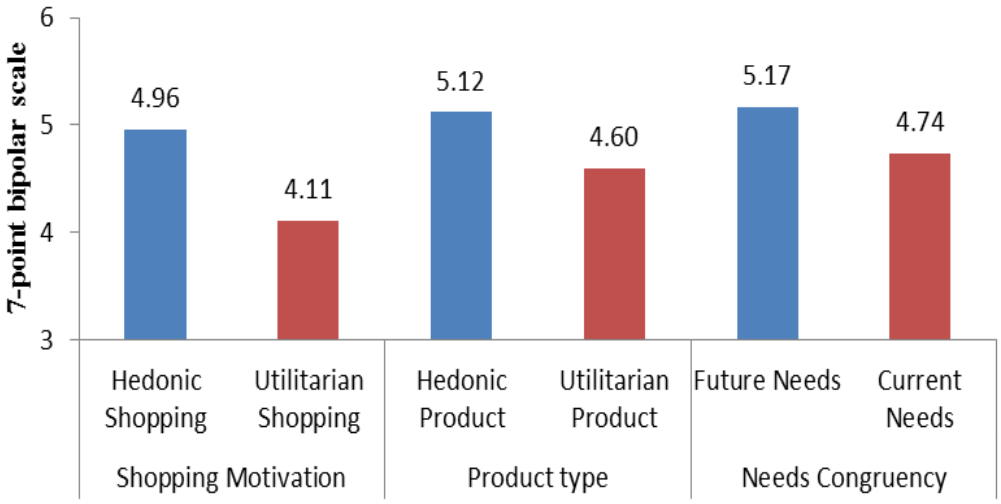

Figure 7.15: Regulatory focus primed by shopping motivation, product type, and temporal needs congruency

7.5 Study 4

Building on the results of study 3, study 4 examines the hypotheses that: utilitarian shoppers perceive higher degrees of regulatory fit in and consequently have higher intentions to redeem utilitarian products and offers congruent with their current needs than hedonic products and offers congruent with their future needs; in contrast, hedonic shoppers have similar perceptions of regulatory fit in hedonic and utilitarian products and also have similar levels of intention to redeem offers congruent with their current or future needs. Indeed, study 4 tests the prediction that: the perception of regulatory fit in, and as a result intention to redeem personalised mobile coupon offers, depends on the compatibility between the type of regulatory focus primed by mobile coupon cues and the type of regulatory focus primed by the consumers' shopping motivation. However, it is predicted that utilitarian and hedonic shoppers have different perceptions of regulatory fit in and intentions to redeem compatible and incompatible personalised mobile coupons; that is, while utilitarian shoppers perceive higher levels of regulatory fit in compatible than in incompatible offers, hedonic shoppers have comparable perceptions of regulatory fit in compatible and incompatible offers.

7.5.1 Data collection, data cleaning, and demographics

Three hundred and eighty-four panel members were recruited by an international organisation that hosts online surveys. The completion rate was 83% as 64 participants commenced but did not finish the survey. According to pre-tests, the average survey completion time for study 4

was about 12 minutes. Of the 320 subjects completing the survey, 20 cases (5%) had too many missing values, or too many identical ratings on different measures, too short/long survey completion times, or a combination of the above. Hence, these subjects were identified as extreme outliers and excluded from the data set, resulting in 300 cases remaining for the main data analysis. Similar to the previous studies, the sample encompassed a majority of young people who had completed a university degree. As shown in Table 7.17, there were also again more males than females (63 percent versus 42 percent, respectively). A large proportion of the respondents were between 25 and 34 years of age (43 percent), followed by those who aged between 18 and 24 (36 percent) and those aged between 35 and 44 (13 percent).

Table 7.17: Sample Demographics

Demographic variable	Categories	Percentage (N=300)
Gender	Female	42
	Male	58
Age	18-24	36
	25-34	43
	35-44	13
	45-54	3
	55-64	3
	65 and above	2
Education	Lower than high school diploma	2
	High school diploma	11
	Associate's degree	10
	Bachelor's degree	50
	Master's degree or higher	27

7.5.2 Exploratory factor analyses

Similar to study 3, two separate exploratory factor analyses (EFA) were performed, one on manipulation check measures and one the measures of dependent and control variables. The first EFA was performed on the five manipulation check measures. In the correlation matrix, most of the correlations among the items measuring their respective factor were significant and above .30. The KMO measure of sampling adequacy was .77; and Bartlett's test of sphericity was statistically significant ($p < .001$). The extraction method Principal Component Analysis and the orthogonal rotation method Varimax extracted 5 factors with eigenvalues greater than one, explaining 83 percent of the variance in the data. Table 7.18 displays the

rotated component matrix with factor leadings above .40. As can be seen, all factor loadings were above .70; also, all communalities were higher than .50. Furthermore, all items loaded to their respective factors without any cross-loading items. The alpha coefficient for all factors was above .70 and all individual items representing each factor had inter-item correlations of higher than .30 and item-total correlations of greater than .50 (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b).

Table 7.18: Factor loadings for manipulation check measures [a]

Factor	Needs Congruency (α = .92)	Hedonic Product (α = .90)	Utilitarian Motivation (α = .88)	Utilitarian Product (α = .89)	Hedonic Motivation (α = .89)
Needs Congruency 2	.95				
Needs Congruency 3	.92				
Needs Congruency 1	.90				
Hedonic Product 3		.90			
Hedonic Product 2		.90			
Hedonic Product 1		.89			
Utilitarian Motivation 3			.90		
Utilitarian Motivation 2			.88		
Utilitarian Motivation 1			.84		
Utilitarian Product 2				.92	
Utilitarian Product 3				.89	
Utilitarian Product 1				.86	
Hedonic Motivation 2					.89
Hedonic Motivation 3					.86
Hedonic Motivation 1					.83

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 4

The second EFA was performed on the measures of the dependent variable regulatory fit, the control variable coupon proneness, and the variable regulatory focus primed by shopping motivation. An assessment of the correlation matrix showed that most of the correlations among the items measuring their corresponding factor were significant and higher than .30. The KMO measure of sampling adequacy was .90; and Bartlett's test of sphericity was statistically significant ($p < .001$). Principal Component Analysis and Varimax rotation extracted three factors explaining 68 percent of the variability in the data. Table 7.19 exhibits

the rotated component matrix with factor leadings above .40 It can be seen that that all factor loadings are above .60; also, all communalities were higher than .50. The alpha coefficient for all factors was above .70 and all factors had inter-item correlations higher than .30 and item-total correlations for individual items greater than .50 (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b). Therefore, it was concluded that the manipulation check measures and the measures of regulatory fit, coupon proneness, and regulatory focus had both convergent and discriminant validity as well as a high level of reliability. The measures associated with each factor were summated and averaged to form a composite scale for their respective factor.

Table 7.19: Factor loadings for dependent and control variable measures [a]

Factor	Regulatory Fit (α = .93)	Regulatory Focus (α = .88)	Coupon Proneness (α = .80)
Regulatory Fit 2	.85		
Regulatory Fit 3	.81		
Regulatory Fit 6	.80		
Regulatory Fit 4	.78		
Regulatory Fit 8	.77		
Regulatory Fit 7	.75		
Regulatory Fit 1	.70		
Regulatory Fit 5	.69		
Regulatory Focus 2		.88	
Regulatory Focus 3		.84	
Regulatory Focus 1		.82	
Regulatory Focus 4		.69	
Coupon Proneness 2			.85
Coupon Proneness 1			.84
Coupon Proneness 3			.74
Coupon Proneness 4			.70

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 4

7.5.3 Manipulation and task checks

Similar to study 3, the manipulations for all the three independent variables were confirmed and operated in the expected directions. Specifically, the participants in hedonic shopping motivation conditions had significantly higher mean scores on the hedonic shopping motivation index than on the utilitarian shopping motivation index ($M_{HM} = 5.48$, $M_{UM} = 4.06$, $F(1,298) = 86.15$); on the contrary, for those in utilitarian shopping scenarios the mean scores

on the utilitarian shopping motivation index was significantly higher than the mean scores on the hedonic shopping motivation index (M_{UM} = 5.39, M_{HM} = 4.19, F (1,298) = 50.30), confirming the manipulation of shopping motivation. The participants presented with a movie ticket offer had a significantly higher mean on hedonic purchase activity index than on utilitarian purchase activity index (M_{HP} = 5.31, M_{UP} = 4.57, F (1, 298) = 23.62, p<.001); on the other hand, for the those offered a shampoo, the mean utilitarian purchase activity index was significantly higher than the mean hedonic purchase activity index (M_{UP} = 5.31, M_{HP} = 4.57, F (1, 298) = 23.62, p<.001), verifying the manipulation of type of product. The subjects in the future-needs-congruent scenarios had a significantly higher mean on temporal needs congruency index than those in the current-needs-congruent conditions, indicating that they had perceived the offer to be congruent with their future needs more than with their current needs (M_{FN} = 4.83 vs. M_{CN} = 3.91, F (1, 253) =19.99, p<.001), thereby supporting the manipulation of temporal needs congruency.

Finally, the respondents regarded the scenarios to be realistic (M=5.39, t (299) = 18.34, p<.001), did not have difficulty imagining themselves in the scenarios (M=5.39, t (299) = 17.95, p<.001), considered the discounts offered on the presented product to be common (M=5.39, t (299) = 13.75, p<.001), and believed that they had adequate time to redeem the offered mobile coupon (M=5.39, t (299) = 18.34, p<.001). Also, none of the respondents was aware of the purpose of the study.

7.5.4 Testing the hypothesised effects

A 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (temporal needs congruency: current needs vs. future needs) full-factorial MANOVA was run with regulatory fit and intention to redeem as dependent variables. The main effects of shopping motivation (Wilk's Lambda=.90, F (2,290) = 15.65, p < .001) and temporal needs congruency (Wilk's Lambda=.98, F (2,290) = 3.69, p < .05) were significant. Also, the interaction effects between shopping motivation and product type (Wilk's Lambda=.94, F (2,290) = 9.52, p < .001) and between shopping motivation and temporal needs congruency (Wilk's Lambda=.98, F (2,290) = 2.50, p < .10) were significant. None of the other main and interaction effects was significant (p>.10).

Data Analysis (Model 1)

In the same way as in study 2, to examine the effects of compatibility (and incompatibility) between shopping motivation, the type of product, and temporal needs congruency on regulatory fit and intention to redeem, two separate full-factorial ANOVAs were run. In the first ANOVA model, regulatory fit was included as the dependent variable. There was a significant main effect for shopping motivation ($F(1,291) = 20.78$, $p<.001$) and temporal needs congruency ($F(1,291) = 4.99$, $p<.05$). Also, the interaction effects between shopping motivation and product type ($F(1,291) = 16.12$, $p<.001$) and shopping motivation and temporal needs congruency ($F(1,291) = 4.35$, $p<.05$) were significant. In the second ANOVA model, intention to redeem was included as the dependent variable. There were significant main effects for shopping motivation ($F(1,291) = 27.17$, $p<.001$), product type ($F(1,291) = 2.99$, $p<.10$), and temporal needs congruency ($F(1,291) = 6.32$, $p<.05$). Similar to the first ANOVA model, the interaction effects between shopping motivation and product type ($F(1,291) = 13.17$, $p<.001$) and shopping motivation and temporal needs congruency ($F(1,291) = 3.31$, $p<.10$) were significant.

Additionally, a three-way ANOVA test with shopping motivation, product type, and temporal needs congruency as independent variables and regulatory focus primed by shopping motivation as dependent variable was performed. The results revealed a significant main effect for shopping motivation ($M_{HM} = 5.33$, $M_{UM} = 3.95$, $F(1,289) = 17.61$, $p<.001$). None of the other main or interaction effects was significant ($p>.10$). This supports the previous proposition that while hedonic shopping motivation primes relatively more promotion focus than prevention focus, utilitarian shopping motivation primes relatively more prevention focus than promotion focus. In order to test hypotheses H4a, H4b, H5a, and H5b, separate data analyses were performed on the two groups of hedonic and utilitarian shoppers. The results are detailed in the subsequent sections.

7.5.4.1 Shopping motivation and product type

In order to investigate the effect of interaction between shopping motivation and product type on regulatory fit, two separate ANOVA models were estimated for hedonic and utilitarian shoppers, with product type as the independent variable and regulatory fit as the dependent variable. As Figure 7.16 illustrates, when they had a utilitarian shopping motivation, participants perceived more regulatory fit in a utilitarian product category than a hedonic product category ($M_{UP} = 4.84$ vs. $M_{HP} = 4.11$, $F(1, 147) = 8.57$, $p<.01$); conversely, when

they had a hedonic shopping motivation, respondents perceived a higher level of regulatory fit in a hedonic product category than a utilitarian product category (M_{HP} = 5.33 vs. M_{UP} = 4.89, F (1, 147) = 8.25, p<.01). This is in contrast to the results of study 2, where it was found that hedonic shoppers perceive similar levels of regulatory fit in hedonic and utilitarian products. As a result, H4a is partially supported.

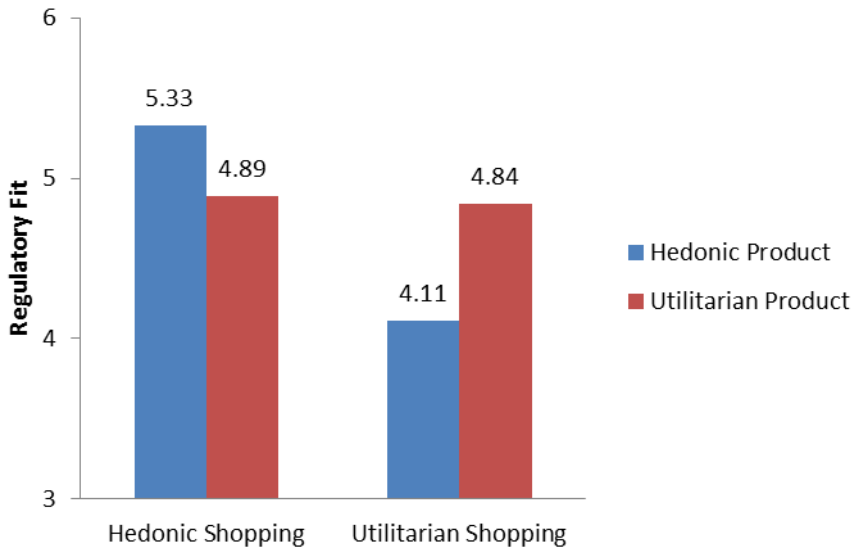

Figure 7.16: Regulatory fit for shopping motivation and product type conditions

Likewise, to test the effect of interaction between shopping motivation and product type on intention to redeem, two separate ANOVA models were estimated for hedonic and utilitarian shoppers, with product type as the independent variable and intention to redeem as the dependent variable. As depicted in Figure 7.17, when their shopping motivation was utilitarian, participants had a higher degree of intention to redeem a utilitarian product than a hedonic product (M_{UP} = 4.83 vs. M_{HP} = 3.67, F (1, 147) = 11.96, p<.01), whereas when they had a hedonic shopping motivation, participants had similar intentions to redeem hedonic and utilitarian products (M_{HP} = 5.44 vs. M_{UP} = 5.09., F (1, 147) = 1.93, p>.10). Therefore, and consistent with the results of study 2, hypothesis H4b is supported.

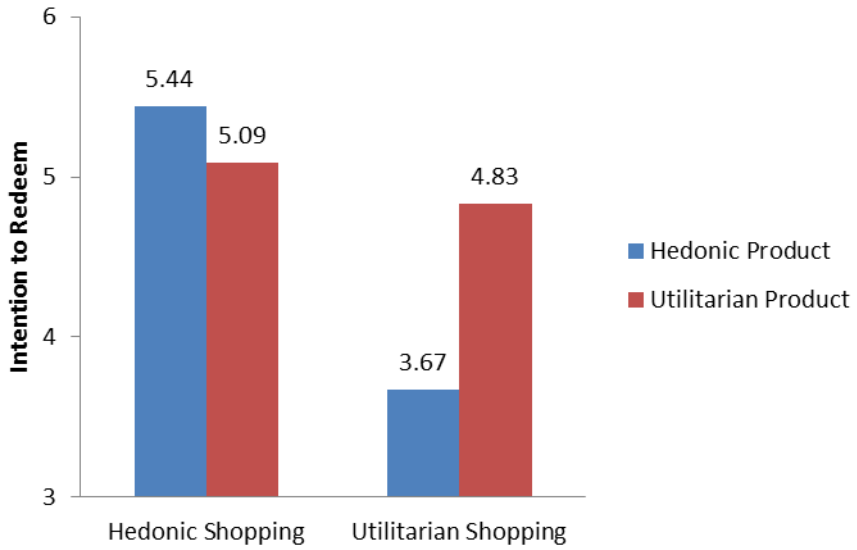

Figure 7.17: Intention to redeem for shopping motivation and product type conditions

7.5.4.2 Shopping motivation and temporal needs congruency

In order to investigate the effect of interaction between shopping motivation and temporal needs congruency on regulatory fit, two separate ANOVA models for hedonic and utilitarian shoppers were estimated, with temporal needs congruency as the independent variable and regulatory fit as the dependent variable. As Figure 7.18 illustrates, when their shopping motivation was utilitarian, participants perceived regulatory fit in an offer congruent with their current needs more than in one congruent with their future needs (M_{CN} = 4.75 vs. M_{FN} = 4.20, F (1, 147) = 6.84, p<.05); on the other hand, when they had a hedonic shopping motivation, respondents perceived similar levels of regulatory fit in offers that are congruent with both their current and future needs (M_{CN} = 5.13 vs. M_{FN} = 5.09, F (1, 147) = 0.004, p>.10). Therefore, hypothesis H5a is supported.

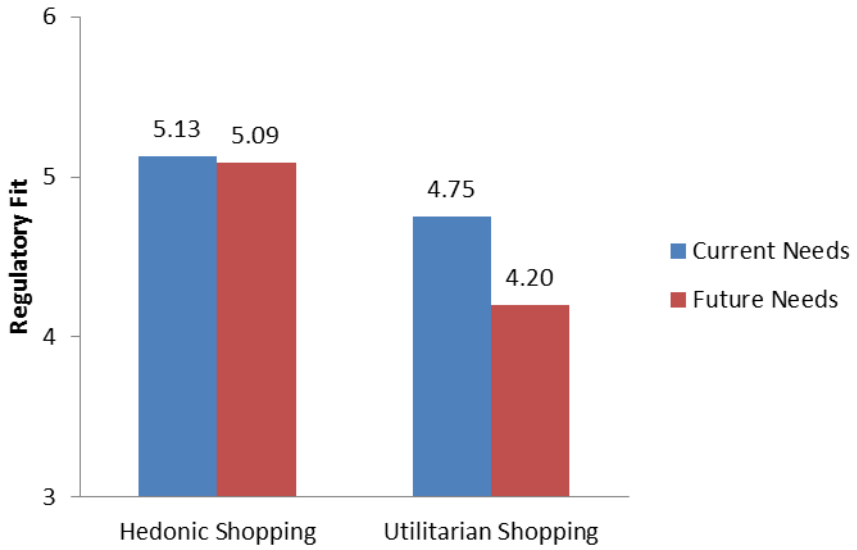

Figure 7.18: Regulatory fit for shopping motivation and temporal needs congruency conditions

Likewise, to test the effect of interaction between shopping motivation and temporal needs congruency on intention to redeem, two separate ANOVA models for hedonic and utilitarian shoppers were estimated, with temporal needs congruency as the independent variable and intention to redeem as the dependent variable. As depicted in Figure 7.19, when they had utilitarian shopping motivation, participants' intention to redeem a current-needs-congruent offer was higher than that for a future-needs-congruent one (M_{CN} = 4.64 vs. M_{FN} = 3.85, F (1, 147) = 7.51, p<.01); whereas when the respondents had a hedonic shopping motivation, they had similar degrees of intentions to redeem offers congruent with both their current or future needs (M_{CN} = 5.34 vs. M_{FN} = 5.19., F (1, 147) = 0.237, p>.10), supporting hypothesis H5b.

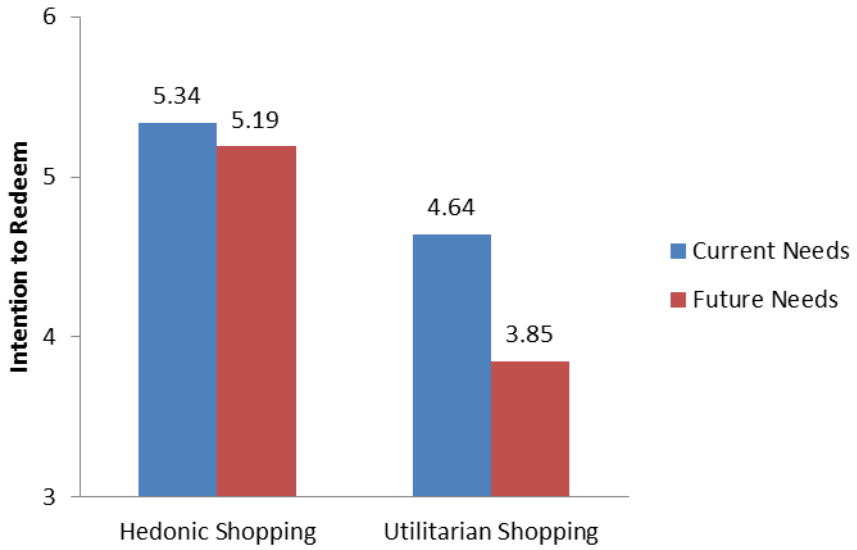

Figure 7.19: Intention to redeem for shopping motivation and temporal needs congruency conditions

7.5.4.3 The Mediating Effect of Regulatory Fit

Similar to study 2, to test the mediating role of regulatory fit in the effect of compatibility (or incompatibility) between shopping motivation, type of product, and temporal needs congruency on intention to redeem, bootstrapping method was used recommended by Preacher and Hayes (2004, 2008) was used. The results are presented in Table 7.20. As can be observed, the results are comparable to those reported in study 2. Specifically, the confidence intervals for the effect of interaction variables (i.e., shopping motivation*product type and shopping motivation*temporal needs congruency) do not include the value zero. In addition, the effects for these two interaction variables are not significant. Therefore, regulatory fit fully mediates the effects of the interaction between shopping motivation and type of product, and the interaction between shopping motivation and temporal needs on intention to redeem. Similarly, the confidence intervals for the mediating effects of product type and temporal needs congruency do not contain zero. Because the direct effect for the effect of product type is significant but for the effect of temporal needs congruency it is not significant, regulatory focus partially mediates the effects of product type and fully mediates the effect of temporal needs congruency on intention to redeem. Finally, since the confidence interval for shopping motivation crosses the value of zero, regulatory fit is not mediating the effect of shopping motivation on intention to redeem. Overall, hypothesis H6 is supported.

Table 7.20: Coefficients for Testing the Mediation Effect of Regulatory Fit [a]

IV	M	DV	a	b	c	c'	a*b	CI [b] (Lower-Upper)	
Shopping Motivation * Product Type	Regulatory Fit	Intention to Redeem	.99***	.79***	1.30***	.51	.79	.43	1.28
Shopping Motivation * Needs Congruency	Regulatory Fit	Intention to Redeem	-.52**	.79***	-.66*	-.24	-.42	-.85	-.02
Product Type	Regulatory Fit	Intention to Redeem	-.57**	.79***	-.96***	-.51*	-.45	-.79	-.14
Needs Congruency	Regulatory Fit	Intention to Redeem	.54**	.79***	.78**	.35	.43	.13	.80
Shopping Motivation	Regulatory Fit	Intention to Redeem	.33	.79***	.62**	.36	.36	-.09	.65

[a] Bootstrap samples: 5000
[b] 95% confidence interval
IV: Independent variable
M: Mediating variable
DV: Dependent variable
a: Effect of IV on M
c: b: Effect of M on DV
c: Total effect
c': Direct effect
* Significant at p< .10
** Significant at p< .05
*** Significant at p< .01

7.5.5 Summary of Study 3 and Study 4

Study 3 and study 4 validated the results of study 1 and study 2. Specifically, in the hypothetical shopping scenarios in study 3, participants were presented with a different type of product, namely, movie ticket and shampoo instead of movie DVD and detergent as hedonic and utilitarian offers, respectively. Consistent with the results of study 1, study 3 showed that while utilitarian shopping motivation, utilitarian products, and offers fulfilling current needs prime a prevention regulatory focus more than a promotion focus, hedonic shopping motivation, hedonic products, and offers addressing future needs prime a promotion regulatory focus more than prevention focus, supporting hypotheses H1, H2, and H3.

Drawing on these findings, study 4 demonstrated that respondents in utilitarian shopping conditions perceive a higher level of regulatory fit in utilitarian products than in hedonic products, whereas those in hedonic shopping conditions perceived a higher level of regulatory fit in hedonic products than utilitarian products. Since this finding for hedonic shoppers was contrary to what had been predicted, H4a was partially supported. However, it was found that while utilitarian shoppers are more likely to redeem utilitarian product offers than hedonic product offers, hedonic shoppers are similarly likely to redeem both hedonic and utilitarian product offers, supporting H4b. Also, study 4 illustrated that while utilitarian shoppers

perceive more regulatory fit in and have higher intentions to redeem offers congruent with their current needs than in offers congruent with their future needs, hedonic shoppers perceive similar levels of regulatory fit in and redeem offers addressing their current or future needs, supporting hypotheses H5a and H5b. Finally, it was shown that regulatory fit mediates the effect of the interaction between shopping motivation and product type as well as the interaction between shopping motivation and temporal needs congruency on intention to redeem (H6).

7.6 Testing the effect of product type

As noted above, the results of study 4 were consistent with those of study 2, except for the finding in study 4 that hedonic shoppers perceive a higher level of regulatory fit in a hedonic product (movie ticket) than in a utilitarian product (shampoo) offer, as opposed to hedonic shoppers in study 2, who perceived similar levels of regulatory fit in movie DVD and detergent offers. One possibility is that this may have been due to the specific nature of the movie ticket and shampoo offers (not due to the type of product category as a whole). In order to rule out this possibility, the data relating to study 2 and study 4 were pooled to form a single data set. In fact, in the pooled data set, movie DVD and movie ticket together represent hedonic product types, whereas detergent and shampoo represent utilitarian product types. In doing so, a new variable named ‘study’ was defined with two levels: study 2 and study 4. Then, two separate 2 (study: study 2 vs. study 4) by 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (temporal needs congruency) full-factorial ANOVAs were run. In the first model, regulatory fit and in the second model intention to redeem were included as dependent variables.

The results of the ANOVA model estimation with regulatory fit as dependent variable are presented in Table 7.21. As can be seen, the main effect of the variable ‘study’ is marginally significant ($F(1, 538) = 2.79$, $p<.10$); on average, the respondents in study 2 had slightly higher perceptions of regulatory fit in the products offered to them (both hedonic and utilitarian) than did the respondents in study 4 ($M_{P1} = 4.92$, $M_{P2} = 4.79$). Also, the interaction between ‘study’ and shopping motivation is marginally significant ($F(1, 538) = 3.36$, $p<.10$). None of the interaction effects between the variable ‘study’ and other variables is significant ($p> .10$). Regarding the interaction effect between ‘study’ and shopping motivation, the pooled data showed that on average, hedonic shoppers perceived similar levels of regulatory

fit in the products offered in study 2 and study 4 (M_{S2} = 5.12, M_{S4} = 5.11, F (1,276) =.03, p>.10), whereas utilitarian shoppers, on average, perceived less regulatory fit in the products offered in study 4 than in the ones offered in study 2 (M_{S2} = 4.72, M_{S4} = 4.47, F (1,273) = 4.50, p<.05).

Table 7.21: Regulatory fit: Pooled data (ANOVA)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	192.23[a]	16	12.01	11.51	.000
Intercept	143.22	1	143.22	137.24	.000
Coupon Proneness	85.52	1	85.52	81.96	.000
Study	2.91	1	2.91	2.79	.095
Shopping Motivation	21.87	1	21.87	20.96	.000
Product Type	1.52	1	1.52	1.45	.228
Temporal Needs	6.30	1	6.30	6.03	.014
Study * Shopping Motivation	3.50	1	3.50	3.36	.068
Study * Product Type	.29	1	.29	.28	.599
Study * Temporal Needs	.53	1	.53	.51	.477
Shopping Motivation * Product Type	23.46	1	23.46	22.48	.000
Shopping Motivation * Temporal Needs	8.93	1	8.93	8.56	.004
Product Type * Temporal Needs	1.21	1	1.21	1.16	.283
Study * Shopping Motivation * Product Type	.86	1	.86	.82	.365
Study * Shopping Motivation * Temporal Needs	.01	1	.01	.01	.953
Study * Product Type * Temporal Needs	.32	1	.32	.31	.578
Shopping Motivation * Product Type * Temporal Needs	.77	1	.77	.73	.391
Study * Shopping Motivation * Product Type * Temporal Needs	.15	1	.15	.14	.707
Error	561.41	538	1.04		
Total	13820.75	555			
Corrected Total	753.63	554			

[a] R Squared = .255 (Adjusted R Squared = .233)

The results of the ANOVA model estimated with intention to redeem as dependent variable are presented in Table 7.22. As can be seen, the main effect of the variable 'study' is significant (F (1, 538) = 12.82, p<.001), with the respondents in the study 2 having higher intentions to redeem the products offered to them (both hedonic and utilitarian) than did the respondents in study 4 (M_{P1} = 5.19, M_{P2} = 4.76). However, none of the interaction effects

between 'study' and other variables is significant (p> .10). Therefore, it seems plausible to conclude that the specific products offered to participants has not played any significant role in the effects found for the interaction between shopping motivation and type of product as well as between shopping motivation and temporal needs congruency.

Table 7.22: Intention to redeem: Pooled data (ANOVA)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	393.82[a]	16	24.61	11.52	.000
Intercept	147.84	1	147.84	69.21	.000
Coupon Proneness	91.37	1	91.37	42.78	.000
Study	27.39	1	27.39	12.82	.000
Shopping Motivation	101.89	1	101.89	47.70	.000
Product Type	10.42	1	10.42	4.88	.028
Temporal Needs	30.63	1	30.63	14.34	.000
Study * Shopping Motivation	.78	1	.78	.36	.547
Study * Product Type	.21	1	.21	.10	.753
Study * Temporal Needs	.05	1	.05	.02	.881
Shopping Motivation * Product Type	37.40	1	37.40	17.51	.000
Shopping Motivation * Temporal Needs	12.79	1	12.79	5.99	.015
Product Type * Temporal Needs	6.93	1	6.93	3.24	.072
Study * Shopping Motivation * Product Type	2.61	1	2.61	1.22	.269
Study * Shopping Motivation * Temporal Needs	.07	1	.07	.033	.856
Study * Product Type * Temporal Needs	1.72	1	1.72	.81	.370
Shopping Motivation * Product Type * Temporal Needs	.52	1	.52	.24	.621
Study * Shopping Motivation * Product Type * Temporal Needs	1.89	1	1.89	.88	.348
Error	1149.14	538	2.14		
Total	15179.00	555			
Corrected Total	1542.96	554			

[a] R Squared = .255 (Adjusted R Squared = .233)

7.7 Conclusion

In this chapter, the hypotheses associated with conceptual model 1 were tested. In particular, in order to test conceptual model 1, four studies were conducted. Study 3 and study 4 were the replications of study 1 and study 2, respectively, but with different types of products for hedonic and utilitarian offers. In studies 1and 3, it was established that while hedonic shopping motivation, hedonic product offers, and offers congruent with future needs each prime relatively more promotion regulatory focus more than prevention focus, utilitarian shopping motivation, utilitarian product offers, and offers congruent with current needs prime relatively more prevention regulatory focus than promotion focus. Building on these results, in study 2 and study 4 it was shown that the compatibility (and incompatibility) between the type of regulatory focus primed by shopping motivation and the type of regulatory focus primed by type of product or temporal needs congruency results in perceptions of regulatory fit and intentions to redeem mobile coupon offers. However, it was demonstrated that while hedonic and utilitarian shoppers have similar responses to compatible offers, they have different responses to incompatible offers.

Specifically, it was demonstrated that hedonic shoppers perceive similar degrees of regulatory fit in and have similar levels of intention to redeem hedonic or utilitarian products; whereas utilitarian shoppers perceive a greater degree of regulatory fit in, and have higher levels of intention to redeem, utilitarian products than hedonic products. Likewise, it was illustrated that hedonic shoppers have comparable perceptions of regulatory fit and intention to redeem when they receive product offers congruent with their current or future needs; whereas utilitarian shoppers have greater degrees of regulatory fit and intention to redeem when they receive product offers congruent with their current needs more than when they receive offers are congruent with their future needs. Further, it was shown that regulatory fit mediates the effects of the interaction between shopping motivation and product type and between shopping motivation and temporal needs congruency on intention to redeem. In other words, it was demonstrated that while utilitarian shoppers perceive more regulatory fit, and consequently have higher intentions to redeem compatible offers more than incompatible offers, hedonic shoppers have similar perceptions of regulatory fit, and consequently similar intentions to redeem, both compatible and less compatible offers. In the next chapter, the hypotheses related to conceptual model 2 are tested by conducting studies 5 to 8.

Chapter 8 : Data Analysis and Findings (Conceptual Model 2)

8.1 Introduction

In the previous chapter, the results of the data analysis conducted to test conceptual model 1and its associated hypotheses were explained. In the present chapter, the data analysis procedures deployed to test conceptual model 2 and its associated hypotheses are detailed. In the same way as the previous chapter, for each separate study (studies 5 through 8), this chapter describes: data collection and data cleaning procedure together with sample characteristics; followed by the results of the tests of the validity and reliability of the scales, manipulation checks, and finally the results of testing research hypotheses.

To recall, conceptual model 2 is presented again in Figure 8.1. According to this model, especially in the context of mobile coupon services, besides the type of the product, another factor that influences consumers' responses to personalised mobile coupons is that of access convenience. Specifically, in conceptual model 2, it is proposed that hedonic and utilitarian shoppers have different perceptions of regulatory fit in as well as different intentions to redeem personalised mobile coupons; it is argued that this difference is due to not only the compatibility (or incompatibility) between the type of product and the consumers' shopping motivations, but also due to the shoppers' perceptions of the physical distance between the location at which they receive an offer and the location at which the offer needs to be redeemed. In order to test this prediction, study 5 and study 6 followed by study 7 and study 8 were conducted. Studies 7 and 8 are similar to studies 5 and 6 except that in the latter two, instead of manipulating the variable shopping motivation, it was measured by asking respondents to reveal their shopping motivations on their most recent visit to a major shopping mall.

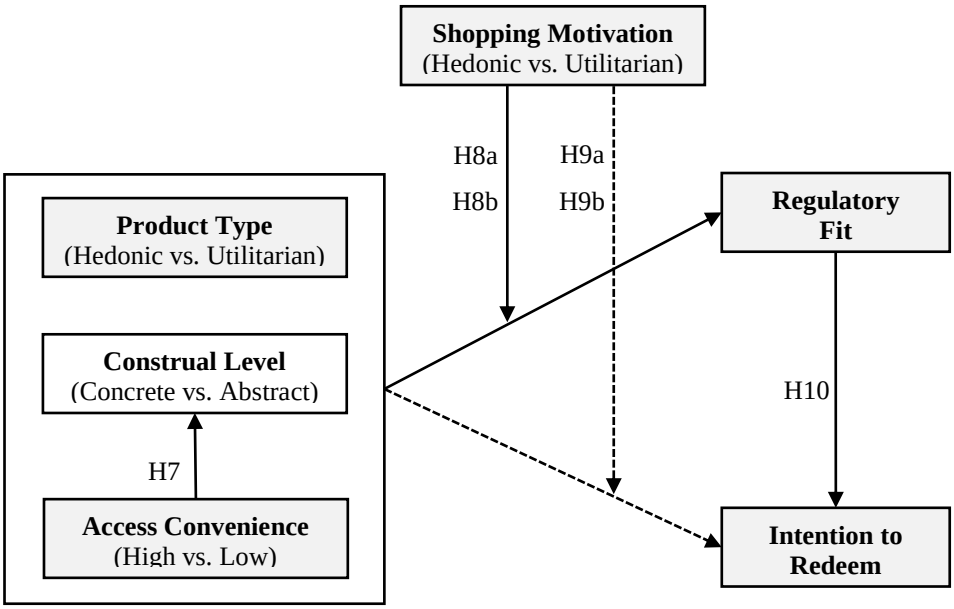

Figure 8.1: Conceptual model 2 (Copied from Figure 5.2)

8.2 Study 5: Construal Level Activated by Access Convenience

According to hypothesis H7 in conceptual model 2, a certain type of construal level is activated as a function of the spatial distance from the point at which a mobile coupon is delivered to shoppers and the location at which the mobile coupon needs to be redeemed. Specifically, H7 predicts that while a convenient-to-access location (close spatial distance) activates a low-level concrete construal, an inconvenient-to-access location (far spatial distance) activates a high-level abstract construal. To test this prediction, study 5 was conducted.

8.2.1 Data collection, data cleaning, and sample characteristics

The sampling framework for study 5 consisted of people who had registered with an international online panel. One hundred and forty-six participants were recruited by an international organisation hosting online surveys. Eight respondents started but did not finish the survey, resulting in a completion rate of 95 percent. Pre-tests conducted prior to the main data collection had shown that the average survey completion time for study 5 was about 10 minutes. Therefore, the criteria used for data cleaning included: too short or too lengthy survey completion time together with a high number of missing values and a high number of

repetitive rating scores across different measures. Using the above data cleaning criteria, 3 subjects (2 percent) were excluded from the data set, resulting in 135 cases remaining for the main data analysis. As shown in Table 8.1, unlike the previous studies, the range of participants comprised more females than males (56 percent versus 44 percent). However, similar to the previous studies, the respondents were mostly young and educated people. Specifically, 39 percent of the subjects fell within the 25-34 age range, 27 percent were between 18 and 24 years of age, and those who were aged between 35 and 44 comprised 20 percent. A high percentage of the participants had a university degree, and 29 percent had finished high school.

Table 8.1: Sample Demographics

Demographic variable	**Categories**	**percentage (N=250)**
Gender	Female	56
	Male	44
Age	18-24	27
	25-34	39
	35-44	20
	45-54	10
	55-64	2
	65 and above	2
Education	Lower than high school diploma	4
	High school diploma	29
	Associate's degree	25
	Bachelor's degree	35
	Master's degree or higher	7

8.2.2 Stimuli and Material

The experiment consisted of a 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (access convenience: high vs. low) full factorial between-subjects design that varied the components of a shopping scenario. A point to note is that, the main objective of study 5 was to test the main effect of access convenience on the construal level. Hence, it was not necessary to have the required sample size of at least 240 (= 8*30) for the 2*2*2 experimental design. Respondents were presented with a few warm-up questions and then a brief explanation of a mobile coupon service that involved requesting an SMS mobile coupon while visiting a shopping mall. They were then asked to imagine themselves at a large shopping mall and using this mobile coupon service. This was followed by the

manipulations of shopping motivation, product type, and access convenience (Appendix 5). The manipulation of shopping motivation followed the approach by Kaltcheva and Weitz (2006) and Spears (2006) and involved participants imagining themselves in a shopping situation with either a hedonic or a utilitarian motivation. To manipulate the type of product, respondents imagined having received a mobile coupon offer on their mobile phone offering either a movie ticket (representing a hedonic product offer) or a shampoo (representing a utilitarian product). Two fictitious brands (i.e., Ciny Wood and My Pharmacy) were used for the merchants being promoted by the mobile coupon offers. The variable access convenience was manipulated by taking into account two elements: first, the physical distance from the point at which the respondent receives the mobile coupon offer and the retailer's location at which the mobile coupon is to be redeemed; second, was the time taken to traverse this distance to reach the retailer. Specifically, to present the respondents with the 'high access convenience' treatment level, they were asked to assume that the retailer (i.e., Ciny Wood or My Pharmacy) was one store away from their current location and it would take them less than a minute to reach it. In contrast, to present the participants with the 'low access convenience' treatment level, they were asked to assume that the retailer was located at the other end of the mall and it would take them about 10 minutes to get there.

8.2.3 Measures

Subsequent to the scenarios were the measures of dependent variables. The dependent variable in this study included the items adopted from behavioural identification form (Vallacher & Wegner, 1989). Specifically, participants were asked to choose between two alternative descriptions or action identifications of a number of general activities. The two alternative descriptions included either a low-level action identification (emphasising how or the means by which the action is performed) or a high-level action identification (emphasising why or the end for which the action is performed). Following the approach adopted by Fujita and colleagues (2006), for spatially proximate conditions (i.e., high access convenience), it was expected that respondents would prefer low-level rather than high-level descriptions. In contrast, for spatially distant conditions (i.e., low access convenience) it was expected that respondents would prefer high-level rather than low-level descriptions.

Afterwards, the manipulations of the variables of shopping motivation, product type, and access convenience were checked. Specifically, the manipulation check for shopping motivation involved six items measured on Likert scales (1="strongly disagree," 7="strongly

agree"), three relating to a hedonic and three to a utilitarian shopping motivation. Items were adopted from Babin et al.(1994), Arnold and Reynolds (2003), and Ganesh et al. (2007) and modified in wording. The manipulation of product type was checked in a similar way, using six Likert items adopted from Voss et al. (2003). Three items measured the perception of purchasing a product as a hedonic activity and three items measured the perceptions of purchasing the product as a utilitarian activity. In order to check for the manipulation of access convenience, four 7-point bipolar items were used. Three items were adopted from the relevant literature (Huang & Oppewal, 2006; Seiders *et al.*, 2007) and their wordings were modified to match the hypothetical scenarios. One item was self-generated drawing on the definitions of spatial distance and location convenience in the relevant literature (Chiou-Wei & Inman, 2008; Fujita *et al.*, 2006). The items were measured using four 7-point bipolar scales on which the left anchor referred to low access convenience and the right anchor referred to high access convenience.

Finally, three task comprehension check questions were included before demographic questions. In particular, using 7-point bipolar scales, these questions asked whether the participants had considered the scenarios to be realistic (1= "not at all realistic" vs. 7="very realistic"), common (1= "not at all common" vs.7= "very common"), and easy to imagine (1= "not at all difficult" vs. 7= "very difficult"). Finally, an open-ended question asking the purpose of the study was included. The detailed shopping scenarios and items related to each measure are displayed in Appendix 5.

8.2.4 Exploratory Factor Analysis

The measures used in the research questionnaire for study 5 were subjected to an exploratory factor analysis (EFA). In the correlation matrix containing all variables, the correlations among the items measuring their respective factor were significant and above .30, indicating that there were sufficient correlations among the variables to produce their representative factors (Hair *et al.*, 2006). Five factors with eigenvalues of higher than 1 were extracted by the extraction method Principal Component Analysis and the orthogonal rotation method Varimax. The KMO measure of sampling adequacy was .78 (Kaiser, 1970, 1974); and Bartlett's test of sphericity was statistically significant ($p < .001$) (Bartlett, 1954). The five extracted factors explained 82 percent of the variance in the data (Goursuch, 1983; Zwick & Velicer, 1986). Table 8.2 exhibits the resultant rotated component matrix with factor loadings

of above .40. As can be seen, all factor loadings were above .50. Also, all communalities were greater than .50. Furthermore, all items loaded to their respective factors without any cross-loading items. This indicated that the manipulation check measures had both convergent and discriminant validity. Also, the alpha coefficient for all factors was higher than .70 and all individual items representing each factor had inter-item correlations of greater than .30 and item-total correlations of greater than .50 (Hair *et al.*, 2006; Tabachnick & Fidell, 2007b), indicating that the manipulation check measures had a high level of reliability. Thus, the items representing each of the five factors were summated and averaged to form an overall index for the corresponding manipulation check measure.

Table 8.2: Factor loadings for research questionnaire measures [a]

Factor	Utilitarian Motivation (α = .95)	Access Convenience (α = .88)	Hedonic Product (α = .94)	Utilitarian Product (α = .92)	Hedonic Motivation (α = .83)
Utilitarian Motivation 2	.95				
Utilitarian Motivation 1	.93				
Utilitarian Motivation 3	.92				
Access Convenience 2		.89			
Access Convenience 1		.85			
Access Convenience 3		.85			
Access Convenience 4		.82			
Hedonic Product 2			.94		
Hedonic Product 3			.94		
Hedonic Product 1			.89		
Utilitarian Product 2				.93	
Utilitarian Product 3				.93	
Utilitarian Product 1				.87	
Hedonic Motivation 2					.90
Hedonic Motivation 3					.85
Hedonic Motivation 1					.60

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 5

8.2.5 Manipulation and task checks

The participants in hedonic shopping conditions had a significantly higher mean on hedonic shopping motivation index than those in utilitarian shopping scenarios ($M_H = 5.48$ vs. $M_U = 2.28$, $F(1,133) = 282.06$, $p<.001$). In contrast, the respondents in utilitarian shopping

conditions had a significantly higher mean on utilitarian shopping motivation index than those in hedonic shopping scenarios (M_U = 5.89 vs. M_H = 2.14, F (1,133) = 380.08, p<.001), confirming the manipulation check for shopping motivation. Regarding the type of product, the participants presented with a movie ticket offer had a greater mean score on their ratings of the hedonic purchase activity index than those presented with a shampoo (M_H = 4.94 vs. M_U = 3.46, F (1,133) = 42.00, p<.001). Conversely, the respondents presented with a shampoo had a greater mean score on utilitarian purchase activity index than those presented with a movie ticket (M_U = 5.90 vs. M_H = 3.39, F (1,133) = 187.15, p<.001), verifying the manipulation of product type. As for access convenience, the participants in high-access-convenience conditions had a significantly higher mean on the access convenience index than those in low-access-convenience conditions (M_{HC} = 5.64 vs. M_{LC} = 3.80, F (1, 133) = 39.74, p<.001). Hence, the manipulation of access convenience was also confirmed. Besides, one sample t-tests with a test value of 4 showed that the respondents considered the scenarios to be realistic (M=5.56, t (134) = 14.75, p<.001), did not have difficulty imagining themselves in the scenarios (M=5.90, t (134) = 15.28, p<.001), and regarded the discounted offers to be common (M=4.72, t (134) = 5.53, p<.001). Finally, an assessment of the participants' responses to the open-ended question showed that none of the respondents realized the purpose of the study.

8.2.6 Testing the hypothesised effect

Hypothesis H7 predicted that while a high access convenience activates a concrete construal level, a low access convenience activates an abstract construal level. In order to test this prediction, for each respondent, the number of times low-level or high-level descriptions of the behaviours had been chosen was counted and averaged. It was expected that, on average, the participants in high convenience conditions choose more low-level concrete than high-level abstract action identification items, whereas the participants in low convenience conditions were expected to choose more high-level abstract than low-level concrete action identification items. First, a new variable was defined and named "concrete", representing the number of times the respondents chose low-level (versus high-level) descriptions of behaviours in the behavioural identification form. A 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (access convenience: high vs. low) full factorial ANOVA with concrete as a dependent variable was run. Only the main effect of access convenience was significant (F (1, 127) = 5.66, p<.05). Specifically, as depicted in

Figure 8.2, on average, in the high access convenience conditions, the participants chose more concrete action identification descriptions (M_{HC} = 9.73) than in low access convenience conditions (M_{LC} = 7.79). Other main and interaction effects were insignificant (p> .10). Therefore, hypothesis H7 is supported.

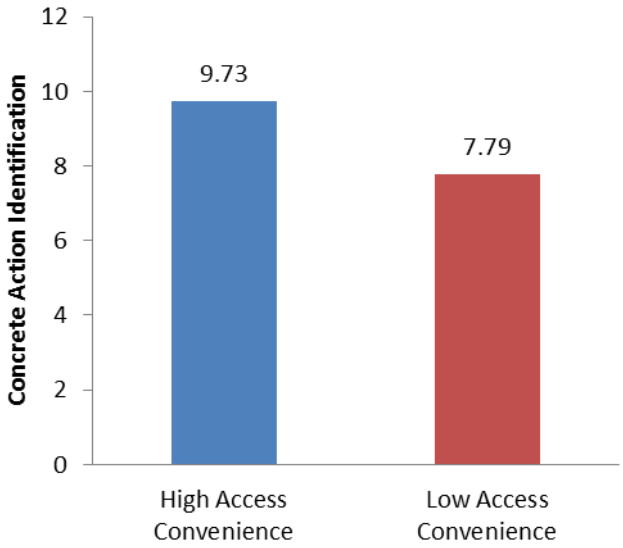

Figure 8.2: Preference for concrete action identification as a function of access convenience

8.3 Study 6: The Role of Access Convenience

In conceptual model 1, it was shown that while hedonic shopping motivation and hedonic product type prime relatively more promotion focus than prevention focus, utilitarian shopping motivation and utilitarian product prime relatively more prevention focus than promotion focus. In conceptual model 2, it was shown than while high access convenience activates more concrete than abstract construal levels, low access convenience activates more abstract than concrete construal levels. Building on these results, in conceptual model 2, hypotheses H8a, H8b, H9a, H9b, and H10 propose that the compatibility between the type of regulatory focus primed by shopping motivation, the type of regulatory focus primed by product type, and the type of construal level activated by access convenience leads to the perception of regulatory fit and consequently intention to redeem personalised mobile coupons; it is further proposed that depending on access convenience, hedonic and utilitarian shoppers have different perceptions of regulatory fit and intentions to redeem compatible and incompatible offers. These predictions are tested by conducting study 6.

8.3.1 Data collection, data cleaning, and sample characteristics

Similar to study 5, the sampling framework for study 6 comprised the members of an international online panel. Three hundred and sixty-five participants were recruited by an international organisation that hosts online surveys. Seventy-four respondents commenced but did not complete the survey, resulting in a completion rate of 80 percent. Pre-tests conducted prior to the main data collection had shown the average survey completion time for study 6 is about 12 minutes. Considering this, the following criteria were used for cleaning the data: a too short or too lengthy survey completion time, too many missing values, and repetitive rating scores across different measures. As a result, 39 subjects (11 percent) were excluded from the data set, retaining 250 cases for the main data analysis. As displayed in Table 8.3, similar to study 5 and in contrast to the previous studies, the participants consisted of more females than males (58 percent and 42 percent, respectively). However, similar to the previous studies, the respondents included mostly young and educated people. In particular, 47 percent of the participants fell within the 25-34 age group, followed by those who were between 18 and 24 years of age (26 percent) and those aged between 35 and 44 (15 percent). Seventy-three percent of the subjects had a university degree, and 24 percent had finished high school.

Table 8.3: Sample demographics

Demographic variable	Categories	Percentage (N=250)
Gender	Female	58
	Male	42
Age	18-24	26
	25-34	47
	35-44	15
	45-54	8
	55-64	3
	65 and above	1
Education	Lower than high school diploma	3
	High school diploma	24
	Associate's degree	22
	Bachelor's degree	40
	Master's degree or higher	11

8.3.2 Stimuli, Material, and Measures

Similar to study 5, the experiment consisted of a 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (access convenience: high vs. low) full factorial between-subjects design. The questionnaire designed for study 6 was identical to the one designed for study 5. The difference between the two research questionnaires was that, in study 6, instead of a behavioural identification form, the dependent variables included consumers' perceived regulatory fit and intention to redeem. In addition, coupon proneness, chronic promotion focus, and chronic prevention focus measures were included in the questionnaire as control variables. The research questionnaire designed for study 6 is presented in Appendix 6.

Specifically, the measures of the dependent variables, namely, intention to redeem and regulatory fit, were presented after the scenario. First, consumers' perception of regulatory fit in the mobile coupon was measured on 7-point "strongly agree/strongly disagree" Likert scales using the 8 items used in studies 2 and 4. The items were adopted from the literature on regulatory fit (Aaker & Lee, 2006; Avnet & Higgins, 2006; Lee *et al.*, 2010) and their wordings were modified to match the context of the experimental scenarios. After that, the respondents were asked about their likelihood of redeeming the mobile coupon they had received on their current shopping trip. To measure redemption intention, a 7-point bipolar scale (1="very unlikely," 7="very likely") was used. After measuring dependent variables, the manipulations of the three factors were checked. This was followed by measuring three control variables, including coupon proneness and chronic promotion and prevention focus. Consumers' coupon proneness was measured using items adopted from Lichtenstein and colleagues (1990) and measured on 7-point Likert scales (1="strongly disagree," 7="strongly agree"). Chronic promotion focus and prevention focus were measured on 7-point Likert scales (1="strongly disagree," 7="strongly agree") using the items suggested by Haws and colleagues (2010). Next, three task comprehension check questions were included before the demographic questions. In particular, using 7-point bipolar scales, these questions asked whether the participants had considered the scenarios to be realistic, common, and easy to imagine. Finally, an open-ended question asking the purpose of the study was included in the questionnaire.

8.3.3 Exploratory Factor Analysis

Two separate exploratory factor analyses (EFA) were performed on the measures used in the research questionnaire. The first EFA was performed on the five measures of manipulation check questions: hedonic and utilitarian shopping motivation, hedonic and utilitarian product type, and access convenience; the second factor analysis was performed on dependent and control variable measures: regulatory fit, regulatory focus primed by shopping motivation, coupon proneness, chronic promotion focus, and chronic prevention focus.

In the first factor analysis, an assessment of the correlation showed that the correlations among the items measuring their respective factor were significant and above .30. Initially, four factors were extracted by the extraction method Principal Component Analysis and the orthogonal rotation method Varimax. Specifically, the three items measuring utilitarian shopping motivation loaded with negative signs on the same factor as hedonic shopping motivation did. Hence, the software used to perform EFA (SPSS version 19) was forced to extract five factors. The rationale for forcing five factors was that the validity and reliability of two different factors measuring hedonic and utilitarian shopping motivation had already been confirmed in the previous studies. The KMO measure of sampling adequacy was .82; and Bartlett's test of sphericity was statistically significant ($p < .001$). The five extracted factors explained 87 percent of the variability in the data. The resultant rotated component matrix with factor loadings of above .40 is displayed in Table 8.4. As can be seen, all factor loadings were above .60; also, all communalities were greater than .50. Furthermore, except for one item, all items loaded to their respective factors without any cross-loading items. This indicated that the manipulation check measures had acceptable convergent and discriminant validity. Moreover, the alpha coefficient for all factors was higher than .70 and all individual items representing each factor had inter-item correlations of greater than .30 and item-total correlations of greater than .50. Hence, it was concluded that the five manipulation check measures had a high level of reliability. The items representing each of the five manipulation check measures were summated and averaged to produce an overall index for each measure.

Table 8.4: Factor loadings for manipulation check measures [a]

Factor	Access Convenience (α = .91)	Utilitarian Motivation (α = .93)	Hedonic Product (α = .94)	Utilitarian Product (α = .93)	Hedonic Motivation (α = .90)
Access Convenience 3	.92				
Access Convenience 2	.91				
Access Convenience 1	.89				
Access Convenience 4	.81				
Utilitarian Motivation 1		.93			
Utilitarian Motivation 3		.90			
Utilitarian Motivation 2		.89			
Hedonic Product 2			.94		
Hedonic Product 3			.91		
Hedonic Product 1			.91		
Utilitarian Product 3				.94	
Utilitarian Product 2				.94	
Utilitarian Product 1				.89	
Hedonic Motivation 2					.89
Hedonic Motivation 3					.80
Hedonic Motivation 1		-.60			.70

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 6

Proceeding to the second factor analysis, in the correlation matrix, the correlations among the items measuring their corresponding factor were significant and above .30. Four factors were extracted by Principal Component Analysis and Varimax rotation, explaining 70 percent of the variance in the data. The KMO measure of sampling adequacy was .85; and Bartlett's test of sphericity was statistically significant ($p < .001$). Table 8.5 shows the rotated component matrix with factor loadings of above .40. As can be seen, except for one item measuring chronic promotion focus and one item measuring chronic prevention focus, all factor loadings were greater than .60; also, all communalities were higher than .50. Moreover, all items loaded to their corresponding factors with no items having cross-loading, indicating that the measures of regulatory fit, coupon proneness, chronic promotion focus, and chronic prevention focus had both convergent and discriminant validity. Also, the alpha coefficient for all factors was above .70 and all individual items representing each factor had inter-item correlations of greater than .30 and item-total correlations of greater than .50, indicating that

the four measures had an acceptable level of reliability. Thus, the items corresponding to each of the four factors were summated and averaged to form an overall index for each variable.

Table 8.5: Factor loadings for dependent and control variable measures [a]

Factor	Regulatory Fit (α = .94)	Coupon Proneness (α = .87)	Chronic Promotion (α = .72)	Chronic Prevention (α = .71)
Regulatory Fit 3	.87			
Regulatory Fit 2	.87			
Regulatory Fit 1	.84			
Regulatory Fit 8	.84			
Regulatory Fit 4	.82			
Regulatory Fit 7	.75			
Regulatory Fit 6	.71			
Regulatory Fit 5	.62			
Coupon Proneness 1		.83		
Coupon Proneness 2		.81		
Coupon Proneness 4		.78		
Coupon Proneness 3		.76		
Chronic Promotion 3			.88	
Chronic Promotion 2			.84	
Chronic Promotion 1			.57	
Chronic Prevention 1				.84
Chronic Prevention 2				.83
Chronic Prevention 3				.55

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 6

8.3.4 Manipulation and task checks

In order to check the manipulation of the independent variable shopping motivation, two ANOVAs were run. In the first ANOVA, the categorical variable shopping motivation was included as an independent variable and the hedonic shopping motivation index as a dependent variable. The mean for hedonic shopping motivation scenarios was significantly greater than that for utilitarian shopping scenarios (M_{HM} = 5.56, M_{UM} = 2.70, F (1,248) = 313.01, p<.001). Conversely, in the second ANOVA, the utilitarian shopping motivation index was a dependent variable. The mean for utilitarian shopping motivation conditions was significantly greater than that for hedonic shopping conditions (M_{UM} = 2.80, M_{HM} = 5.82, F (1,248) = 357.33, p<.001). These results confirmed the manipulation of shopping motivation.

Similarly, in order to check the manipulation of the independent variable type of product, two ANOVAs were run. In the first ANOVA, the categorical variable product type was included as independent variable and hedonic product index as dependent variable. The mean for respondents presented with a hedonic product was significantly higher than that for those presented with a utilitarian product (M_{HP} = 5.17, M_{UP} = 3.45, F (1,248) = 104.68, p<.001). On the other hand, in the second ANOVA, the utilitarian product index was a dependent variable. The mean for participants presented with a utilitarian product was significantly higher than that for those presented with a hedonic product (M_{UP} = 5.74, M_{HP} = 3.51, F (1,248) = 151.23, p<.001). Hence, the manipulation of product type was verified. To check the manipulation of access convenience, an ANOVA model with the categorical variable access convenience as independent variable and access convenience index as dependent variable was significant. Specifically, the mean access convenience index for subjects in high access convenience scenarios was significantly greater than that for subjects in low access convenience conditions (M_H = 5.79, M_L = 4.18, F (1,248) = 59.47, p<.001), confirming the manipulation of access convenience. Finally, one-sample t-tests with test value of 4 showed that the participants considered the scenarios to be realistic (M=5.53, t = 65.34, df = 249, p<.001), did not have difficulty imagining themselves in the scenarios (M=6.11, t = 72.32, df = 249, p< .001), and considered the discounted offers to be common (M=4.87, t = 51.39, df = 249, p< .001). Moreover, an assessment of the answers to the open-ended question revealed that none of the respondents realized the purpose of the study.

8.3.5 Testing the hypothesised effects

In the present thesis, it is proposed that consumers' perception of regulatory fit in a personalised mobile coupon is associated with their intentions to redeem the offer. Hence, in order to investigate the main and interaction effects among shopping motivation, type of product, and access convenience, a 2 (shopping motivation: hedonic vs. utilitarian) * 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) full-factorial MANOVA model was estimated. In the model, regulatory fit and intention to redeem were included as dependent variables; and coupon proneness, chronic promotion focus, and chronic prevention focus were included as covariates.

The results revealed significant main effects for shopping motivation (Wilk's Lambda=.70, F (2,238) = 49.49, p < .001), product type (Wilk's Lambda=.95, F (2,238) = 6.36, p < .001),

access convenience (Wilk's Lambda=.95, F (2,238) = 6.21, p < .001), and coupon proneness (Wilk's Lambda=.95, F (2,238) = 6.35, p < .001). The main effects of chronic promotion and prevention focus were not significant (p>.10). There were also significant interaction effects between shopping motivation and product type (Wilk's Lambda=.90, F (2,238) = 13.25, p < .001), shopping motivation and access convenience (Wilk's Lambda=.97, F (2,238) = 4.17, p < .001), as well as product type and access convenience (Wilk's Lambda=.97, F (2,238) = 3.61, p < .001). However, the three-way interaction among shopping motivation, product type, and access convenience was not significant (p>.10).

In order to test hypotheses H8a, H8b, H9a, and H9b, two separate full-factorial ANOVA models were estimated. In the first model, regulatory fit, and in the second model, intention to redeem, were included as dependent variables controlling for the effects of coupon proneness, chronic promotion focus, and chronic prevention focus. Hereafter, in all the forthcoming data analyses, coupon proneness, chronic promotion focus, and chronic prevention focus will be included as covariates. However, their effects will not be reported since, in all the data analyses, there was a significant main effect for coupon proneness and insignificant main effects for chronic promotion and prevention focus. The results of the two ANOVA model estimations are detailed below.

8.3.5.1 Dependent variable: Regulatory fit

A 2 (shopping motivation: hedonic vs. utilitarian) * 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) full-factorial ANOVA model was estimated, with regulatory fit as the dependent variable. Descriptive statistics, consisting of the distribution of the participants among the 8 experimental conditions and the mean and standard deviation of the dependent variable regulatory fit in each condition, are presented in Table 8.6.

Table 8.6: Regulatory fit: Descriptive statistics

Shopping Motivation	Product Type	Access Convenience	Mean*	Std. Deviation	n
Hedonic	Hedonic	High	5.18	.83	30
		Low	5.18	.95	30
		Total	5.18	.89	60
	Utilitarian	High	5.07	.99	35
		Low	4.78	.95	32
		Total	4.93	.97	67
	Total	High	5.12	.91	65
		Low	4.98	.97	62
		Total	5.05	.94	127
Utilitarian	Hedonic	High	3.22	1.43	30
		Low	2.97	1.31	30
		Total	3.10	1.36	60
	Utilitarian	High	4.96	1.05	30
		Low	3.62	1.53	33
		Total	4.26	1.48	63
	Total	High	4.09	1.52	60
		Low	3.31	1.45	63
		Total	3.69	1.53	123

* 7-point Likert scale

Table 8.7 presents the results of the ANOVA model estimation. As can be seen, there are significant main effects of shopping motivation ($F(1,239) = 93.35$, $p<.001$), product type ($F(1,239) = 10.54$, $p<.01$), and access convenience ($F(1,239) = 11.14$, $p<.01$). There are also significant interaction effects between shopping motivation and product type ($F(1,239) = 25.64$, $p<.001$), shopping motivation and access convenience ($F(1,239) = 7.17$, $p<.01$), as well as product type and access convenience ($F(1,239) = 4.44$, $p<.05$). However, the three-way interaction effect among shopping motivation, product type, and access convenience is not significant ($p>.10$).

Table 8.7: Regulatory fit: ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	223.52[a]	10	22.35	18.45	.000
Intercept	22.80	1	22.80	18.82	.000
Coupon Proneness	14.82	1	14.82	12.23	.001
Chronic Promotion	2.79	1	2.79	2.30	.131
Chronic Prevention	2.08	1	2.08	1.71	.192
Shopping Motivation	113.10	1	113.10	93.35	.000
Product Type	12.78	1	12.78	10.54	.001
Access Convenience	13.50	1	13.50	11.14	.001
Shopping Motivation * Product Type	31.07	1	31.07	25.64	.000
Shopping Motivation * Access Convenience	8.68	1	8.68	7.17	.008
Product Type * Access Convenience	5.38	1	5.38	4.44	.036
Shopping Motivation * Product Type * Access Convenience	2.66	1	2.66	2.20	.140
Error	289.57	239	1.21		
Total	5311.37	250			
Corrected Total	513.08	249			

[a] R Squared = .436 (Adjusted R Squared = .412)

Hypothesis H8a predicted that utilitarian shoppers will perceive more regulatory fit in a utilitarian, high-access-convenience offer than in a utilitarian, low-access-convenience product offer, whereas However, they perceive similar levels of regulatory fit in a hedonic, high-access-convenience or a hedonic, low-access-convenience product offer. Hypothesis H8b predicted that hedonic shoppers will perceive more regulatory fit in a utilitarian, high-access-convenience than in a utilitarian, low-access-convenience product offer, whereas they perceive similar levels of regulatory fit in a hedonic, high-access-convenience or a hedonic, low-access-convenience product offer. To test these two hypotheses, the sample was divided into two groups, one of hedonic and one of utilitarian shoppers; then, for each group a 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) ANOVA model was performed with regulatory fit as dependent variable. The interaction effect of product type and access convenience for the two groups of hedonic and utilitarian shoppers is outlined in Figure 8.3.

Data Analysis (Model 2)

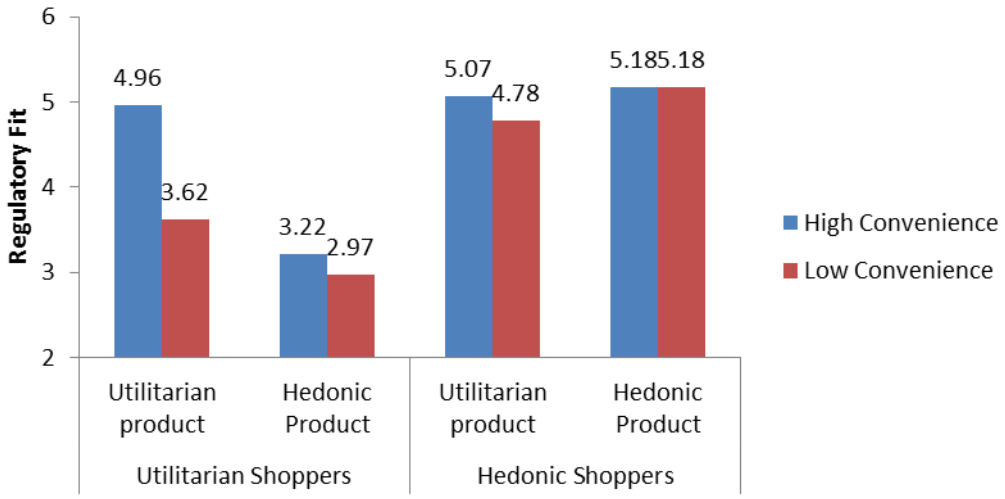

Figure 8.3: Regulatory fit for product type and access convenience conditions across the two groups of hedonic and utilitarian shoppers

For utilitarian shoppers (the left side of Figure 8.3), the ANOVA model estimation revealed a significant interaction effect between product type and access convenience ($F(1,116) = 4.49$, $p<.05$) as well as significant main effects for product type ($M_{UP} = 4.26$, $M_{HP} = 3.10$, $F(1,116) = 24.10$, $p<.001$) and access convenience ($M_{HC} = 4.09$, $M_{LC} = 3.31$, $F(1,116) = 12.28$, $p<.01$). Specifically, as can be seen, respondents who had utilitarian shopping motivations and received a utilitarian product offer perceived significantly greater levels of regulatory fit when the redemption location was convenient than when it was inconvenient ($M_{HC} = 4.96$, $M_{LC} = 3.62$, $F(1,58) = 16.37$, $p<.001$). Conversely, participants who had utilitarian shopping motivation and received a hedonic product offer perceived similar levels of regulatory fit when the redemption location was convenient or when it was inconvenient ($M_{HC} = 3.22$, $M_{LC} = 2.97$, $F(1,55) = .62$, $p>.10$). This supports hypothesis H8a.

For hedonic shoppers (the right side of Figure 8.3), the ANOVA model estimation revealed an insignificant interaction effect between product type and access convenience ($F(1,120) = .29$, $p>.10$) as well as insignificant main effects for product type ($M_{HP} = 5.18$, $M_{UP} = 4.93$, $F(1,120) = 2.57$, $p>.10$) and access convenience ($M_{HC} = 5.12$, $M_{LC} = 4.97$, $F(1,120) = .39$, $p>.10$). In particular, when they had hedonic shopping motivation and received a utilitarian product offer, the respondents perceived higher levels of regulatory fit when the redemption location was convenient than when it was inconvenient ($M_{HC} = 5.08$, $M_{LC} = 4.78$); however, contrary to what had been predicted, this difference was not significant ($F(1,62) = .49$, $p>.10$).

Similarly, as was predicted, when they had hedonic shopping motivation and received a hedonic product offer, the participants perceived similar levels of regulatory fit when the redemption location was convenient or when it was inconvenient (M_{HC} = 5.18, M_{LC} = 5.18, F (1,55) = .12, p>.10). Thus, hypothesis H8b is partially supported.

8.3.5.2 Dependent variable: Intention to redeem

A 2 (shopping motivation: hedonic vs. utilitarian) * 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) full-factorial ANOVA model was estimated, with intention to redeem as the dependent variable. The descriptive statistics, comprising the distribution of the respondents among the 8 experimental conditions and the mean and standard deviation of the dependent variable intention to redeem in each condition, are presented in Table 8.8.

Table 8.8: Intention to redeem: Descriptive statistics

Shopping Motivation	Product Type	Access Convenience	Mean*	Std. Deviation	n
Hedonic	Hedonic	High	5.53	1.59	30
		Low	5.87	1.20	30
		Total	5.70	1.41	60
	Utilitarian	High	5.86	1.82	35
		Low	5.25	1.24	32
		Total	5.57	1.59	67
	Total	High	5.71	1.71	65
		Low	5.55	1.25	62
		Total	5.63	1.50	127
Utilitarian	Hedonic	High	3.53	2.33	30
		Low	3.27	1.93	30
		Total	3.40	2.12	60
	Utilitarian	High	5.67	1.47	30
		Low	3.91	1.74	33
		Total	4.75	1.83	63
	Total	High	4.60	2.21	60
		Low	3.60	1.84	63
		Total	4.09	2.08	123

* 7-point Likert scale

Table 8.9 displays the results of the ANOVA model estimation. As can be seen, the pattern of the results is similar to that of the previous model with regulatory fit as the dependent variable. Specifically, there are significant main effects of shopping motivation (F (1,239) =

49.46, p<.001), product type (F (1,239) = 8.61, p<.01), and access convenience (F (1,239) = 7.23, p<.01). There are also significant interaction effects between shopping motivation and product type (F (1,239) = 11.69, p<.01), shopping motivation and access convenience (F (1,239) = 5.35, p<.05), as well as product type and access convenience (F (1,239) = 6.33, p<.05). However, the three-way interaction effect among shopping motivation, product type, and access convenience is not significant (p>.10).

Table 8.9: Intention to redeem: ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	294.03[a]	10	29.40	10.52	.000
Intercept	42.08	1	42.08	15.06	.000
Coupon Proneness	16.16	1	16.16	5.78	.017
Chronic Promotion	4.32	1	4.32	1.54	.215
Chronic Prevention	.06	1	.06	.02	.888
Shopping Motivation	138.23	1	138.23	49.46	.000
Product Type	24.06	1	24.06	8.61	.004
Access Convenience	20.21	1	20.21	7.23	.008
Shopping Motivation * Product Type	32.67	1	32.67	11.69	.001
Shopping Motivation * Access Convenience	14.96	1	14.96	5.35	.022
Product Type * Access Convenience	17.68	1	17.68	6.33	.013
Shopping Motivation * Product Type * Access Convenience	1.29	1	1.29	.46	.497
Error	667.88	239	2.79		
Total	6896.00	250			
Corrected Total	961.90	249			

[a] R Squared = .436 (Adjusted R Squared = .412)

Hypothesis H9a predicted that utilitarian shoppers will have greater intentions to redeem a utilitarian, high-access-convenience than a utilitarian, low-access-convenience product offer; whereas, they have similar levels of intention to redeem a hedonic, high-access-convenience or a hedonic, low-access-convenience product offer. Hypothesis H9b predicted that hedonic shoppers will have greater intentions to redeem a utilitarian, high-access-convenience than a utilitarian, low-access-convenience product offer; whereas, they have similar levels of intention to redeem a hedonic, high-access-convenience or a hedonic, low-access-convenience product offer. In the same way that the hypotheses related to regulatory fit were tested, to test

these two hypotheses, the sample was divided into two groups of hedonic and utilitarian shoppers; then, for each group, a 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) ANOVA model was performed with intention to redeem as the dependent variable. The interaction effect of product type and access convenience for the two groups of hedonic and utilitarian shoppers is outlined in Figure 8.4.

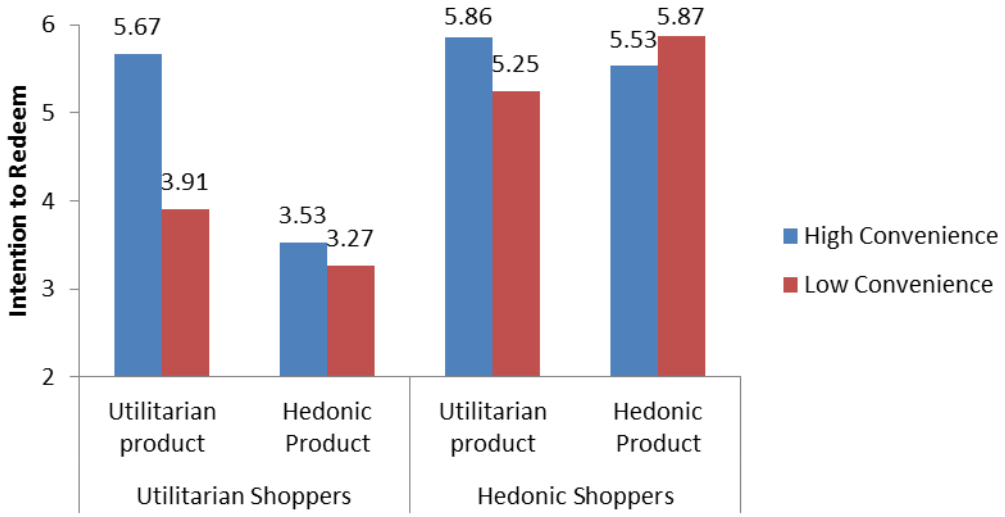

Figure 8.4: Intention to redeem for product type and access convenience conditions across the two groups of hedonic and utilitarian shoppers

For utilitarian shoppers (the left side of Figure 8.4), there was a significant interaction effect between product type and access convenience ($F(1,116) = 4.07$, $p<.05$) as well as significant main effects for product type ($M_{UP} = 4.75$, $M_{HP} = 3.40$, $F(1,116) = 15.83$, $p<.001$) and access convenience ($M_{HC} = 4.60$, $M_{LC} = 3.60$, $F(1,116) = 9.44$, $p<.01$). In particular, when their shopping motivation was utilitarian and they were offered a utilitarian product, the participants had significantly higher redemption intentions when the redemption location was convenient than when it was inconvenient ($M_{HC} = 5.67$, $M_{LC} = 3.91$, $F(1,58) = 18.12$, $p<.001$). In contrast, when their shopping motivation was utilitarian and they were offered a hedonic product, the subjects had similar levels of redemption intentions when the redemption location was convenient or when it was inconvenient ($M_{HC} = 3.53$, $M_{LC} = 3.27$, $F(1,55) = .31$, $p>.10$). This supports hypothesis H9a.

For hedonic shoppers (the right side of Figure 8.4), there was an insignificant interaction effect between product type and access convenience (F (1,120) = 2.29, p>.10) as well as insignificant main effects for product type (M_{HP} = 5.70, M_{UP} = 5.57, F (1,120) = .15, p>.10) and access convenience (M_{HC} = 5.71, M_{LC} = 5.55, F (1,120) = .06, p>.10). Specifically, when their shopping motivation was hedonic and they were offered a utilitarian product, the participants had higher levels of redemption intention when the redemption location was convenient than when it was inconvenient (M_{HC} = 5.86, M_{LC} = 5.25); however, contrary to what had been predicted, this difference was not significant (F (1,62) = .86, p>.10). Similarly, as predicted, when their shopping motivation was hedonic and they were offered a hedonic product, the subjects had similar levels of redemption intention when the redemption location was convenient or when it was inconvenient (M_{HC} = 5.53, M_{LC} = 5.87, F (1,55) = .51, p>.10). Hence, hypothesis H9b is partially supported.

8.3.5.3 Two-way interaction effects

As shown in Table 8.7 and Table 8.9, for both regulatory fit and intention to redeem as dependent variables, there were significant two-way interaction effects between shopping motivation and type of product, shopping motivation and access convenience, as well as between type of product and access convenience. In this section, these two-way interaction effects will be investigated in more detail.

The two-way interaction effect of shopping motivation and type of product is outlined in Figure 8.5. As can be seen, for the respondents in hedonic shopping motivation conditions, perceived regulatory fit in a hedonic product offer was not significantly different from that in a utilitarian product offer (M_{HP} = 5.18, M_{UP} = 4.93, F (1,122) = 2.48, p>.10); similarly, these participants did not have significantly different intentions to redeem hedonic and utilitarian product offers (M_{HP} = 5.70, M_{UP} = 5.57, F (1,122) = .10, p>.10). Conversely, the participants in utilitarian shopping motivation conditions perceived significantly higher levels of regulatory fit in a utilitarian product than in a hedonic product (M_{UP} = 4.26, M_{HP} = 3.10, F (1,118) = 19.74, p<.001); they also had greater intentions to redeem a utilitarian product than a hedonic product (M_{UP} = 4.75, M_{HP} = 3.40, F (1,118) = 13.17, p<.001). This is consistent with what was found in studies 2 and 4; that is, while hedonic shoppers are responsive to both hedonic and utilitarian products, utilitarian shoppers are more responsive to utilitarian products than to hedonic products.

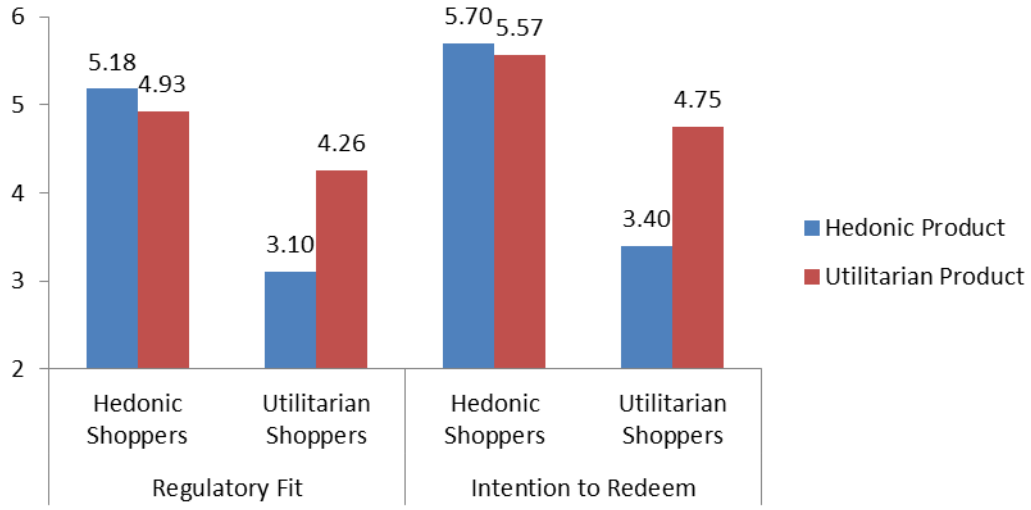

Figure 8.5: Shopping motivation and product type conditions

Figure 8.6 illustrates the two-way interaction effect between shopping motivation and access convenience. According to this figure, regardless of the type of product offered by a personalised mobile coupon, the respondents in hedonic shopping scenarios perceived similar levels of regulatory fit when the redemption location was convenient to access or inconvenient to access (M_{HC} = 5.12, M_{LC} = 4.98, F (1,122) = .35, p>.10); likewise, they had comparable degrees of intention to redeem when redemption location was convenient or inconvenient to access (M_{HC} = 5.71, M_{LC} = 5.55, F (1,122) = .10, p>.10). On the other hand, the respondents in utilitarian shopping conditions perceived more regulatory fit when the redemption location was convenient to access than inconvenient to access (M_{HC} = 4.09, M_{LC} = 3.31, F (1,118) = 9.47, p<.01); they also had higher degrees of intention to redeem when the redemption location was convenient to access than inconvenient to access (M_{HC} = 4.60, M_{LC} = 3.60, F (1,118) = 7.81, p<.01). While this finding is line with what was predicted in hypotheses H7a, H7b, H8a, and H8b, it does not distinguish between hedonic and utilitarian products.

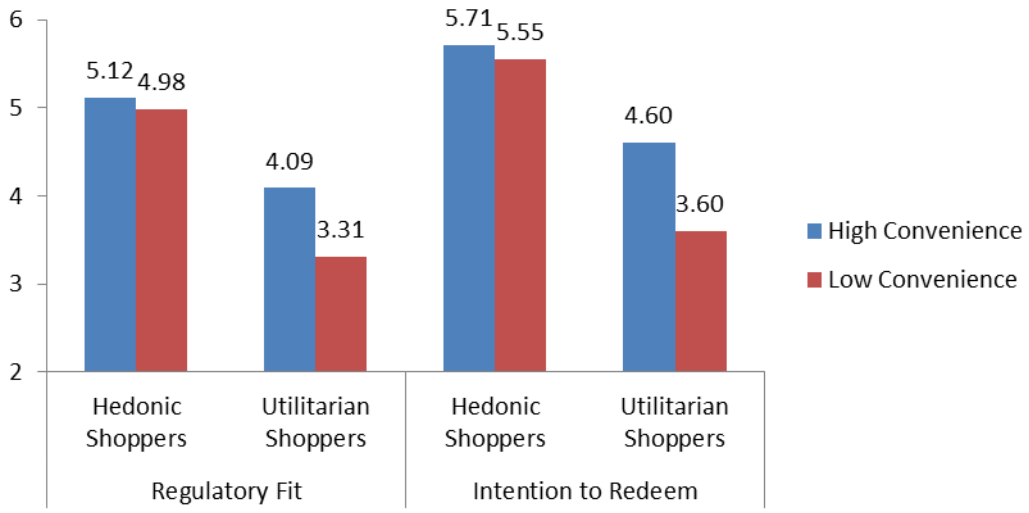

Figure 8.6: Shopping motivation and access convenience conditions

The two-way interaction effect between the type of product and access convenience is demonstrated in Figure 8.7. As can be seen, irrespective of shopping motivation, on average, the respondents who were offered a hedonic product perceived similar levels of regulatory fit when the redemption location was convenient to access or inconvenient to access (M_{HC} = 4.20, M_{LC} = 4.08, F (1,115) = .48, p>.10); similarly, they had comparable degrees of intentions to redeem when the redemption location was convenient to access or inconvenient to access (M_{HC} = 4.53, M_{LC} = 4.57, F (1,115) = .01, p>.10). By contrast, those who were offered a utilitarian product perceived higher levels of regulatory fit when the redemption location was convenient to access than inconvenient to access (M_{HC} = 5.02, M_{LC} = 4.19, F (1,125) = 13.21, p<.001); they also had greater intentions to redeem when the redemption location was convenient to access than inconvenient to access (M_{HC} = 5.77, M_{LC} = 4.57, F (1,125) = 14.09, p<.001).

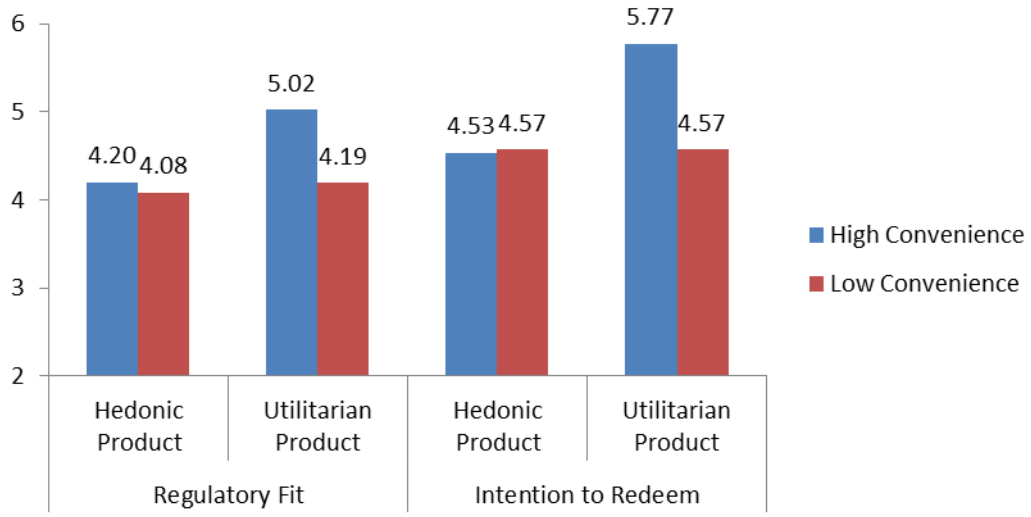

Figure 8.7: Product type and access convenience conditions

8.3.5.4 The mediating effect of regulatory fit

Hypothesis H10 predicted that the effect of the interaction among shopping motivation, type of product, and access convenience on intention to redeem is mediated by the perception of regulatory fit. In order to test this mediating effect, the bootstrapping method suggested by Preacher and Hayes (2004, 2008) was used. In doing so, the categorical variables shopping motivation, type of product, and access convenience were coded using a dummy coding approach. In particular, hedonic shopping motivation, hedonic product, and high access convenience conditions were coded to one, and utilitarian shopping motivation, utilitarian product, and low access convenience were coded to zero. In addition to these three independent variables, four new variables were defined, representing the two-way interaction effects between shopping motivation and product type, shopping motivation and access convenience, product type and access convenience, and the three-way interaction effect among shopping motivation, product type, and access convenience. Here they are referred to as "interaction variables". Specifically, to test the mediating effect of regulatory fit, seven separate mediation tests were conducted. In each test, one of the interaction or independent variables was included as the predictor variable, intention to redeem was included as the outcome variable, regulatory fit was included as the mediating variable, and the other variables were included in the analysis as covariates. The results of these seven tests are detailed in Table 8.10.

Table 8.10: Coefficients for Testing the Mediation Effect of Regulatory fit [a]

IV	M	DV	a	b	c	c'	a*b	CI [b] (Lower-Upper)	
Shopping Motivation* Product Type* Access Convenience	Regulatory Fit	Intention to Redeem	.83	.77***	.58	- .06	.64	.17	-1.57
Shopping Motivation* Product Type	Regulatory Fit	Intention to Redeem	1.01**	.77***	1.17*	.39	.78	.19	1.42
Shopping Motivation* Access Convenience	Regulatory Fit	Intention to Redeem	-1.16***	.77***	-1.27**	-.37	-.90	-1.55	-.34
Product Type* Access Convenience	Regulatory Fit	Intention to Redeem	-1.00**	.77***	-1.36**	-.58	-.78	-1.53	-.07
Product Type	Regulatory Fit	Intention to Redeem	-.66**	.77***	-.67	-.16	-.51	-1.06	-.01
Access Convenience	Regulatory Fit	Intention to Redeem	1.35***	.77***	1.75***	.71*	.94	.59	1.60
Shopping Motivation	Regulatory Fit	Intention to Redeem	-2.09	.77***	-.90	.71	-.161	-5.01	1.39

[a] Bootstrap samples: 5000
[b] 95 % confidence interval
IV: Independent variable
M: Mediating variable
DV: Dependent variable
a: Effect of IV on M
c: b: Effect of M on DV
c: Total effect
c': Direct effect
* Significant at p< .10
** Significant at p< .05
*** Significant at p< .01

As indicated in Table 8.10, the confidence interval for the mediating role of regulatory fit in the effect of the two-way interaction variables (shopping motivation* product type; shopping motivation*access convenience; product type*access convenience), as well as the effect of the independent variables of product type and access convenience on intention to redeem do not contain the value of zero. However, the confidence interval for the mediating role of regulatory fit in the effect of the three-way interaction variable (shopping motivation*product type*access convenience), as well as that of the independent variable shopping motivation on intention to redeem cross the value of zero. Also, except for access convenience, the direct effects (c prime paths) for these mediating effects are not significant. Therefore, regulatory fit mediates the effects as the effects of the two-way interaction variables as well as that of the independent variables product type and access convenience as well on intention to redeem. Therefore, because the research hypotheses (H8a, H8b, H9a, and H9b) denote a three-way interaction for the effects of shopping motivation, product type, and access convenience on regulatory fit and intention to redeem, hypothesis H10 is partially supported. The reason is

that, unlike the two-way interaction variables, the effect of the three-way interaction variable on intention to redeem is not mediated by regulatory fit.

8.3.6 Summary of Study 5 and Study 6

In conceptual model 2, it was proposed that: first, a certain type of construal level is activated by access convenience of a location where a personalised mobile coupon is to be redeemed. second: the compatibility between the type of regulatory focus primed by shopping motivation and type of product and the construal level activated by access convenience leads to the perception of regulatory fit in and subsequently intention to redeem mobile coupons; it was further predicted that hedonic and utilitarian shoppers perceive different levels of regulatory fit in and have different levels of intention to redeem compatible or incompatible offers. In order to test these hypotheses, studies 5 and 6 were carried out.

First, study 5 demonstrated that receiving a mobile coupon offer from a spatially proximate retailer activates a low-level concrete construal level; on the other hand, receiving a mobile coupon offer from a spatially distant retailer activates a high-level abstract construal level, supporting hypothesis H7. Then, study 6 found that on average and regardless of access convenience, utilitarian shoppers are more likely to redeem a utilitarian product than a hedonic product. Also, and regardless of the type of product, utilitarian shoppers redeem offers with high access convenience more than offers with low access convenience. Conversely, it was revealed that on average and irrespective of access convenience, hedonic shoppers are equally likely to redeem hedonic and utilitarian products. Also, and irrespective of the type of product, hedonic shoppers are equally likely to redeem offers with high or low access convenience. Overall, these results fully supported the hypotheses relating to utilitarian shoppers (H8a and H9a) and partially supported the hypotheses relating to hedonic shoppers (H8b and H9b). Finally, it was shown that the mechanism leading to intention to redeem a personalised mobile coupon is the perception of regulatory fit resulting from the interaction effect between product type and shopping motivation and between access convenience and shopping motivation, partially supporting hypothesis H10.

8.4 Study 7

The purpose of study 7 is the same as that of study 5; that is, to test hypothesis H7. To recap, hypothesis H7 proposed that, in a shopping mall context, a convenient-to-access store

activates a low-level concrete construal level, whereas an inconvenient-to-access store activates a high-level abstract construal level. The difference between study 7 and study 5 lies in two things: First, in study 7, the variable shopping motivation was measured by asking the study participants to reveal the purpose of their most recent visit to a shopping mall. Second, two different products were used to manipulate the type of product.

8.4.1 Data collection, data cleaning, and sample characteristics

The sampling framework for study 7 was similar to that for study 5, namely, people who had registered with an international online panel. One hundred and eighteen participants were recruited by an international organisation that hosts online panel surveys. Four respondents started but did not finish the survey, resulting in a completion rate of 97 percent. Pre-tests conducted prior to the main data collection had shown that the average survey completion time for study 7 was about 12 minutes. Therefore, the criteria used for data cleaning included: too short or too lengthy survey completion time in conjunction with too many missing values and repetitive rating scores across different questions. Using the above criteria, none of the 114 respondents were recognised as extreme outliers to be excluded from the data analysis. As shown in Table 8.11, comparable to study 5, the participants consisted of more females than males (65 percent versus 35 percent). Thirty-three percent of the subjects were in the 25-34 years age group and 32 percent fell within the 18-24 age group. A high percentage of the participants had a university degree, including 30 percent with an associate's degree and 25 percent with a bachelor's degree. Also, 25 percent had finished high school.

Table 8.11: Sample demographics

Demographic variable	Categories	percentage (N=114)
Gender	Female	65
	Male	35
Age	18-24	32
	25-34	33
	35-44	14
	45-54	18
	55-64	3
	65 and above	0
Education	Lower than high school diploma	4
	High school diploma	25
	Associate's degree	30
	Bachelor's degree	25
	Master's degree or higher	16

8.4.2 Stimuli, Material, and Measures

The experiment consisted of a 2 (product type: hedonic vs. utilitarian) by 2 (access convenience: high vs. low) full factorial between-subjects design. Participants answered a few warm-up questions and were given a brief explanation of a mobile coupon service similar to the one in the previous studies. The respondents were then asked to remember their last visit to a major shopping mall. Then, to make their memories more concrete, they answered some general questions about their most recent visit. Next, the participants were presented with a number of measurement scales to specify their main purposes of visiting the shopping mall they had remembered. The measures were adopted from the literature on shopping motivation (Arnold & Reynolds, 2003; Babin *et al.*, 1994; Ganesh *et al.*, 2007). The detailed description of the research questionnaire designed for study 7 is presented in Appendix 7.

Having revealed their shopping motivations during their last visit to a shopping mall, the participants were asked to imagine that now they are visiting the same shopping mall with the same purpose as that already revealed. Then, they were subjected to the manipulations of product type and access convenience. The manipulations of these two variables were identical to those in studies 5 and 6. The only difference was that magazine and deodorant were replaced for movie ticket and shampoo as hedonic and utilitarian products, respectively. Also, instead of Ciny Wood, the fictitious brands name "Mag Hub" was used for the hypothetical merchant offering a hedonic product.

Subsequent to the scenarios was a measure of dependent variable. Similar to study 5, the dependent variable included the items adopted from the behavioural identification form (Vallacher & Wegner, 1989). Participants were asked to choose between two alternative descriptions or action identifications of some general activities, one being low-level concrete action identification and the other being high-level abstract action identification. In the questionnaire, the presentation of the action identification measures to the respondents was randomised using the online survey tool Qualtrics. Subsequently, the manipulations of the variables product type and access convenience were checked using the same measures as the ones used in studies 5 and 6. Finally, respondents answered three task comprehension check questions and an open-ended question asking the purpose of the study.

8.4.3 Dividing the participants based on their revealed shopping motivations

In order to divide the participants into two groups of hedonic and utilitarian shoppers, an exploratory factor analysis (EFA) was performed on the nine items used to measure the participants' revealed shopping motivations. The extraction method was Principal Component Analysis and the rotation method was the orthogonal method Varimax. The KMO measure of sampling adequacy was .77; and Bartlett's test of sphericity was statistically significant ($p < .001$). Table 8.12 displays the rotated component matrix with factor loadings of above .40. As expected, two factors were extracted explaining 68 percent of the variance in the data. The items loaded on the two factors match the items identified in the literature representing utilitarian (Babin *et al.*, 1994; Ganesh *et al.*, 2007) and hedonic (Arnold & Reynolds, 2003; Babin *et al.*, 1994) shopping motivations. All factor loadings were greater than .60. Also, all communalities were higher than .50. The alpha coefficient for the two factors was higher than .70 and the individual items representing each factor had inter-item correlations of greater than .30 and item-total correlations of greater than .50.

Table 8.12: Factor loadings for revealed shopping motivation measures [a]

Factor	Utilitarian Motivation (α = .86)	Utilitarian Motivation (α = .88)
To buy something that I needed	.87	
To buy some necessary items	.83	
To find some items that I was looking for and leave the mall right away	.82	
To find exactly what I wanted in the least amount of time	.78	
To have a time-out from my daily routines		.85
To relieve my sense of boredom		.84
To make me feel better when I was in a down mood		.77
To browse around		.76
To socialize with others (friends, family members, etc.)		.64

Therefore, in Table 8.12, the first four items were summated and averaged to produce an overall measure for utilitarian shopping motivation; and the second five items were summated and averaged to produce an overall measure for hedonic shopping motivation. Next, a new variable was defined by subtracting the utilitarian shopping motivation measure from the hedonic shopping motivation measure. Then, the new variable was median-split and used as a

basis for dividing the sample into two groups of respondents with hedonic and utilitarian shopping motivations. Finally, a new categorical variable was defined representing the two groups of hedonic and utilitarian shoppers.

A second exploratory factor analysis was conducted on the measures of manipulation check for the variables of type of product and access convenience. In the correlation matrix, the correlations among the items measuring their respective factor were significant and above .30. The rotated component matrix with factor loadings of above .40 is presented in Table 8.13. Three factors were extracted by the extraction method Principal Component Analysis and the orthogonal rotation method Varimax, explaining 89 percent of the variance in the data. The KMO measure of sampling adequacy was .77; and Bartlett's test of sphericity was statistically significant ($p < .001$). It can be seen that all factor loadings were greater than .60; also, all communalities were higher than .50. The alpha coefficient for all the factors was higher than .70 and individual items representing each factor had inter-item correlations of greater than .30 and item-total correlations of greater than .50. Therefore, it was concluded that manipulation check measures both convergent and discriminant validity as well as a high level of reliability. The items associated with each factor were summated and averaged to produce three manipulation check indices.

Table 8.13: Factor loadings for revealed shopping motivation measures [a]

Factor	Access Convenience (α = .95)	Hedonic Product (α = .94)	Utilitarian Product (α = .96)
Access Convenience 3	.95		
Access Convenience 2	.94		
Access Convenience 1	.91		
Access Convenience 4	.91		
Utilitarian Product 3		.97	
Utilitarian Product 2		.95	
Utilitarian Product 1		.93	
Hedonic Product 1			.95
Hedonic Product 3			.93
Hedonic Product 2			.93

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 7

8.4.4 Manipulation and task checks

The participants presented with a magazine offer had a higher mean score on their ratings of the hedonic product index than those presented with a deodorant ($M_H = 4.39$ vs. $M_U = 3.05$, $F(1,112) = 25.47$, $p<.001$). Conversely, the respondents presented with a deodorant had a higher mean score on utilitarian product index than those presented with a magazine ($M_U = 5.90$ vs. $M_H = 3.39$, $F(1,112) = 195.20$, $p<.001$). Hence, the manipulation of product type for magazine and deodorant was confirmed. Regarding access convenience, the participants in high-access-convenience conditions had a significantly greater mean on the access convenience index than did those in low-access-convenience conditions ($M_{HC} = 6.02$ vs. $M_{LC} = 3.69$, $F(1, 112) = 59.23$, $p<.001$). Thus, the manipulation of access convenience was also confirmed. Besides, one sample t-tests with a test value of 4 showed that the respondents regarded the scenarios to be realistic ($M=5.56$, $t(134) = 14.75$, $p<.001$), did not have difficulty imagining themselves in the scenarios ($M=5.90$, $t(134) = 15.28$, $p<.001$), and considered the discounted offers to be common ($M=4.72$, $t(134) = 5.53$, $p<.001$). In addition, an assessment of the participants' responses to the open-ended question showed that none of them realized the purpose of the study.

8.4.5 Testing the hypothesised effect

To test hypothesis H7, a 2 (shopping motivation: hedonic vs. utilitarian) by 2 (product type: hedonic vs. utilitarian) by 2 (access convenience: high vs. low) full factorial ANOVA with the variable 'abstract' as dependent variable, was run. The variable abstract represents the number of times the respondents chose high-level (versus low-level) descriptions of behaviours in the behavioural identification form over low-level concrete descriptions. The results showed that only the main effect of access convenience was significant ($F(1, 106) = 4.66$, $p<.05$). None of the other main and interaction effects was significant ($p> .10$). Specifically, as indicated in Figure 8.8, in low access convenience conditions, participants chose more abstract than concrete action identification descriptions ($M_{LC} = 13.22$) than in high access convenience conditions ($M_{HC} = 11.13$). Therefore, hypothesis H7 is supported.

Data Analysis (Model 2)

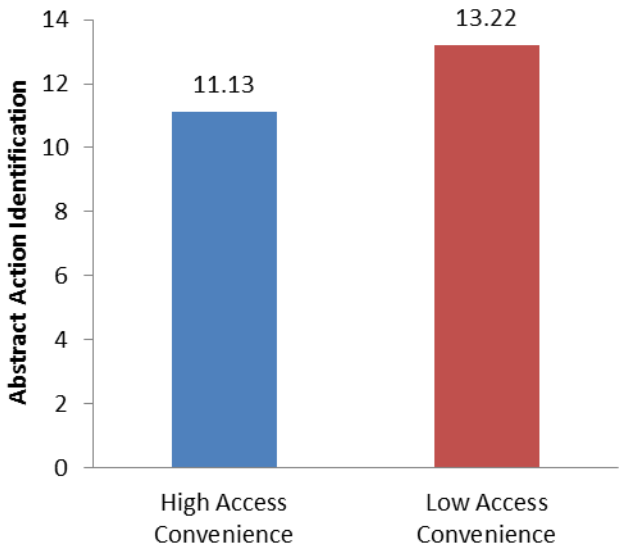

Figure 8.8: Preference for concrete action identification as a function of access convenience

8.5 Study 8

The purpose of conducting study 8 was identical to that of study 6. However, in order to test conceptual model 2 in a more generalizable context, similar to study 7, the participants' shopping motivation was revealed and measured. Testing hypothesis H7 supported that in a shopping mall context, the access convenience of a location activates a certain type of construal level (abstract vs. concrete) more than the other type. Also, testing hypotheses H1 and H2 (conceptual model 1) showed that shopping motivation and type of product prime a certain type of regulatory focus (promotion vs. prevention) which is superior in strength to the other type. Building on these results, in conceptual model 2, it is proposed that the compatibility between the type of regulatory focus primed by shopping motivation and the type of regulatory focus primed by product type, and the type of construal level activated by access convenience result in the intention to redeem through the mediating effect of regulatory fit in personalised mobile coupons (hypotheses H8a, H8b, H9a, H9b, and H10). However, it is predicted that hedonic and utilitarian shoppers have different perceptions of regulatory fit, and intentions to redeem, compatible and incompatible offers. These hypotheses are tested in study 8.

8.5.1 Data collection, data cleaning, and sample characteristics

Similar to study 7, the sampling framework for study 8 consisted of the members of an international online panel. Two hundred and ninety-two participants were recruited by an

international organisation that hosts online surveys. Five respondents commenced but did not complete the survey, resulting in a completion rate of 98 percent. Pre-tests conducted prior to the main data collection had shown that the average survey completion time for study 8 is about 14 minutes. Considering this, too short or too lengthy survey completion times, too many missing values, and repetitive rating scores across different measures were used as the criteria for cleaning the dada. Hence, 3 subjects were excluded from the data set, retaining 284 cases for the main data analysis. As displayed in Table 8.14, similar to study 7, the participants consisted of more females than males (58 percent and 42 percent, respectively). Also, comparable to study 7, 35 percent of the participants were between 25 and 34 years of age, followed by those aged between 18 and 24 (24 percent) and those aged between 35 and 44 (20 percent). Seventy-four percent of the subjects had a university degree, and 25 percent had finished high school.

Table 8.14: Sample Demographics

Demographic variable	Categories	percentage (N=283)
Gender	Female	60
	Male	40
Age	18-24	24
	25-34	35
	35-44	20
	45-54	15
	55-64	35
	65 and above	1
Education	Lower than high school diploma	1
	High school diploma	25
	Associate's degree	21
	Bachelor's degree	41
	Master's degree or higher	12

8.5.2 Stimuli, Material, and Measures

The structure of the questionnaire designed for study 8 included: general questions; an explanation of a typical mobile coupon service; questions related to the most recent visit to a shopping mall; questions to measure respondents' revealed shopping motivations; and the experimental scenarios to manipulate product type and access convenience. Specifically, the experimental scenarios were identical to those in study 7; the difference between the two questionnaires was that in study 8, instead of a behavioural identification form, the dependent

variables included consumers' perceived regulatory fit and intention to redeem. In addition, coupon proneness, purchase frequency and purchase spending were measured as control variables.

To measure the respondents' intentions to redeem a mobile coupon offer, rather than using one question (as in studies 2, 4, and 6), three questions were adopted from literature (Dabholkar & Bagozzi, 2002; Kleijnen *et al.*, 2007). The measures asked the respondents how likely they would be to go to the merchant offering the mobile coupon to redeem the offer on their current visit to the mall. The answers were measured on three 7-point bipolar scales (1= "Very unlikely", 7= "Very likely"; 1= "Improbable", 7= "Probable"; 1= "Definitely would not redeem", 7= "Definitely would redeem"). Consumers' perception of regulatory fit in a mobile coupon offer was measured using the same 8 items as the ones used in studies 2, 4, and 6. After measuring dependent variables, the manipulations of the three independent variables were checked, followed by measuring the control variable coupon proneness as well as the control variables purchase frequency and purchase spending. The reason for controlling for the effect of purchase frequency and purchase spending was the possibility that some respondents might have been heavy users of magazines or deodorant. Next, three task comprehension check questions were included before demographic questions. The research questionnaire designed for study 8 is presented in Appendix 8.

8.5.3 Exploratory Factor Analysis

Two separate exploratory factor analyses (EFA) were performed. The first EFA was performed on the measures of revealed shopping motivation, together with manipulation check measures for product type and access convenience; the second EFA was performed on the measures of the dependent variables of regulatory fit and intention to redeem together with the control variable coupon proneness. In the first factor analysis, the KMO measure of sampling adequacy was .79; and Bartlett's test of sphericity was statistically significant ($p < .001$). The extraction method Principal Component Analysis and the orthogonal rotation method Varimax extracted five factors explaining 79 percent of the variance in the data. The rotated component matrix with factor loadings of above .40 is displayed in Table 8.15. It can be seen that all factor loadings were above .60; also, all communalities were greater than .50. Also, the alpha coefficient for all factors was higher than .70 and all individual items representing each factor had inter-item correlations of greater than .30 and item-total

correlations of greater than .50. Hence, it was concluded that the two measures of hedonic and utilitarian shopping motivation and the three manipulation check measures had both convergent and discriminant validity as well as a high level of reliability. The items representing each of the five manipulation check measures were summated and averaged to create an overall index for each measure. In the same way as study 7, the five items measuring revealed hedonic shopping motivation and the four items measuring revealed utilitarian shopping motivation were summated and averaged to produce overall indices for hedonic and utilitarian shopping motivation. A new variable was defined by subtracting the utilitarian shopping motivation index from the hedonic shopping motivation index. The new variable was then median-split to divide the sample into two groups of hedonic and utilitarian shoppers.

Table 8.15: Factor loadings for revealed shopping motivation and manipulation check measures [a]

Factor	Access Convenience (α = .95)	Hedonic Motivation (α = .84)	Utilitarian Motivation (α = .84)	Utilitarian Product (α = .95)	Hedonic Product (α = .93)
Access Convenience 3	.94				
Access Convenience 1	.93				
Access Convenience 2	.92				
Access Convenience 4	.90				
Hedonic Motivation 4		.88			
Hedonic Motivation 3		.83			
Hedonic Motivation 5		.72			
Hedonic Motivation 2		.71			
Hedonic Motivation 1		.63			
Utilitarian Motivation 3			.88		
Utilitarian Motivation 3			.87		
Utilitarian Motivation 2			.70		
Utilitarian Motivation 4			.69		
Utilitarian Product 3				.96	
Utilitarian Product 2				.95	
Utilitarian Product 1				.92	
Hedonic Product 1					.94
Hedonic Product 3					.92
Hedonic Product 2					.90

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 8

In the second factor analysis, first, an assessment of the correlation matrix showed that all the correlations among the items measuring their corresponding factor were significant and above .30. Initially, four factors were extracted by the extraction method Principal Component Analysis and the orthogonal rotation method Varimax. Specifically, the first four items measuring regulatory fit loaded on a different factor from the one on which the second four items were loaded. Hence, the software used to perform EFA (SPSS version 19) was forced to extract three factors. The rationale for forcing the number of factors to five was that the validity and reliability of the regulatory fit measure had already been confirmed in the previous studies (studies 2, 4, and 6). The resultant three factors explained 75 percent of the variability in the data. The KMO measure of sampling adequacy was .79; and Bartlett's test of sphericity was statistically significant ($p < .001$). Table 8.16 exhibits the rotated component matrix with factor loadings of above .40. As can be seen, all factor loadings were greater than .70; also, all communalities were higher than .50. Also, the alpha coefficient for all factors was above .70 and all individual items representing each factor had inter-item correlations of greater than .30 and item-total correlations of greater than .50. These results indicate that these three measures had acceptable convergent and discriminant validity as well as acceptable levels of reliability. Each of the three measures was summated and averaged to create an overall index for each variable.

Table 8.16: Factor loadings for dependent and control variable measures [a]

Factor	Regulatory Fit (α = .93)	Intention to Redeem (α = .97)	Coupon Proneness (α = .82)
Regulatory Fit 2	.85		
Regulatory Fit 1	.84		
Regulatory Fit 7	.84		
Regulatory Fit 8	.82		
Regulatory Fit 3	.82		
Regulatory Fit 6	.80		
Regulatory Fit 5	.76		
Regulatory Fit 4	.72		
Intention to Redeem 1		.98	
Intention to Redeem 2		.98	
Intention to Redeem 3		.96	
Coupon Proneness 1			.87
Coupon Proneness 2			.84
Coupon Proneness 4			.79
Coupon Proneness 3			.74

[a] To review the scales refer to Chapter 6: Research Design or to Appendix 8

8.5.4 Manipulation and task checks

The respondents in the conditions presenting a magazine product offer had a greater mean score on their ratings of the hedonic purchase activity index than those presented with a deodorant ($M_H = 4.35$ vs. $M_U = 2.90$, $F(1,282) = 71.91$, $p<.001$). In contrast, the participants in the conditions presenting a deodorant product offer had a greater mean score on the utilitarian product index than those presented with a magazine ($M_U = 6.04$ vs. $M_H = 2.77$, $F(1,282) = 520.47$, $p<.001$). Thus, the manipulation of product type was verified. As regards access convenience, the respondents in high-access-convenience scenarios had a significantly higher mean on the access convenience index than those in low-access-convenience conditions ($M_{HC} = 6.02$ vs. $M_{LC} = 3.69$, $F(1, 112) = 59.23$, $p<.001$). Hence, the manipulation of access convenience was also verified. Also, one sample t-tests with a test value of 4 showed that the respondents regarded the scenarios to be realistic ($M=5.56$, $t(134) = 14.75$, $p<.001$), did not have difficulty imagining themselves in the scenarios ($M=5.90$, $t(134) = 15.28$, $p<.001$), and considered the discounted offers to be common ($M=4.72$, $t(134) = 5.53$, $p<.001$). In addition, an assessment of the respondents' answers to an open-ended question revealed that none of them realized the purpose of the study.

8.5.5 Testing the hypothesised effects

The data analysis performed for study 8 was identical to that for study 6. Specifically, in order to examine the effects of interactions among shopping motivation, product type, and access convenience on regulatory fit and intention to redeem, a 2 (shopping motivation: hedonic vs. utilitarian) * 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) full-factorial MANOVA model was estimated. In the model, regulatory fit and intention to redeem were included as dependent variables, and coupon proneness, purchase frequency, and purchase spending were included as covariates. The results of the MANOVA revealed significant main effects for shopping motivation (Wilk's Lambda=.94, F (2,271) = 8.48, p < .001), product type (Wilk's Lambda=.94, F (2,271) = 8.31, p < .001), and access convenience (Wilk's Lambda=.96, F (2,271) = 5.00, p < .01). There were also significant two-way interaction effects between shopping motivation and product type (Wilk's Lambda=.98, F (2,271) = 3.14, p < .05) and product type and access convenience (Wilk's Lambda=.93, F (2,271) = 10.98, p < .001). The two-way interaction effect between shopping motivation and access convenience was not significant (p> .10). However, the three-way interaction among shopping motivation, product type, and access convenience was significant (Wilk's Lambda=.98, F (2,271) = 2.83, p < .10). Also, there were significant main effects for the control variables coupon proneness (Wilk's Lambda=.98, F (2,271) = 2.45, p < .10), purchase frequency (Wilk's Lambda=.94, F (2,271) = 8.16, p < .001), and purchase spending (Wilk's Lambda=.98, F (2,271) = 3.53, p < .001).

To test hypotheses H8a, H8b, H9a, and H9b, two separate full-factorial ANOVA models were run, with the first model including regulatory fit and the second model including intention to redeem as dependent variables controlling for the effects of coupon proneness, purchase frequency, and purchase spending. Henceforth, in all the upcoming data analyses, coupon proneness, purchase frequency, and purchase spending will be included as covariates. In the following sections, the results of the two ANOVA model estimations are presented.

8.5.5.1 Dependent variable: Regulatory fit

A 2 (shopping motivation: hedonic vs. utilitarian) * 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) full-factorial ANOVA model was run, in which regulatory fit was included as dependent variable. Table 8.17 gives the descriptive statistics,

consisting of the mean and standard deviation of the dependent variable regulatory fit in each of the resulting 8 conditions and the number of the participants in each condition.

Table 8.17: Regulatory fit: Descriptive statistics

Shopping Motivation	Product Type	Access Convenience	Mean *	Std. Deviation	n
Utilitarian	Utilitarian	Low	3.25	1.11	30
		High	3.74	1.14	34
		Total	3.51	1.14	64
	Hedonic	Low	2.86	1.23	41
		High	2.70	1.21	37
		Total	2.79	1.21	78
	Total	Low	3.03	1.19	71
		High	3.20	1.28	71
		Total	3.11	1.23	142
Hedonic	Utilitarian	Low	3.25	1.52	38
		High	4.27	1.11	38
		Total	3.76	1.42	76
	Hedonic	Low	3.98	1.01	32
		High	3.60	1.16	33
		Total	3.78	1.10	65
	Total	Low	3.59	1.35	70
		High	3.96	1.18	71
		Total	3.77	1.278	141

* 7-point Likert scale

The results of the ANOVA model estimation are presented in Table 8.18. It can be seen that there are significant main effects of shopping motivation ($F(1,272) = 15.91$, $p<.001$) and access convenience ($F(1,272) = 4.68$, $p<.05$), whereas the main effect of product type is not significant ($p> .10$). There are significant two-way interaction effects between shopping motivation and product type ($F(1,272) = 5.39$, $p<.05$) and between product type and access convenience ($F(1,272) = 16.02$, $p<.001$). However, the two-way interaction effect between shopping and access convenience as well as the three-way interaction effect among shopping motivation, product type, and access convenience is not significant ($p>.10$).

Table 8.18: Regulatory fit: ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	119.69[a]	10	11.97	9.20	.000
Intercept	72.45	1	72.45	55.67	.000
Coupon Proneness	4.44	1	4.44	3.41	.066
Purchase Frequency	19.92	1	19.92	15.30	.000
Purchase Spending	8.93	1	8.93	6.86	.009
Shopping Motivation	20.70	1	20.70	15.91	.000
Product Type	.16	1	.16	.13	.724
Access Convenience	6.09	1	6.09	4.68	.031
Shopping Motivation * Product Type	7.01	1	7.01	5.39	.021
Shopping Motivation * Access Convenience	.30	1	.30	.23	.630
Product Type * Access Convenience	20.85	1	20.85	16.02	.000
Shopping Motivation * Product Type * Access Convenience	.91	1	.91	.70	.405
Error	354.00	272	1.30		
Total	3825.04	283			
Corrected Total	473.69	282			

[a] R Squared = .253 (Adjusted R Squared = .225)

In order to test hypotheses H8a and H8b, in the same way as these hypotheses were tested in study 6, the sample was divided into two groups: hedonic and utilitarian shoppers; then, for each group, a 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) ANOVA model was performed with regulatory fit as the dependent variable. Figure 8.9 outlines the interaction effect of product type and access convenience for the two groups of hedonic and utilitarian shoppers.

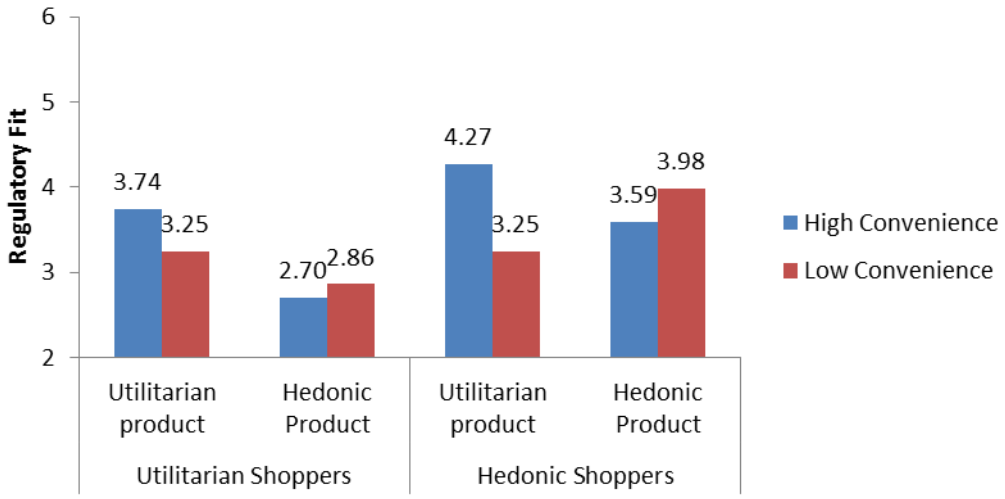

Figure 8.9: Regulatory fit for product type and access convenience conditions across the two groups of hedonic and utilitarian shoppers

The ANOVA performed for utilitarian shoppers showed a significant interaction effect between product type and access convenience ($F(1,135) = 5.70$, $p<.05$). Specifically, as can be seen on the left side of Figure 8.9, participants who had utilitarian shopping motivations and received a utilitarian product offer perceived significantly higher levels of regulatory fit when access convenience was high than when it was low ($M_{HC} = 3.74$, $M_{LC} = 3.25$, $F(1,59) = 6.21$, $p<.05$). By contrast, respondents who had utilitarian shopping motivation and received a hedonic product offer perceived similar levels of regulatory fit when access convenience was high or low ($M_{HC} = 2.70$, $M_{LC} = 2.86$, $F(1,73) = .85$, $p>.10$). Therefore, consistent with the results of study 6, hypothesis H8a is supported.

Likewise, the ANOVA performed for hedonic shoppers showed a significant interaction effect between product type and access convenience ($F(1,134) = 10.47$, $p<.01$). In particular, as can be seen on the right side of Figure 8.9, when participants had hedonic shopping motivation and received a utilitarian product offer, they perceived significantly higher levels of regulatory fit when access convenience was high than when access convenience was low ($M_{HC} = 4.27$, $M_{LC} = 3.25$, $F(1,71) = 10.27$, $p<.01$). Conversely, when respondents had hedonic shopping motivation and received a hedonic product offer, they did not perceive significantly different levels of regulatory fit when access convenience was high or when access convenience was low ($M_{HC} = 3.59$, $M_{LC} = 3.98$, $F(1,60) = 1.79$, $p>.10$). Hence, hypothesis H8b is supported.

8.5.5.2 Dependent variable: Intention to redeem

A 2 (shopping motivation: hedonic vs. utilitarian) * 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) full-factorial ANOVA model was run, in which intention to redeem was included as the dependent variable. Table 8.19 gives the descriptive statistics, consisting of the mean and standard deviation of the dependent variable intention to redeem in each of the resulting 8 conditions and the number of the participants in each condition.

Table 8.19: Intention to redeem: Descriptive statistics

Shopping Motivation	Product Type	Access Convenience	Mean *	Std. Deviation
Utilitarian	Utilitarian	Low	4.04	1.49
		High	4.75	1.31
		Total	4.42	1.43
	Hedonic	Low	2.84	1.59
		High	2.95	1.76
		Total	2.89	1.67
	Total	Low	3.35	1.65
		High	3.81	1.80
		Total	3.58	1.74
Hedonic	Utilitarian	Low	3.72	1.73
		High	5.63	1.33
		Total	4.68	1.81
	Hedonic	Low	4.45	1.73
		High	3.81	1.76
		Total	4.12	1.76
	Total	Low	4.05	1.76
		High	4.78	1.79
		Total	4.42	1.80

* 7-point Likert scale

The results of the ANOVA model estimation are presented in Table 8.20. It can be seen that there are significant main effects of shopping motivation ($F(1,272) = 11.74$, $p<.01$), product type ($F(1,272) = 10.81$, $p<.01$), and access convenience ($F(1,272) = 10.03$, $p<.01$). There are also significant two-way interaction effects between shopping motivation and product type ($F(1,239) = 11.69$, $p<.01$) and between product type and access convenience ($F(1,272) = 20.14$, $p<.001$). Although, the two-way interaction effect between shopping motivation and access convenience is not significant ($p>.10$), the three-way interaction of shopping motivation, product type, and access convenience is significant ($F(1,272) = 4.96$, $p<.05$).

Table 8.20: Intention to redeem: ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	288.50[a]	10	28.85	12.20	.000
Intercept	87.83	1	87.83	37.15	.000
Coupon Proneness	10.83	1	10.83	4.58	.033
Purchase Frequency	26.78	1	26.78	11.33	.001
Purchase Spending	10.36	1	10.36	4.38	.037
Shopping Motivation	27.76	1	27.76	11.74	.001
Product Type	25.55	1	25.55	10.81	.001
Access Convenience	23.70	1	23.70	10.03	.002
Shopping Motivation * Product Type	12.01	1	12.01	5.08	.025
Shopping Motivation * Access Convenience	.83	1	.83	.35	.554
Product Type * Access Convenience	47.61	1	47.61	20.14	.000
Shopping Motivation * Product Type * Access Convenience	11.72	1	11.72	4.96	.027
Error	643.05	272	2.36		
Total	5454.22	283			
Corrected Total	931.55	282			

[a] R Squared = .310 (Adjusted R Squared = .284)

In the same way that the hypotheses related to regulatory fit were tested, to test hypotheses H9a and H9b, the sample was divided into two groups of hedonic and utilitarian shoppers; then, for each group a 2 (product type: hedonic vs. utilitarian) * 2 (access convenience: high vs. low) ANOVA model was performed with the intention to redeem as the dependent variable. Figure 8.10 outlines the interaction effect of product type and access convenience for the two groups of hedonic and utilitarian shoppers.

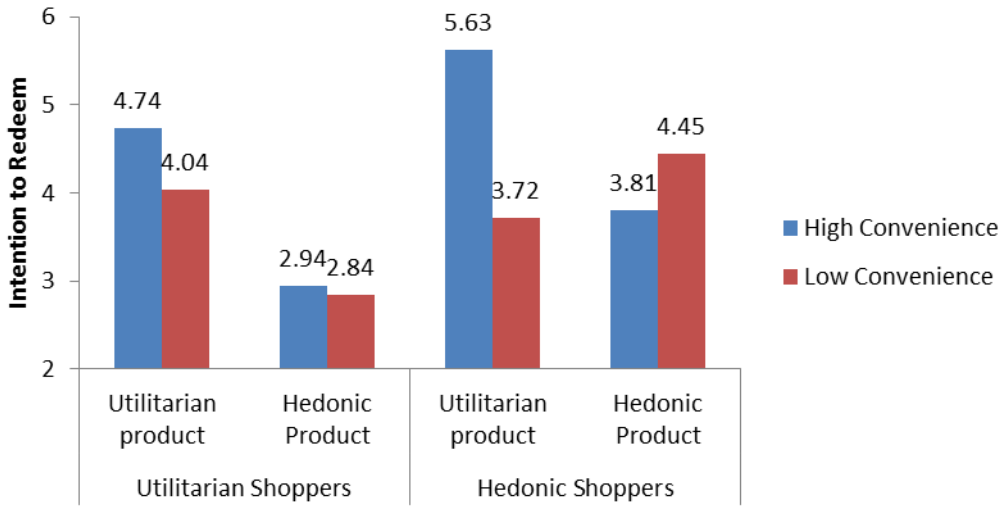

Figure 8.10: Intention to redeem for product type and access convenience conditions across the two groups of hedonic and utilitarian shoppers

For utilitarian shoppers, there was a marginally significant interaction effect between product type and access convenience ($F(1,135) = 3.14$, $p<.10$) as well as a significant main effect for product type ($M_{UP} = 4.42$, $M_{HP} = 2.89$, $F(1,135) = 14.21$, $p<.001$) and a marginally significant main effect for access convenience ($M_{HC} = 3.81$, $M_{LC} = 3.35$, $F(1,135) = 3.39$, $p<.10$). Specifically, as shown on the left side of Figure 8.10, when the participants with utilitarian shopping motivation were offered a utilitarian product, they had significantly higher degrees of intention to redeem when access convenience was high than when access convenience was low ($M_{HC} = 4.74$, $M_{LC} = 4.04$, $F(1,59) = 5.10$, $p<.05$). In contrast, when their shopping motivation was utilitarian and they were offered a hedonic product, the respondents did not have significantly different degrees of intention to redeem when access convenience was high than when access convenience was low ($M_{HC} = 2.94$, $M_{LC} = 2.84$, $F(1,73) = .01$, $p>.10$). As a result, and consistent with the results of study 6, hypothesis H9a is supported.

For hedonic shoppers, there was a significant interaction effect between product type and access convenience ($F(1,134) = 18.98$, $p<.001$) as well as a significant main effect for access convenience ($M_{HC} = 4.78$, $M_{LC} = 4.05$, $F(1,134) = 6.70$, $p<.05$). In particular, as portrayed on the right side of Figure 8.10, when the respondents had hedonic shopping motivation and were offered a utilitarian product, they had significantly higher degrees of intention to redeem when access convenience was high than when access convenience was low ($M_{HC} = 5.63$, $M_{LC} = 3.72$). On the contrary, when their shopping motivation was hedonic and they were offered

a hedonic product, participants did not have significantly different levels of intention to redeem when access convenience was high than when access convenience was low (M_{HC} = 3.81, M_{LC} = 4.45, F (1,60) = 1.38, p>.10). Thus, hypothesis H9b is supported.

8.5.5.3 The mediating effect of regulatory fit

In order to test hypothesis H10, the bootstrapping method recommended by Preacher and Hayes (2004, 2008) was used in the same way as it was used in study 6. The results of the mediation tests are presented in Table 8.21. As can be seen, the confidence interval for the effect of three-way interaction variable (shopping motivation*product type*access convenience) on intention to redeem via the indirect effect of regulatory fit does not contain the value of zero. Similarly, the confidence interval for the effect of two-way interaction variable 'shopping motivation*product type' as well as the confidence interval for the effect of the two-way variable 'product type*access convenience' does not include the value of zero. However, the confidence interval for the effect of the two-way interaction variable 'shopping motivation*access' convenience crosses the zero value. Among the individual independent variables, the confidence interval for the effects of product type and access convenience on intention to redeem via the indirect effect of regulatory fit does not include zero, whereas that for shopping motivation crosses zero. Hypotheses H8a, H8b, H9a, and H9b implied a three-way interaction for the effects of shopping motivation, product type, and access convenience on intention to redeem via the mediating effect of regulatory fit. Therefore, it can be concluded that regulatory fit fully mediated the effect of interaction among these three independent variables on intention to redeem. This supports hypothesis H10.

Table 8.21: Coefficients for Testing the Mediation Effect of Regulatory fit [a]

IV	M	DV	a	b	c	c'	a*b	CI [b] (Lower-Upper)	
Shopping Motivation* Product Type* Access Convenience	Regulatory Fit	Intention to Redeem	.92**	.91***	-1.98***	-1 .14*	.84	-1.57	-.14
Shopping Motivation* Product Type	Regulatory Fit	Intention to Redeem	.84**	.91***	1.37***	.60	.77	.18	1.43
Shopping Motivation* Access Convenience	Regulatory Fit	Intention to Redeem	.36	.91***	.98**	.65**	.32	-.32	.98
Product* Convenience	Regulatory Fit	Intention to Redeem	-1.26**	.91***	-1.39***	-.25	1.14	-1.78	-.48
Product Type	Regulatory Fit	Intention to Redeem	.48**	.91***	.13	-.31	.44	.05	.85
Access Convenience	Regulatory Fit	Intention to Redeem	.87***	.91***	1.47***	.67***	.90	.43	1.20
Shopping Motivation	Regulatory Fit	Intention to Redeem	.44*	.91***	.27	-.13	.50	-.11	.89

[a] Bootstrap samples: 5000
[b] 95 % confidence interval
IV: Independent variable
M: Mediating variable
DV: Dependent variable
a: Effect of IV on M
c: b: Effect of M on DV
c: Total effect
c': Direct effect
* Significant at p< .10
** Significant at p< .05
*** Significant at p< .01

8.5.6 Two-way interactions

As noted earlier, the results of data analysis found significant two-way interaction effects between product type and shopping motivation, and also between product type and access convenience (Table 8.18 and Table 8.20). In this section, first the two-way interaction effect between shopping motivation and type of product, and then the two-way interaction effect between type of product and access convenience, are further investigated.

As depicted in Figure 8.11, the respondents with hedonic shopping motivations did not perceive significantly different degrees of regulatory fit in a hedonic product offer or in a utilitarian product offer ($M_{HP} = 3.78$, $M_{UP} = 3.76$, $F(1,136) = 1.46$, $p>.10$); likewise, for these respondents, the intention to redeem hedonic and utilitarian product offers was not significantly different ($M_{HP} = 4.12$, $M_{UP} = 4.67$, $F(1,136) = .25$, $p>.10$). By contrast, the participants with utilitarian shopping motivations perceived significantly higher degrees of regulatory fit in a utilitarian than in a hedonic product ($M_{UP} = 3.51$, $M_{HP} = 3.76$, $F(1,137) = 14.48$, $p<.001$); also, these respondents had higher levels of intention to redeem a utilitarian

product than a hedonic product (M_{UP} = 4.42, M_{HP} = 2.89, F (1,137) = 16.17, p<.001). These results are consistent with the results of previous studies; that is, while utilitarian shoppers are more responsive to offers compatible with their shopping motivations than to incompatible offers, hedonic shoppers are responsive to both compatible and incompatible offers.

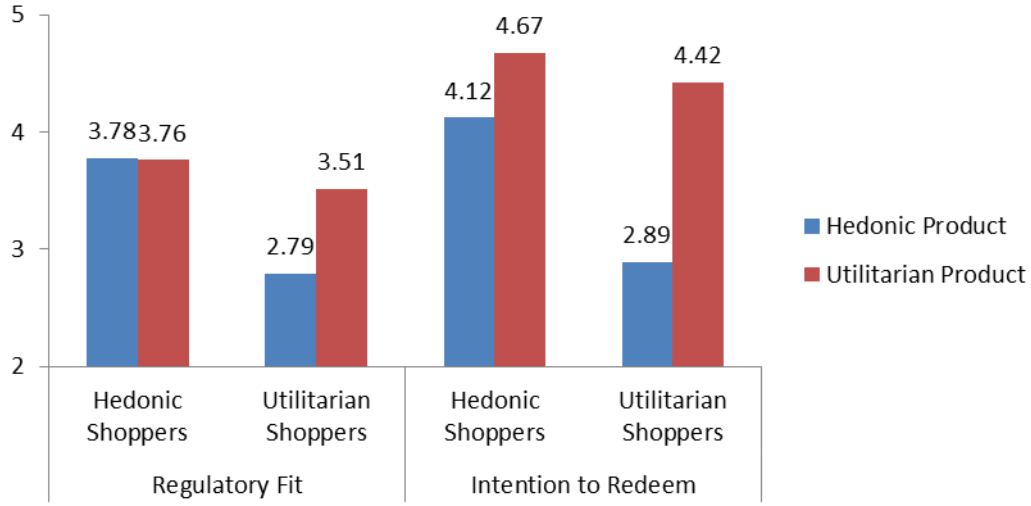

Figure 8.11: Two-way interactions between shopping motivation and type of product

As illustrated in Figure 8.12, on average and regardless of shopping motivation, the respondents who were offered a hedonic product perceived similar degrees of regulatory fit whether access convenience was high or low (M_{HC} = 3.12, M_{LC} = 3.35, F (1,138) = 1.40, p>.10); likewise, these participants had comparable levels of intentions to redeem whether access convenience was high or low (M_{HC} = 3.35, M_{LC} = 3.54, F (1,138) = .34, p>.10). On the contrary, the participants who were offered a utilitarian product perceived higher degrees of regulatory fit when access convenience was high than when it was low (M_{HC} = 4.02, M_{LC} = 3.25, F (1,135) = 16.80, p<.001); also, these respondents had higher levels of intentions to redeem when access convenience was high than when it was low (M_{HC} = 5.21, M_{LC} = 3.86, F (1,135) = 30.94, p<.001).

Data Analysis (Model 2)

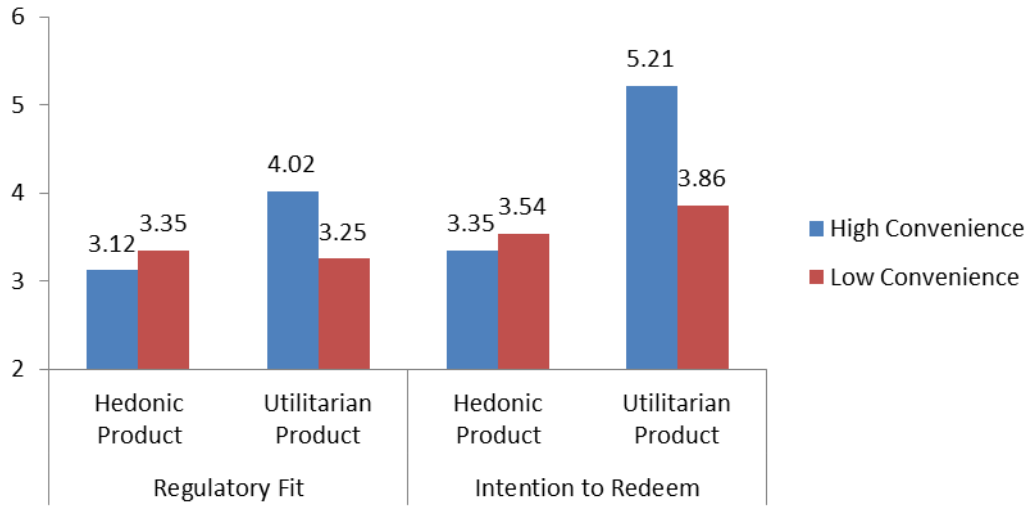

Figure 8.12: Two-way interactions between type of product and access convenience

8.5.7 Summary of Study 7 and Study 8

The purpose of conducting studies 7 and 8 was to provide more generalizable support for the results of studies 5 and 6. The difference between these two sets of studies lies in the way consumers' shopping motivation was operationalized. In particular, instead of manipulating shopping motivation in a hypothetical scenario, the shopping motivations revealed by consumers were measured and used as a basis for dividing the study subjects into two groups of shoppers: hedonic and utilitarian. It was expected that this approach would provide more realistic results compared with the specific experimental scenarios designed for the previous studies. Study 6 illustrated that, in a shopping mall context, while, receiving a mobile coupon offer from a convenient-to-access merchant activates a low-level concrete construal, receiving a mobile coupon offer from an inconvenient-to-access merchant activates a high-level abstract construal, supporting hypothesis H7. Building upon this result, study 8 showed that, on average, utilitarian shoppers are more likely to redeem a utilitarian product than a hedonic product; however, utilitarian shoppers opt for redeeming utilitarian products when access convenience is high. By contrast, study 8 showed that regardless of access convenience, hedonic shoppers are equally likely to redeem hedonic products; however, they are more likely to redeem utilitarian product offers when access convenience is high. These results supported the hypotheses relating to utilitarian shoppers (H8a and H9a) as well as hypotheses relating to hedonic shoppers (H8b and H9b). Finally, it was demonstrated that the effect of the interaction among product type, access convenience, and shopping motivation on intention to

redeem is explained by the mediating effect of perceived regulatory fit, thereby supporting hypothesis H10.

8.6 Conclusion

In this chapter, conceptual model 2 was tested. Consistent with the main premise of the present thesis, it was shown that while both hedonic and utilitarian shoppers are responsive to offers that are compatible with their shopping motivations, hedonic shoppers are responsive to less compatible offers as well. Specifically, it was illustrated that while utilitarian shoppers are inclined to redeem utilitarian products, hedonic shoppers tend to redeem hedonic products. It was argued that this effect is due to the compatibility between regulatory focus primed by type of product and regulatory focus primed by shopping motivation. However, it was demonstrated that utilitarian shoppers are less likely to redeem hedonic products, whereas hedonic shoppers are equally likely to redeem both hedonic and utilitarian shoppers.

The difference between hedonic and utilitarian shoppers' responses to incompatible offers was further revealed when the effect of access convenience was taken into account. In particular, it was shown that utilitarian shoppers are more inclined to redeem utilitarian products with high access convenience than those with low access convenience. This effect was argued to be the result of: the compatibility between the concrete construal level activated by high access convenience and the prevention focus primed by utilitarian shopping motivation; and also the vigilance strategy adopted by utilitarian shoppers. By contrast, it was shown that hedonic shoppers redeem hedonic products with low access convenience as much as those with high access convenience. This effect was argued to be the result of: the compatibility between the abstract construal level activated by low access convenience and promotion focus primed by hedonic shopping motivation; as well as the eagerness strategy adopted by hedonic shoppers. Overall, the results of studies 5 to 8 provide support for the main proposition of this thesis that hedonic and utilitarian shoppers respond differently to mobile coupon cues that are compatible or incompatible with their regulatory goals. In the next chapter, the results of studies 1 to 4, as well as those of studies 5 and 8, will be discussed. Then, the theoretical and managerial contributions of this research will be elaborated on. Finally, the limitations of the present research together with directions for future research will be discussed.

Chapter 9 : Conclusion and Discussion

9.1 Introduction

The aim of this study was to investigate the factors that influence consumers' responses to personalised offers in the context of mobile coupon services. In the overall conceptual framework it was proposed that the marketing cues conveyed by a mobile coupon interact with consumers' situational states to affect the consumers' redemption behaviours. In particular, three relevant marketing cues were identified: the type of product offered, the congruency of the offer with consumers' temporal needs, and the convenience of access to the retailer's location to redeem the mobile coupon; relatedly, consumers' shopping motivation was identified as a situational state. It was proposed that the compatibility between the type of regulatory focus or construal level primed by mobile coupons' cues and the type of regulatory focus primed consumers' shopping motivation leads to the experience of regulatory fit and consequently intention to redeem; however, it was predicted that utilitarian and hedonic shoppers respond differently to compatible or incompatible offers. Specifically, it was posited that while utilitarian shoppers are likely to respond more favourably to compatible offers than to incompatible ones, hedonic shoppers tend to respond favourably to both compatible and incompatible offers. In other words, while utilitarian shoppers tend to be more responsive to a narrower range of offers from compatible product categories, hedonic shoppers are more likely to respond favourably to a wider range of offers from. To recap, in the present thesis, the term 'compatibility' refers to the match between that the type of regulatory focus or construal level primed by a mobile coupon's cue and the type of regulatory focus primed by consumers' shopping motivation.

The overall conceptual framework was tested in two stages. In the first stage, the independent variable access convenience was kept constant. This resulted in the first split of the overall conceptual framework and was titled "conceptual model 1". In the second stage, the independent variable temporal needs congruency was kept constant and was replaced with access convenience. This resulted in the second split of the overall conceptual framework which was titled "conceptual model 2". As can be noted, conceptual models 1 and 2 are not two entirely separate splits of the overall conceptual framework; rather, the difference between the two lies in the variables of temporal needs congruency and access convenience

that were kept constant in the two stages merely for testing purposes. In Chapters 7 and 8, conceptual models 1 and 2 and their corresponding hypotheses were tested, respectively. This was done by conducting scenario-based experiments and analysing data collected from an online panel. Specifically, conceptual model 1 was tested by conducting studies 1 to 4; and conceptual model 2 was tested by conducting studies 5 to 8. Overall, the results of the experiments supported the main premise of the present thesis that while utilitarian shoppers respond only to mobile coupon offers that are compatible with their focal shopping motivation, hedonic shoppers are responsive to both compatible and incompatible offers. In the current chapter, first, the research findings resulting from testing conceptual models 1 and 2 will be discussed. Next, the theoretical as well as managerial implications of the findings will be elaborated on. After that, the limitations of the present research accompanied by propositions for further research will be highlighted.

9.2 Discussion of conceptual model 1

The main premise of conceptual model 1 was that while utilitarian shoppers are more likely to redeem personalised mobile coupon offers that are more compatible with their focal shopping motivation, hedonic shoppers tend to be receptive to both compatible and incompatible offers. It was also proposed that consumers' intentions to redeem personalised mobile coupon offers are dependent on their perception of regulatory fit in the offers. Specifically, it was predicted that the perception of regulatory fit is a function of the compatibility or incompatibility between the regulatory focus primed by mobile coupons' cues (i.e., type of product or temporal needs congruency) and the regulatory focus primed by consumers' shopping motivations; however, it was anticipated that hedonic and utilitarian shoppers have different perceptions of regulatory fit in compatible or incompatible offers. The results of two experiments, namely, study 1 and study 3, as well as their replications, namely, study 2 and study 4, supported these predictions.

9.2.1 Regulatory focus primed by shopping motivation and marketing cues

First, in study 1, drawing on the insights provided by regulatory focus theory (Higgins, 1997, 1998) as well as the research on the association between regulatory focus and consumers' shopping orientation (Arnold & Reynolds, 2009), product attributes (Chitturi *et al.*, 2008), and temporal distance (Pennington & Roese, 2003), it was revealed that in terms of consumers' shopping motivation, the type of product offered to them by a mobile coupon, and

the congruency of the offer with the consumers' temporal needs, each primes a certain type of regulatory focus (promotion or prevention) that is superior in strength to the other type. In particular, it was shown that while utilitarian shopping motivation, utilitarian products, and offers fulfilling current needs prime relatively more prevention focus than promotion focus, hedonic shopping motivation, hedonic products, and offers addressing future needs prompt relatively more promotion focus than prevention focus.

These findings are in line with the findings provided by previous studies. In particular, it has been found that certain marketing cues, namely, the framing of the savings message of a coupon, the expiration date restriction of the coupon, and the familiarity with the promoted brands, each can independently prime certain regulatory focuses (Ramanathan & Dhar, 2010); that is, while a "save $x" message, a "today" expiration date, and a well-known brand prime a prevention focus, a "get $x off" message, a "two weeks" expiration date, and a less familiar brand prime a promotion focus. Moreover, it has been shown that the consumption of hedonic and utilitarian benefits leads to different emotional experiences associated with promotion or prevention regulatory focuses (Chitturi *et al.*, 2007, 2008); in particular, the authors found that a positive consumption experience of a product superior in utilitarian benefits induces the prevention-related feelings of security and confidence, whereas a positive consumption experience of a product superior in hedonic benefits induces the promotion-related feelings of excitement and cheerfulness.

9.2.2 The interaction between shopping motivation and product type

Building on the results of study 1, and drawing on the theories of regulatory focus (Higgins, 1997, 1998) and regulatory fit (Aaker & Lee, 2006; Avnet & Higgins, 2006), it was proposed that the compatibility between the type of regulatory focus primed by the type of product and regulatory focus primed by consumers' shopping motivation leads to the perception of regulatory fit and consequently intention to redeem an offer; however, it was predicted that while utilitarian shoppers redeem offers that are compatible with their focal shopping motivation (i.e., utilitarian products), hedonic shoppers are more likely to redeem both compatible and incompatible offers (i.e., both hedonic and utilitarian products). These predictions were supported by study 2. Specifically, it was demonstrated that while utilitarian shoppers are more likely to redeem utilitarian (e.g., detergent) offers than hedonic (e.g., movie DVD) offers, hedonic shoppers redeem offers from a wider range of product types, that is,

both hedonic and utilitarian products. The underlying mechanism for this finding was explained by establishing the mediating role of regulatory fit. Specifically, it was shown that utilitarian shoppers experience relatively higher levels of regulatory fit in utilitarian products than in hedonic products, whereas hedonic shoppers perceive similar levels of regulatory fit in both types of products.

These results concur with the findings provided by previous research. Specifically, Chernev (2004a) has shown that compared with promotion-focused people, those with a prevention focus are relatively more likely to attach more weight to the utilitarian features of product offers and select the alternatives that are superior in terms of these features; conversely, hedonic attributes of product offers receive relatively more weight than utilitarian attributes from promotion-focused individuals than from prevention-focused individuals. In the same vein, Chitturi and colleagues (2007) illustrated that regulatory focus moderates the intensity of the emotions evoked as a result of the trade-offs between hedonic and utilitarian features of products. In particular, it was found that trading off hedonic attributes for utilitarian ones evokes the prevention-related emotions of security and confidence and these feelings are stronger for prevention-focused than for promotion-focused people; on the contrary, trading utilitarian features for hedonic ones induces the promotion emotions of cheerfulness and excitement and these feelings are stronger for promotion-focused than for prevention-focused individuals. In the present thesis, it was demonstrated that while utilitarian shoppers, who are relatively more prevention-focused, prefer utilitarian products, hedonic shoppers, who are relatively more promotion-focused, prefer hedonic products.

9.2.3 The interaction between shopping motivation and temporal needs congruency

Linking the notion of regulatory fit (Aaker & Lee, 2006; Avnet & Higgins, 2006) with the research on the association between regulatory focus and temporal distance (Liberman *et al.*, 2001; Pennington & Roese, 2003), it was postulated that the compatibility between the type of regulatory focus primed by temporal needs congruency of an offer and the type of regulatory focus primed by consumers' shopping motivation leads to the perception of regulatory fit and subsequently the intention to redeem the offer; however, it was posited that utilitarian and hedonic shoppers perceive differing levels of regulatory fit in the offers addressing current and future needs. In particular, it was demonstrated that utilitarian shoppers are more likely to redeem offers fulfilling their current needs (e.g., when they have not purchased a product for a

while) than the ones fulfilling their future needs (e.g., when they have purchased a product recently). In contrast, hedonic shoppers are equally likely to redeem product offers addressing their current needs or their future needs. Again, the explanation for these findings was provided on the basis of the differences between hedonic and utilitarian shoppers' perceptions of regulatory fit in the offers congruent with their current or future needs.

These results are consistent with recent findings showing that shoppers will be more responsive to promotions when they experience compatibility between a coupon's cue and their regulatory focus (Ramanathan & Dhar, 2010). Specifically, Ramanathan and Dhar demonstrated that prevention-focused people redeem more coupons with a close expiry date (i.e., today); this is because short-term restrictions herald imminent actions drawing attention to the near future which is compatible with a prevention focus; conversely those with a promotion focus redeem more coupons with a far expiry date (i.e., two weeks); the reason is that long-term expiry dates indicate a more distant future which is compatible with promotion focus. In a similar sense, Inman and colleagues (2009) found that the likelihood of unplanned purchases is higher for product categories that are purchased less frequently (i.e., products with longer interpurchase cycles), whereas making unplanned purchases is less likely for those consumers who shop more frequently (i.e., more frequent shoppers). Both the notions of interpurchase cycle and shopping frequency refer to the time interval between two purchase occasions which is similar in spirit to the conceptualisation of temporal needs congruency in the present thesis. Lee and Ariely (2006) demonstrated that consumers who are in the early stages of their shopping process construe their shopping goals and product offers at a higher and more abstract level; whereas, those in the later stages of their shopping construe their shopping goals and product offers at a lower, more concrete level; hence, the former group will be more open to promotional offers, as opposed to the latter group who will be less responsive to coupons. Related to this, previous research also observes an association between a more abstract (concrete) construal level and a distal (proximal) temporal perspective (Liberman *et al.*, 2007; Trope & Liberman, 2010), as well as between a more abstract (concrete) construal level and a promotion (prevention) focus (Pennington & Roese, 2003).

Therefore, for the present thesis, it can be argued that a current-needs congruent offer is in harmony with a shorter interpurchase cycle, or a shorter temporal distance, which is more compatible with utilitarian shoppers' perceptions of the time they have to accomplish their

shopping trips as well as their prevention-focused orientations. In contrast, a future-needs congruent offer is of the same meaning as a longer inter-purchase cycle, or a longer temporal distance, which is more compatible with hedonic shoppers' perspectives of their shopping trip as well as their promotion-focused orientations.

9.2.4 Supporting the generalizability of the findings (Study 3 and Study 4)

Study 3 and study 4 were conducted to further support the generalizability of the results of studies 1 and 2, using different types of products (i.e., movie ticket and shampoo instead of movie DVD and detergent as hedonic and utilitarian products, respectively). Specifically, in study 3 it was shown that while a utilitarian shopping motivation, utilitarian products, and offers fulfilling current needs prime a prevention focus more than a promotion focus, a hedonic shopping motivation, hedonic products, and offers addressing future needs prime a promotion focus more than a prevention focus. Subsequently, in study 4 it was demonstrated that utilitarian shoppers perceive more regulatory fit in and consequently have higher intentions to redeem utilitarian products than hedonic products. On the other hand, hedonic shoppers experience higher levels of regulatory fit in hedonic offers (movie ticket) than utilitarian offers (shampoo). Hence, there was a slight discrepancy between the findings of study 4 and study 2 as the latter found that hedonic shoppers perceive similar levels of regulatory fit in hedonic (movie DVD) and utilitarian (detergent) products. However, consistent with the results of study 2, the results of study 4 showed that hedonic shoppers have similar intentions to redeem both hedonic and utilitarian products. Study 4 also illustrated that while utilitarian shoppers perceive more regulatory fit in, and have a higher intention to redeem, offers congruent with their current needs than offers congruent with their future needs, hedonic shoppers perceive similar levels of regulatory fit in offers addressing their current or future needs, leading them to be more responsive to both types of offers. Furthermore, in study 4 it was shown that regulatory fit mediates the effects of the interaction between shopping motivation and product type and between shopping motivation and temporal needs congruency on intention to redeem.

Overall, the results of studies 1 to 4 confirm the main premise of the present research that: utilitarian shoppers place relatively more weight on personalised mobile coupons that are compatible with their focal shopping motivations (i.e., utilitarian products and offers congruent with current needs) than incompatible ones (i.e., hedonic products and offers

congruent with future needs); whereas hedonic shoppers tend to be more responsive to both compatible (i.e., hedonic products and offers congruent with future needs) and less compatible (i.e., utilitarian products and offers congruent with current needs) offers. Specifically, in the present thesis it was demonstrated that consumers' intention to redeem personalised mobile coupon offers is a function of the perception of regulatory fit in the offers; which itself is the result of the compatibility or incompatibility between the type of regulatory focus primed by shopping motivation and that primed by mobile coupons' cues. In this sense, it was shown that hedonic and utilitarian shoppers have different perceptions of regulatory fit in and consequently different intentions to redeem compatible or incompatible offers. Specifically, the results demonstrated that utilitarian shoppers perceive a relatively higher level of regulatory fit in utilitarian product categories (e.g., movie DVD, movie ticket) than in hedonic product categories (e.g., detergent, shampoo). Likewise, it was shown that utilitarian shoppers perceive a relatively higher degree of regulatory fit in product offers congruent with their current needs (e.g., products purchased a while ago) than in product offers congruent with future needs (e.g., products purchased recently). Conversely, it was demonstrated that hedonic shoppers perceive comparable levels of regulatory fit in both hedonic and utilitarian product categories. Similarly, it was shown that hedonic shoppers perceive similar degrees of regulatory fit in product offers congruent with their current needs as well as those congruent with future needs.

9.3 Discussion of conceptual model 2

As noted earlier, in conceptual model 2 the variable temporal needs congruency in conceptual model 1 was kept constant and replaced with the variable access convenience. A point to re-emphasise is that the conceptual models 1 and 2 have the same premise as the overall conceptual framework. The reason for testing the overall framework in two stages was merely for implementation purposes. In line with conceptual model 1, the core premise of conceptual model 2 was that while utilitarian shoppers are more likely to redeem personalised mobile coupon offers that are compatible with their focal shopping motivations, hedonic shoppers tend to be receptive to both compatible and incompatible offers. In this regard, it was proposed that depending on access convenience (i.e., the distance between the location at which an offer is received and the location at which the offer needs to be redeemed) hedonic and utilitarian shoppers respond differently to hedonic and utilitarian offers. These

propositions were tested by conducting studies 5 and 6, and the quasi-experimental studies 7 and 8.

9.3.1 Construal level activated by access convenience

In studies 5 and 7, drawing on the literature on the relationship between construal level and psychological distance (Fujita *et al.*, 2006; Trope & Liberman, 2010), it was proposed that in a shopping mall context, the access convenience of a retailer activates a certain type of construal level (abstract vs. concrete). Specifically, study 5 showed that while a convenient-to-access location activates more low-level and concrete than high-level and abstract construals, an inconvenient-to-access location activates more high-level and abstract than low-level and concrete construals. The result of the experimental study 5 was further supported by the quasi-experimental study 7.

9.3.2 The interaction of shopping motivation, product type, and access convenience

Building on the results of studies 5 and 7, and bringing together the insights derived from regulatory focus (Higgins, 1997, 1998) and regulatory fit theories (Aaker & Lee, 2006; Avnet & Higgins, 2006) with the research on the association between regulatory focus and construal level (Lee *et al.*, 2010; White *et al.*, 2011), it was proposed that consumers' responses to personalised mobile coupon offers depend on the perception of regulatory fit in the offers. Hence, it was posited that the perception of regulatory fit is the result of the compatibility between the type of regulatory focus primed by the type of product offer, the one primed by consumers' shopping motivations, and the type of construal level activated by access convenience. However, it was predicted that utilitarian shoppers will respond to personalised mobile coupons more favourably when the offers are from utilitarian product categories and are convenient to redeem. In contrast, it was anticipated that although hedonic shoppers are responsive to both hedonic and utilitarian product offers, they will have similar responses to hedonic product offers notwithstanding access convenience, whereas they will have more favourable responses to utilitarian product offers with high access convenience than utilitarian products with low access convenience. The results of experimental study 6 fully supported the above predictions for utilitarian shoppers and partially supported the anticipations for hedonic shoppers. The results of quasi-experimental study 8 fully supported the above predictions for both utilitarian and hedonic shoppers.

Specifically, in study 6 it was revealed that utilitarian shoppers are more willing to redeem a utilitarian product than a hedonic product, regardless of the access convenience of the hedonic product. It was also shown that although utilitarian shoppers prefer utilitarian products to hedonic ones, they place importance on the access convenience of utilitarian products, in that they are not interested in redeeming utilitarian offers with a low level of access convenience. In contrast, it was found that, on average, hedonic shoppers are equally likely to redeem a hedonic or a utilitarian product, irrespective of access convenience. Moreover, they are equally likely to redeem offers from both convenient- or inconvenient-to-access, regardless of the type of products. Further, it was demonstrated that regulatory fit mediates the effect of the interaction between shopping motivation and type of product as well as the effect of the interaction between shopping motivation and access convenience on intention to redeem.

In study 8, instead of manipulating the variable shopping motivation, the respondents' revealed shopping motivations on their last visit to a major shopping mall were measured. Also, instead of movie ticket and shampoo in study 6, magazine and deodorant were used as hedonic and utilitarian product offers, respectively. The results of study 8 showed that firstly, utilitarian shoppers are more responsive to utilitarian product offers than hedonic ones; secondly, when it comes to access convenience, utilitarian shoppers opt for utilitarian products offered by retailers that are convenient to access. By contrast, the results showed that firstly, hedonic shoppers are equally responsive to hedonic or utilitarian product offers; secondly, when it comes to access convenience, hedonic shoppers opt for redeeming hedonic products irrespective of access convenience of the merchant offering the mobile coupon. However, for utilitarian products, hedonic shoppers prefer utilitarian products with a high level of convenient to access. Moreover, in study 8 it was demonstrated that regulatory fit mediates the effect of the three-way interaction among shopping motivation, product type, and access convenience on intention to redeem.

On the whole, the findings provided by studies 1 to 4 and by studies 5 to 8 support the premise that when the type of product, temporal needs congruency, and access convenience are used as the bases to design personalised mobile coupon offers, utilitarian shoppers are more responsive to personalised offers that are more compatible with their shopping goals, whereas hedonic shoppers are responsive to compatible as well as incompatible offers. In other words, while utilitarian shoppers are prefer a narrower range of offers that are relevant

to their focal shopping motivation, hedonic shoppers are responsive to offers from a wider range of product categories including both relevant and irrelevant offers. These results are also consistent with the previous findings that comparing to prevention-focused consumers, promotion-focused consumers include more options in their consideration sets, because the former group adopts a vigilance strategy, whereas the latter group follows an eagerness strategy to achieve their goals (Pham & Chang, 2010).

9.4 Theoretical Contributions

The present study contributes to the research on personalisation as well as the regulatory focus literature. In this section, the theoretical contributions of the present research will be discussed in relation to the respective research questions.

RQ1: *Do different types of shopping motivation induce different types of regulatory focus?* Previous research has revealed an association between shopping orientation and regulatory focus as dispositional consumer traits (Arnold & Reynolds, 2009). In particular, it was found by the authors that while hedonic shopping orientation is associated with promotion focus, utilitarian shopping orientation is associated with prevention focus. In the same vein, it has been demonstrating by Novak and Hoffman (2009) that consumers with instrumental motivations and those with a prevention focus have more rational than experiential thinking styles; on the other hand, consumers with consummatory motivations and those with a promotion focus have more experiential than rational thinking styles. While these two findings imply an association between situational shopping motivation and situational regulatory focus, previously this association had not been empirically demonstrated. The present study bridged this gap by illustrating that situational hedonic motivation is positively related to situational promotion focus while situational utilitarian motivation is positively related to prevention focus.

RQ2: *Do certain marketing cues associated with mobile coupons induce certain types of regulatory focuses? Specifically, do the type of product offered and the congruency of the offer with consumers' temporal needs, prime certain types of regulatory focus?* Research on consumers' responses to promotional offers has demonstrated that each of certain promotional cues such as the expiry date of a promotional offer, the familiarity of the promoted brand, and the framing of a promotion's message, primes a different type of regulatory focus

(Ramanathan & Dhar, 2010). In the present research, it was shown that each of the other marketing cues conveyed by a mobile coupon, namely, the type of product and the temporal needs addressed by the offer, also primes a specific type of regulatory focus. Previous research has also shown that certain promotion-related emotions, such as cheerfulness and excitement, are evoked when people trade off the functional attributes of a certain product for its hedonic attributes (Chitturi *et al.*, 2007); or when the product offer is designed in such a way that the product's hedonic features outweigh its functional ones (Chitturi *et al.*, 2008); on the other hand, certain prevention-related emotions such as security and confidence, are evoked when people trade off hedonic attributes of a certain product for its functional attributes (Chitturi *et al.*, 2007); or when the functional features are superior to the hedonic ones used in the design of the product (Chitturi *et al.*, 2008). In contrast to these previous studies, the present study focused on the hedonic and utilitarian nature of purchasing product offers as a whole, rather than focusing on the superiority of a product in one aspect, such as in terms of the way the product offer has been framed or how the product has been designed. For example, although a normal type of shampoo can be framed to underline either the hedonic (e.g., beauty or attractiveness of the hair) or the utilitarian (e.g., long-term effect or general hair hygiene) aspects, the main reason for purchasing a shampoo, as well as the act of purchasing this product, will remain more utilitarian than hedonic. However, it should be noted that some types of products can be both hedonic and utilitarian in nature depending on the context in which they are consumed. For instance, massage services can be regarded as hedonic when used for relaxation but utilitarian when used as a medical treatment. Similarly, the act of purchasing a massage service can be either hedonic or utilitarian depending on the reason for using it.

RQ3: *Does the spatial distance of a retailer wherein a mobile coupon is to be redeemed induce a certain type of construal level?* As demonstrated by Fujita and colleagues (Fujita *et al.*, 2006), while a spatially distant activity (e.g., helping a friend move into a new place located 3000 miles away) activates a high-level abstract construal level, a spatially near activity (e.g., helping a friend move into a new place located 3 miles away) activates a low-level concrete construal level. However, to the best of the researcher's knowledge, the effect of spatial distance in terms of access convenience in a shopping mall context had not been shown in the previous literature. In the present thesis, the results of studies 5 and 7 showed that thinking of redeeming a mobile coupon in a convenient-to-access store activates a

concrete level of construal; whereas thinking of redeeming a mobile coupon in an inconvenient-to-access store activates an abstract level of construal.

RQ4: *Do consumers with different shopping motivations respond to compatible and incompatible personalised mobile coupons in different ways?* Previous research accentuates the importance of making products relevant to consumers when personalising an offer by demonstrating that presenting the consumers with contents that are relevant to their specific processing goals (i.e., selecting a specific type of product or browsing for a certain type of product in a specified product category) results in a better recall performance than presenting them with irrelevant contents (Tam & Ho, 2006). However, the literature has not examined the effects of offering relevant or irrelevant products to consumers who have only non-specific shopping goals (e.g., browsing around among various product categories). Although a non-specific shopping goal is not the same as a hedonic shopping goal, it stands to reason that, by definition, in comparison to utilitarian shoppers, hedonic shoppers may have less specific shopping goals. Therefore, assuming a similarity between having a hedonic shopping motivation and having less specific shopping goals, and also between the concepts of relevance and compatibility, the present thesis not only showed that hedonic shoppers respond positively to compatible as well as to incompatible personalised offers, but also suggests that, more widely, consumers with less specific shopping goals respond similarly positively to compatible as well as to incompatible personalised offers.

Research on personalisation has also illustrated that consumers will have negative reactions to personalised offers with high levels of distinctiveness (i.e., using personal information in the message that exclusively addresses the recipient) (White *et al.*, 2008) unless the use of distinctive information is justified in the message or the recipients perceive that the benefits of receiving the personalised offer outweigh the costs of receiving an inappropriate personal message. Similarly, Barone and Roy (2010) found that, apart from the relevance or irrelevance of the personalised offers, the effectiveness of promotional messages also depends on the way consumers' characteristics, demographics, or purchase histories are used to design the offers. Specifically, the authors showed that consumers evaluate exclusive offers (i.e., offers available only to them and not to others) more favourably than inclusive ones. Building a correspondence between the concepts of distinctiveness and exclusivity in the two above-mentioned studies, it can be argued that they are similar in spirit to the concept of

compatibility in the present thesis. As such, this thesis showed that consumers' responses to personalised mobile coupons depend not only on the compatibility between the type of regulatory focus primed by the mobile coupons' cues and that primed by consumers' shopping motivations, but also on consumers' shopping motivation itself as a moderating variable. Specifically, this thesis indicated that while compatible personalised offers are accepted by both groups of hedonic and utilitarian shoppers, incompatible offers are appreciated by only hedonic shoppers.

RQ4.1: *how do consumers with hedonic or utilitarian shopping motivations respond to mobile coupons offering hedonic or utilitarian products?* The findings provided by the present thesis extend the results of the studies conducted by Chernev (2004a) as well as by Chitturi and colleagues (2007). Specifically, drawing on regulatory fit theory (Aaker & Lee, 2006; Avnet & Higgins, 2006), Chernev showed that the compatibility between hedonic or utilitarian attributes highlighted in the framing of a product and consumers' regulatory-orientated goals enhances the consumers' evaluations of the offered product; that is, while prevention-focused consumers attach more weight to products superior in prevention-related attributes, promotion-focused people assign more weight to products superior in promotion-related attributes (Chernev, 2004a). Relatedly, Chitturi and colleagues demonstrated that consumers' regulatory focuses moderate the effect of trade-offs between functional and hedonic product attributes on the emotions evoked by the trade-offs. Specifically, the authors found that trading off utilitarian attributes for hedonic ones induces the promotion-related emotions of excitement and cheerfulness, whereas trading off hedonic attributes for utilitarian ones induces the prevention-related emotions of security and confidence. They further found that while the former effect is stronger for promotion-focused than prevention-focused people, the latter effect is more intense for prevention-focused than promotion-focused individuals (Chitturi *et al.*, 2007). This thesis was primarily concerned with the regulatory focus activated by the shopping motivations that consumers bring to the shopping environment, not the regulatory focus activated in response to marketing communications or originating from personality traits. As such, this thesis demonstrated that the compatibility between the type of regulatory focus primed by product offers (as part of a mobile coupon's cue) and the regulatory focus activated by the consumer's shopping motivation leads to a higher level of intention to redeem the offers. Further, it was revealed that the effect of this compatibility on intentions to redeem is different between hedonic and utilitarian shoppers; in other words,

consumers' shopping motivations moderate the effect of the compatibility or incompatible offers on consumers' intentions to redeem.

RQ4.2: *how do consumers with hedonic or utilitarian shopping motivations respond to mobile coupons offering products congruent with their current or future needs?* Evidence reports an association between regulatory focus and the temporal distance of goals, in that while a prevention focus is compatible with a proximal temporal perspective, a promotion focus is compatible with a distal temporal perspective (Pennington & Roese, 2003). In a similar sense, it has been found that the compatibility between the regulatory focus primed by the expiry date restrictions on a coupon and consumers' regulatory focus results in a larger shopping basket size. For example, a coupon with a temporally proximate expiry date primes a prevention focus and is purchased by prevention-focused more than promotion-focused people; whereas, a coupon with a temporally distant expiry date primes a promotion focus and is redeemed by promotion-focused more than prevention-focused individuals (Ramanathan & Dhar, 2010). The present thesis extended these findings by illustrating that the compatibility between the regulatory focus primed by the temporal needs congruency (i.e., the temporal need for a product offer) and the regulatory focus primed by consumers' shopping motivations results in greater perceptions of regulatory fit in and also more intentions to redeem personalised offers. However, this association was found to be more discernible for utilitarian shoppers than for hedonic shoppers.

Research has also revealed an association between construal level and regulatory focus (Lee *et al.*, 2010; White *et al.*, 2011). For example, Lee and colleague (2010) demonstrated that while promotion-focused people construe product information at a high level, prevention-focused people construe product information at a low level. The authors further showed that presenting promotion-focused people with product offers framed at a high construal level, or presenting prevention-focused people with product information framed at a low construal level, results in higher perceptions of regulatory fit. In the same vein, White and colleague (2011) demonstrated that framing messages as a loss for consumers with concrete mind-sets, or framing messages as a gain for consumers with abstract mind-sets, leads to higher behavioural intentions and also actual behaviours. In this sense, the present thesis found that the compatibility between the construal level activated by access convenience (as one of the cues in a mobile coupon offer) and the regulatory focus prompted by consumers' shopping

motivation leads to the perception of regulatory fit and enhanced intentions to redeem the mobile coupon offers.

RQ4.3: *how do consumers with hedonic or utilitarian shopping motivations respond to mobile coupons offering products with high or low levels of access convenience?* Bell and colleagues (1998) divided the costs of shopping into fixed and variable costs. As explained by the authors, fixed costs depend on the cost of travelling between a household and a store as well as on the household's loyalty towards each store. Variable costs depend on a shopping list on each trip and include the household's expected expenditure at a certain store. The authors showed that stores with locations farther away from households incur higher fixed shopping costs. More importantly, they found that although the impact of variable costs is significant, it is small in comparison with that of fixed costs. Similarly, in the context of electronic coupons, Chiou-Wei and Inman (2008) found that there is a negative relationship between the distance of redemption location and redemption rate of coupons. Relatedly, Huang and Oppewal (2006) showed that a longer travel time from a household to a physical store will cause consumers to perceive a lower level of convenience in traditional grocery shopping than in on-line grocery shopping, leading the consumers to prefer on-line shopping to in-store shopping. Likewise, Pan and Zinkhan (2006) revealed a positive correlation between convenience of location and store choice.

Although these studies confirm that consumers generally prefer a convenient location over an inconvenient one, none of them incorporates the moderating role of consumers' shopping motivations nor its interaction with the type of product offered to consumers. In this thesis, and consistent with the evidence reported above, it was shown that, on average, all respondents place importance on convenience of access to a certain retailer in terms of the distance and the time involved in redeeming a mobile coupon. However, it was found that when it comes to the interaction between consumers' shopping motivation and the type of product offered, hedonic and utilitarian shoppers will have different responses. Specifically, unlike the approach adopted by Bell and colleagues (1998), in the current study location convenience was considered as a type of perceived cost that varies depending on consumers' shopping motivation. In particular, it was illustrated that utilitarian shoppers attach more weight to high access convenience even when the type of product offered is relevant to their

shopping motivation; whereas, hedonic shoppers assign weight to both convenient and inconvenient offers, notwithstanding the type of product.

RQ5: *What process underlies shoppers' responses to mobile coupons?* The extant literature suggests that the compatibility between the regulatory focus activated by marketing cues and consumers' regulatory focus enhances consumers' positive reactions to product offers (Ramanathan & Dhar, 2010; Zhao & Pechmann, 2007). Also, the literature on regulatory fit reports that the match between construal level activated by a product offer and consumers' regulatory focus results in the perception of regulatory fit (Lee *et al.*, 2010; White *et al.*, 2011). Further, research has shown that the perception of regulatory fit leads to more positive attitudes toward a product offer (Lee & Aaker, 2004; Wan *et al.*, 2009), more willingness to pay for the offered product (Avnet & Higgins, 2006; Higgins *et al.*, 2003), higher purchase intentions (Labroo & Lee, 2006) as well as more actual behaviours (White *et al.*, 2011). The results of the present thesis documented differences between hedonic and utilitarian shoppers in their redemption behaviours towards personalised mobile coupons with differing degrees of compatibility. These differences were explained by establishing the mediating role of regulatory fit (Aaker & Lee, 2006; Avnet & Higgins, 2006) in the effect of the marketing cues conveyed by a mobile coupon (i.e., type of product offered, congruency of the offer with temporal needs, or access convenience) on consumers' intention to redeem. Specifically, it was demonstrated that when receiving a personalized mobile coupon offer, depending on the compatibility between the regulatory focus primed by the offer and the regulatory focus primed by their shopping motivation, hedonic and utilitarian shoppers perceive different levels of regulatory fit in the mobile coupon's cues, resulting in differing redemption intentions.

9.5 Managerial Implications

In this thesis, a conceptual model of mobile coupon personalisation was theoretically developed and empirically tested. In this model, it is proposed that four factors be taken into consideration when designing personalised mobile coupon offers. Three factors relate to the marketing cues conveyed by a mobile coupon and include: the type of product offered by a mobile coupon, the congruency of the offer with consumers' temporal needs, and the convenience of redeeming the offer in terms of access convenience of the retailer's store. The fourth factor is related to one of the consumers' situational states, namely, consumers'

shopping motivation on a certain shopping occasion. This model posits that the effectiveness of personalised mobile coupon offers is a function of the compatibility between marketing cues and consumers' shopping motivation. It further postulates that consumers with different shopping motivations have different evaluations of compatible and incompatible personalised offers; that is, consumers' shopping motivation moderates the effect of mobile coupon's cues on the consumers' intentions to redeem the offer.

As mentioned previously, regarding personalisation, some researchers (Arora *et al.*, 2008; Nunes & Kambil, 2001; Salo & Tahtinen, 2005) have emphasized that marketers need to decide when and for what groups of consumers they should personalise their offers. The empirical studies conducted in the present thesis support the moderating role of consumers' shopping motivation in the effectiveness of personalised mobile coupons. Specifically, the findings provided by this thesis suggest that consumers' shopping motivations can be used by marketers as a criterion for determining which groups of consumers place more or less weight on applying personalisation practices in mobile coupon offers. This is because hedonic shoppers were shown to be equally responsive to both compatible and incompatible offers, while utilitarian shoppers assigned more weight to compatible offers than to incompatible ones. Therefore, marketing managers can adopt one or a combination of the following strategies to target consumers on the basis of their shopping motivations: They can identify the occasions on which consumers may have more hedonic than utilitarian shopping motivations. For instance, on the basis of certain days of the week (weekends more than weekdays), retailing type (music stores more than computer accessories) (Kaltcheva & Weitz, 2006), or the retailing environment (recreational websites more than task-oriented search engines) (Childers *et al.*, 2001). Another way is to create shopping environments that include more recreational stimuli or to frame promotional messages that are more promotion focus evoking. Then, the retailers can offer to hedonic shoppers products from more diverse categories, namely, both hedonic and utilitarian products, but offer to utilitarian shoppers more deliberately designed mobile coupons offering only utilitarian products. This strategy is also consistent with what has been suggested by Bell et al. (2011), that is, retailers should shift from competing for customers to competing for shopping goals.

Another factor identified by this research for personalizing mobile coupons is to use consumers' purchase profiles to identify their current or future needs regarding an offer. As suggested by Kollat and Willet (1967, p. 30) and highlighted by Bell et al.(2011), by

investigating consumers' past purchase frequencies, retailers can present shoppers with marketing stimuli that remind them of their present or future needs. For example, suppose a customer's purchase history shows that s/he buys a specific product every four weeks. If this customer is offered the same product five weeks after the last purchase occasion, this may prompt a current need (i.e., s/he may think they need to buy that product now), whereas offering that product one week after the last purchase occasion may prompt a future need (i.e., s/he may think they need to buy that product sometime in the future). Given this, retailers can use consumers' purchase profiles and send either hedonic or utilitarian product offers congruent with current or future needs to hedonic shoppers, or send utilitarian product offers congruent with current needs to utilitarian shoppers. This strategy is in line with the findings reported by Inman and colleagues (2009) that unplanned purchases are more likely for hedonic product categories and also for products purchased over longer time intervals. Therefore, considering that hedonic shoppers are more likely to adopt promotion-based eagerness strategies, they are expected to make more unplanned purchases from hedonic products or products purchased long time ago.

Last, but not least, the present thesis showed that access convenience can be used by retailers as a basis for designing personalised offers in a mobile coupon service context. For example, consider a typical business model of a mobile coupon service involving four parties: a mobile carrier, who locates shoppers and sends them offers; a mobile service provider, who designs the content of personalised offers and pays the mobile carrier for delivering the offers to the specified consumers at the specified time and place; a merchant, who pays the mobile service provider for advertising its products; and a customer (Gopal & Tripathi, 2006). In this business model, the mobile service provider, and consequently the merchant, are being charged by the mobile carrier on the basis of the degree of personalisation they decide to apply; that is, the mobile service provider is charged on the basis of the accuracy of time and place the offers are to be delivered as well as the characteristics of the customers who receive the offers (Yuan & Zhang, 2003). According to the findings provided by the present thesis, apart from the type of product offered, firms need to be more accurate about the point at which their offers are delivered to utilitarian shoppers than to hedonic shoppers. The rationale for this is that hedonic shoppers have been shown to appreciate both hedonic and utilitarian product offers regardless of the convenience of access to the retailer where they can redeem the offer; conversely, utilitarian shoppers appear to be more prudent when they have to

deviate from their intended route to redeem an offer. Hence, merchants will incur lower costs when they personalise their offers for hedonic shoppers, as compared to utilitarian shoppers, while maintaining the attitudes of both shopper groups towards the personalised offers at a high, positive level.

Such strategies also have to do with customer welfare. In this regard, it has been shown that the compatibility between the informational cues of a retail environment and consumers' shopping goals can enhance the consumers' perceptions of experiential value by making their shopping trips more efficient or more entertaining (Mathwick *et al.*, 2002). It has also been shown that the irritation caused by irrelevant mobile advertisements has a negative effect on consumers' evaluations of the ads (Xu *et al.*, 2009). Therefore, it is conceivable that not only personalised mobile coupons that are compatible with consumers' shopping motivations will not be perceived as irritating, as opposed to traditional SMS messages (Tsang *et al.*, 2004), but that they also will enhance consumers' shopping experience, by making their shopping more efficient as well as, or more, experiential. This argument is also in line with the shopping efficiency perspective suggested by Chandon and colleagues (2000). According to this perspective, consumers use coupons as an efficient means to help them reduce their search costs (e.g., by helping them find the product they need or by reminding them of the product they want) or decision costs (e.g., by providing them with a fast and easy decision heuristics for purchase decisions). For instance, a mobile coupon offering a product that is compatible with consumers' focal shopping goals can enhance the efficiency of their shopping by reminding them of their need for that product and showing them the location where they can redeem the product.

9.6 Research Limitations and Further Research Suggestions

The research presented in this thesis should be interpreted with consideration given to its limitations, especially since these limitations afford directions for further future enquiries. One limitation of this research relates to the use of hypothetical scenarios. Stated intentions and imagined perceptions may not correspond with consumers' behaviour in live shopping environments. Nevertheless, scenario-based experiments allow the researcher to manipulate the independent variables in a way that matches the conceptual definitions of the variables, thereby enhancing the internal validity of the experiment, which is a prerequisite for its external validity (Campbell, 1957). Moreover, they allow retaining levels of experimental

control that cannot be achieved by other means. The present thesis included elements of quasi experimental designs by including two studies in which the scenarios referred to respondents' reported real life shopping motives on a recent shopping trip. Future research could extend this approach to field settings to observe naturally occurring variations in the congruency of offers with consumers' temporal needs. Intercept surveys could be conducted to investigate shoppers motivations and task perceptions during their shopping trips. Alternatively, using customers' purchase histories, product offers can be presented that are temporally far from or close to the day of conducting the research, expecting that the former will induce current needs and the latter will induce future needs. However, a point that should be noted is that, the use of customers' purchase profiles as a basis for personalisation has its own limitations. In particular, while it may be beneficial to consumers, it may not be beneficial to retailers. For example, a retailer may not regard it as necessary to offer discounted products to consumers who purchase that product regularly, when the retailer can still sell that product without discount; on the other hand, consumers will find it beneficial to receive an offer with a discount, especially a product that they purchase regularly. Therefore, using consumers' purchase histories as a basis for personalising offers may be more beneficial when implemented for new products, or for customers whose purchase history shows that they have a high rate of brand switching.

The second limitation of the studies conducted in this thesis has to do with the variable access convenience. In particular, this variable was manipulated on the basis of the distance between the point of delivering a mobile coupon and the retailer's location where the offer can be redeemed. However, other factors such as the consumers' familiarity with a shopping mall may affect consumers' perceptions of access convenience. This factor was not taken into account in the design of the studies conducted here. In addition, consumers may have a different perception of convenience and consequently different redemption behaviours when they are shopping in a one-storey shopping mall from when they are shopping in a multi-storey shopping centre. Another relevant line of enquiry is the role of the spatial layout of stores in a shopping mall. For instance, suppose a consumer with a hedonic shopping motivation is intending to play bowling. When offering this consumer a deodorant, the redemption behaviour of this consumer may be different depending on whether the location of the retailer offering deodorant is on the way to, or further than, the bowling centre.

In the present thesis, consumers who have multipurpose shopping goals on a certain shopping trip or those who are at different stages of their shopping trips were not taken into consideration (Arentze, Oppewal, & Timmermans, 2005). Therefore, future research could consider the effect on redemption behaviour of offering a hedonic or utilitarian product to these consumers when they are pursuing a specific shopping goal (among the multiple goals) or are at different stages of their shopping trip. It may also be fruitful to investigate how offering multiple hedonic or utilitarian products to consumers with multipurpose shopping trips can cause the consumers to place more emphasis on one goal or switch between two goals.

In the present research, the perception of regulatory fit was proposed as the underlying mechanism explaining consumers' intentions to redeem compatible or incompatible personalised mobile coupons. However, other factors may explain these differences. For example, a conceptually similar but in fact different concept is regulatory relevance. It occurs when a decision outcome is perceived to satisfy the needs or concerns that are compatible with an individual's regulatory focuses; that is, people with different regulatory orientations attach different weights to the outcomes of choosing the same alternative as a function of the relevance of that option to their regulatory focuses (Aaker & Lee, 2001; Bettman & Sujan, 1987). As highlighted by Avnet and Higgins (2006), regulatory relevance is different from regulatory fit; however, it can be a source of regulatory fit. Hence, it would be interesting to compare whether regulatory relevance or regulatory fit better explain hedonic and utilitarian shoppers' responses to personalised coupons in a mobile service context.

Finally, in this research, only three factors (i.e., type of product, temporal needs congruency, and access convenience) were identified as key bases for personalising mobile coupon offers. Hence, an investigation into the interplay between other bases for personalising mobile coupons, such as the face value of the coupons, their expiry date, or the brand image of the offered product, and the factors proposed in this research, can be another fruitful line of enquiry. Besides these factors, which act as independent variables, considering other dependent variables such as satisfaction with the mobile coupon service, or the intention to re-visit the same shopping centre or to re-opt-in on the next visit to the shopping centre may provide beneficial insights for mobile service providers. For instance, a mobile coupon offering a hedonic product to a utilitarian shopper may have two different effects: it may

either encourage the shopper to re-visit the shopping centre when s/he has a hedonic shopping motivation, or it may be perceived as irritating by the shopper, causing him/her to delete the message from his/her mobile phone right away.

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Appendices

Appendix 1: Research questionnaire for study 1

Explanatory Statement

Consumer Shopping and Mobile Services

This study is being undertaken by Saman Khajehzadeh with Professor Harmen Oppewal and Dr Dewi Tojib as his supervisors in the department of Marketing, Faculty of Business and Economics at Monash University towards a PhD degree. We are interested in how consumers shop and how receiving mobile s can enhance their shopping experience. Our study aims to help retailers and mobile service providers improve their offers by providing better values for consumers. Filling out this questionnaire will take about 10 minutes or so.

The results of this study will be written up for a PhD thesis, which is a research report of about 200 pages. No individual data will be shared with anyone. Information acquired in this study will not be disclosed in any other research studies or to outside parties. Data will be accessible only to the above-mentioned researchers. Data provided by participants will be stored for 5 years as prescribed by Monash University regulations. A summary of the aggregated results will be provided to participants if requested.

If you would like to speak with the researchers about any aspect of this study, please contact student researcher:

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If you have a complaint concerning the manner in which this research (number: 2009001875) is being conducted, please contact:

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Section A: General Questions

This study is about mobile coupons.
Coupons generally offer price savings on a specific product, are valid for a certain time period, and can be redeemed in specified retail stores.

1) In the last six months, have you redeemed any paper-based coupons (clipped from newspapers, magazines, brochures, sales receipts, etc.)?

   - Yes
   - No

2) In the last six months, have you redeemed any internet-based coupons (found on the web or that were sent to you by email)?

   - Yes
   - No

3) In the last six months, have you redeemed any SMS-based coupons (sent to you by SMS)?

   - Yes
   - No

Section B: Describing a typical mobile service

Specifically, this study is about a particular SMS coupon service.
This service involves sending SMSs containing discounted offers to consumers who visit participating shopping centres.
To use this service, consumers need to subscribe only once and subscription is free.
Users subscribe by sending a code via SMS to the mobile service company.
In turn, they receive a bar code sticker or tag to put on their key ring or mobile phone.
To receive SMS offers, users need to swipe (or scan) this bar code at self-service kiosks strategically located within the shopping centre, again free of charge.
This means users receive offers only when they are shopping and when they are willing to, so there is no possibility of spamming.
The offers can be redeemed instantly at the indicated retail store, or they can be stored in the user's mobile phone for use during a later visit to the centre.

1) Are you aware of such a mobile service to exist in any shopping centre?

   - Yes - Please specify the name of the shopping centre (s) …….
   - No [If ticked, question 2 will be skipped]

2) Are you subscribing to this type of service in any shopping centre?Yes, I am a subscriber in the following shopping centre (s) (please specify) …….
   - No

3) How useful would you regard such a mobile service?

Not useful at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very useful

4) How appealing would you regard such a mobile service?

Not appealing at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very appealing

Section C: Experimental Scenario [Randomised in a between-subjects full-factorial design]

You will now be presented with a hypothetical shopping scenario.
Please read through the scenario and try to imagine yourself in the described situation.
Take your time as keeping the details in mind throughout the survey is important.

Condition 1:
Shopping motivation: *Hedonic*
Type of product: *Hedonic*
Temporal needs congruency: *Current needs*

It is a weekend and you feel somewhat bored. It is pouring rain and you cannot do anything outdoors. You also do not find anything interesting on TV or the Internet. As you have not much else to do, you think of visiting a nearby shopping centre could be a good way to amuse yourself. So, you decide to go to the shopping centre ...

... Now you are at the shopping centre. Recently, you have subscribed to a mobile coupon service similar to the one described above. While you are browsing around, you decide to see whether there is any offer available for today. You swipe your mobile phone to receive an SMS coupon, and after a couple of seconds, you receive the following offer on your mobile phone:

- *Come to Movie Land and buy any of the latest new releases of movie DVDs with 30% price off (Valid: Four weeks).*

Suppose:
The latest new releases offered by Movie Land include all of your favourite types of movies.
It has been a while since you bought a movie DVD.

Condition 2:
Shopping motivation: *Hedoni*
Type of product: *Hedonic*
Temporal needs congruency: *Future needs*

[Manipulation of shopping motivation and product type: Same as condition 2]

You just bought a movie DVD yesterday.

Condition 3:
Shopping motivation: *Hedonic*
Type of product: *Utilitarian*
Temporal needs congruency: *Current needs*

[Manipulation of shopping motivation: Same as conditions 1 and 2]

- *Come to All Stuff and buy any type of detergent of your choice with 30% price off (Valid: four weeks).*

Suppose:
All Stuff stocks all of your favourite brands of detergent.
It has been a while since you bought some detergent.

Condition 4:
Shopping motivation: *Hedonic*
Type of product: *Utilitarian*
Temporal needs congruency: *Future needs*

[Manipulation of shopping motivation and product type: Same as condition 3]

You just bought some detergent yesterday.

Condition 5:
Shopping motivation: *Utilitarian*
Type of product: *Hedonic*
Temporal needs congruency: *Current needs*

It is a weekend and you are doing your weekly grocery shopping at a nearby shopping centre. All you intend to do is to complete your shopping tasks as soon as possible and go back home right away.

Recently, you have subscribed to a mobile coupon service similar to the one described earlier. You decide to see whether there is any relevant offer available for today. You swipe your mobile phone to receive an SMS coupon, and after a couple of seconds, you receive the following offer on your mobile phone:

- *Come to Movie Land and buy any of the latest new releases of movie DVDs with 30% price off (Valid: Four weeks).*

Suppose:
The latest new releases offered by Movie Land include all of your favourite types of movies.
It has been a while since you bought a movie DVD.

Condition 6:
Shopping motivation: *Utilitarian*
Type of product: *Hedonic*
Temporal needs congruency: *Future needs*

[Manipulation of shopping motivation and product type: Same as condition 5]

You just bought a movie DVD yesterday.

Condition 7:
Shopping motivation: *Utilitarian*
Type of product: *Utilitarian*
Temporal needs congruency: *Current needs*

[Manipulation of shopping motivation: Same as conditions 5 and 6]

- *Come to All Stuff and buy any type of detergent of your choice with 30% price off (Valid: four weeks).*

Suppose:
All Stuff stocks all of your favourite brands of detergent.
It has been a while since you bought some detergent.

Condition 8:
Shopping motivation: *Utilitarian*
Type of product: *Utilitarian*
Temporal needs congruency: *Future needs*

[Manipulation of shopping motivation and product type: Same as above conditions 7]

You just bought some detergent yesterday.

Section D: Dependent Variables

Regulatory focus primed by shopping motivation

Considering the purpose of my visit to the shopping centre, if I were on this shopping trip, I would mainly focus on:

1)	All the things I need to do to act sensibly	1	2	3	4	5	6	7	All the things I could do to enjoy myself
2)	Pursuing my oughts and duties	1	2	3	4	5	6	7	Pursuing my ideals and desires
3)	Pursuing the things that I need	1	2	3	4	5	6	7	Pursuing all the things that I want
4)	Avoiding making mistakes	1	2	3	4	5	6	7	Taking the full advantage of opportunities

Regulatory focus primed by type of product

Imagining myself purchasing a movie DVD (detergent) makes me think of:

1)	Something I ought to buy to fulfil my obligations and responsibilities	1	2	3	4	5	6	7	Something I aspire to buy for pleasure and happiness
2)	Pursuing my oughts and duties	1	2	3	4	5	6	7	Pursuing my ideals and desires
3)	Following my needs	1	2	3	4	5	6	7	Following my wants
4)	Assuring my safety	1	2	3	4	5	6	7	Having variety

Regulatory focus primed by temporal needs congruency

Imagining that "it has been a while since I bought a movie DVD (detergent)/I just bought a movie DVD (detergent) yesterday" makes me think of:

1)	Buying a movie DVD (detergent) now	1	2	3	4	5	6	7	Buying a movie DVD (detergent) in the future
2)	Not missing the opportunity to buy this movie DVD (detergent)	1	2	3	4	5	6	7	Making the most of the opportunity to buy this movie DVD (detergent)
3)	The least things I can have	1	2	3	4	5	6	7	The most things I can gain
4)	Avoiding a negative decision outcome	1	2	3	4	5	6	7	Gaining a positive decision outcome

Section E: Manipulation checks

Manipulation check for shopping motivation

Please indicate the degree to which you agree or disagree with the following statements.

According to the scenario, the main purpose of my visit to the shopping center is:

		Strongly disagree						Strongly agree
1)	To relieve my sense of boredom	1	2	3	4	5	6	7
2)	To feel better	1	2	3	4	5	6	7
3)	To amuse myself	1	2	3	4	5	6	7
4)	To purchase only the necessary items that I need in the least amount of time	1	2	3	4	5	6	7
5)	To get my shopping tasks done in the most efficient way	1	2	3	4	5	6	7
6)	To find what I need to buy and not to go to other shops	1	2	3	4	5	6	7

Manipulation check for type of product

How much do you agree or disagree with the following words about the product offered to you.

Purchasing a movie DVD (detergent) is:

	Strongly disagree						Strongly agree
1) Fun	1	2	3	4	5	6	7
2) Amusing	1	2	3	4	5	6	7
3) Enjoyable	1	2	3	4	5	6	7
4) Necessary	1	2	3	4	5	6	7
5) Functional	1	2	3	4	5	6	7
6) Practical	1	2	3	4	5	6	7

Manipulation check for temporal needs congruency

Please indicate the degree to which you agree or disagree with the following statements.

Considering that "it has been a while since I bought a movie DVD (detergent)/I just bought a movie DVD (detergent) yesterday" makes me think of:

1)	I may need to buy movie DVD (detergent) now	1	2	3	4	5	6	7	I may need to buy movie DVD (detergent) in the future
2)	This mobile coupon is offering me something that I may need now	1	2	3	4	5	6	7	This mobile coupon is offering me something that I may need in the future
3)	This offer suits what I may need in the current shopping situation	1	2	3	4	5	6	7	This offer suits what I may need in a future visit to the shopping center

Section H: Task checks

1) How realistic do you think is the scenario?

Not realistic at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very realistic

2) How difficult was it for you to imagine yourself in the described situation?

Very difficult | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Not difficult at all

3) How common or uncommon do you think this price discount is on the offer for this type of product?

Very uncommon | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very common

4) Given the four weeks expiry date, how much time do you think you would have to redeem the coupon?

Very little time | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A lot of time

5) What do you think the purpose of the study was? …….…

Section I: Demographics

1) What is your gender?

- Female
- Male

2) What is your age group?

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 and above

3) Which of the following best describes your highest completed level of education?

- High school diploma or equivalent
- Associate's degree or 2 years of college
- Bachelor's or some college degree
- Master's degree or higher
- PhD or equivalent
- Other (Please specify) …….

4) Which of the following represents your annual household income range before tax?

- Less than $15,000
- 15,000 to $24,999
- 25,000 to $34,999
- 35,000 to $49,999
- 50,000 to $74,999
- 75,000 to $99,999
- 100,000 to $119,999
- 120,000 to $179,999
- $180,000 or above
- I would rather not say

5) Which of the following best describes your current employment status?

- Full time work
- Part time work
- Unemployed/Searching work
- Student
- Retired
- Household duties/Home maker
- Self-employed
- Other (please specify) …….

6) Which of the following best describes your current life stage?

- Living at home with parents
- Single adult living alone
- Single adult living with others
- Couple living together with no children
- Couple living with child/children
- Single parent living with child/children

7) Please add any comments that you may have regarding this survey? …….

Thank you very much for participating in this survey.

Appendix 2: Research questionnaire for study 2

Explanatory Statement
Same as study 1 (the estimated survey completion time was specified to be about 15 minutes)
Section A: General Questions
Same as study 1
Section B: Describing a typical mobile service
Same as study 1
Section C: Experimental Scenario
Same as study 1
Section D: Dependent Variables
Intention to redeem
• How likely would you be to go to Movie Land/All Stuff and Redeem this offer? Very unlikely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very likely

Regulatory Fit

Please indicate the degree to which you agree or disagree with the following statements.

Considering the scenario as described above, I would say this mobile coupon offer:

	Strongly disagree						Strongly agree
1) Is in harmony with my shopping purpose	1	2	3	4	5	6	7
2) Helps me achieve my intended shopping outcome	1	2	3	4	5	6	7
3) Makes it easy for me to accomplish what I am in the shopping centre for	1	2	3	4	5	6	7
4) Concerns what I need on this shopping trip	1	2	3	4	5	6	7
5) Increases the enjoyment of my shopping	1	2	3	4	5	6	7
6) Makes me feel right about redeeming the offer	1	2	3	4	5	6	7
7) Is just right for me	1	2	3	4	5	6	7
8) Keeps me engaged in my main shopping motivation	1	2	3	4	5	6	7

Section E: Manipulation checks

Same as study 1

Section F: Regulatory focus primed by shopping motivation

Same as study 1

Section G: Coupon proneness

Please indicate the degree of your agreement with the following statements about coupons?

	Strongly disagree						Strongly agree
1) Redeeming coupons makes me feel good	1	2	3	4	5	6	7
2) When I use coupons, I feel that I am getting a good deal	1	2	3	4	5	6	7
3) I enjoy using coupons, regardless of the amount I save by doing so	1	2	3	4	5	6	7
4) Beyond the money I save, redeeming coupons gives me a sense of joy	1	2	3	4	5	6	7

Section H: Task checks

Same as study 1

Section I: Demographics

Same as study 1

Appendix 3: Research questionnaire for study 3

Explanatory Statement
Same as studies 1 and 2
Section A: General Questions
Same as studies 1 and 2
Section B: Describing a typical mobile service
Same as studies 1 and 2
Section C: Experimental Scenario [Randomised in a between-subjects full-factorial design]
You will now be presented with a hypothetical shopping scenario. Please read through the scenario and try to imagine yourself in the described situation. Take your time as keeping the details in mind throughout the survey is important.
Condition 1: Shopping motivation: *Hedonic* Type of product: *Hedonic* Temporal needs congruency: *Current needs*
[Manipulation of shopping motivation: Same as studies 1 and 2] • *Come to Ciny Wood and buy a ticket for any of our now showing movies with 30% price off (Valid: Four weeks).* Suppose: The movies Cine Wood is showing now include all of your favourite types of movies, and It has been a while since you watched a movie.
Condition 2: Shopping motivation: *Hedonic* Type of product: *Hedonic* Temporal needs congruency: *Future needs*
[Manipulation of shopping motivation and product type: Same as condition 1] You just watched a movie yesterday.

Condition 3:
Shopping motivation: *Hedonic*
Type of product: *Utilitarian*
Temporal needs congruency: *Current needs*

[Manipulation of shopping motivation: Same as conditions 1 and 2]

- *Come to All Stuff and buy any type of shampoo with 30% price off (Valid: four weeks).*

Suppose:
All Stuff stocks all of your favourite brands of shampoo.
It has been a while since you bought a shampoo.

Condition 4:
Shopping motivation: *Hedonic*
Type of product: *Utilitarian*
Temporal needs congruency: *Future needs*

[Manipulation of shopping motivation and product type: Same as condition 3]

You just bought a shampoo yesterday.

Condition 5:
Shopping motivation: *Utilitarian*
Type of product: *Hedonic*
Temporal needs congruency: *Current needs*

[Manipulation of shopping motivation: Same as studies 1 and 2]

- *Come to Ciny Wood and buy a ticket for any of our now showing movies with 30% price off (Valid: Four weeks).*

Suppose:
The movies Cine Wood is showing now include all of your favourite types of movies.
It has been a while since you watched a movie.

Condition 6:
Shopping motivation: *Utilitarian*
Type of product: *Hedonic*
Temporal needs congruency: *Future needs*

[Manipulation of shopping motivation and product type: Same as condition 5]

You just watched a movie yesterday.

Condition 7:
Shopping motivation: *Utilitarian*
Type of product: *Utilitarian*
Temporal needs congruency: *Current needs*

[Manipulation of shopping motivation: Same as conditions 5 and 6]

- *Come to All Stuff and buy any type of shampoo with 30% price off (Valid: four weeks).*

Suppose:
All Stuff stocks all of your favourite brands of shampoo.
It has been a while since you bought a shampoo.

Condition 8:
Shopping motivation: *Utilitarian*
Type of product: *Utilitarian*
Temporal needs congruency: *Future needs*

[Manipulation of shopping motivation and product type: Same as conditions 5, 6 and 7]

You just bought a shampoo yesterday.

Section D: Dependent Variables

Regulatory focus primed by shopping motivation

Same as study 1

Regulatory focus primed by type of product

Imagining myself purchasing a movie ticket (shampoo) makes me think of:

[Measures: Same as study 1]

Regulatory focus primed by temporal needs congruency								
Imagining that "it has been a while since I watched a movie (bought a shampoo)/I just watched a movie (bought a shampoo) yesterday" makes me think of:								
1) Watching a movie (buying a shampoo) now	1	2	3	4	5	6	7	Watching a movie (buying a shampoo) in the future
2) Not missing the opportunity to buy this movie ticket (shampoo)	1	2	3	4	5	6	7	Making the most of the opportunity to buy this movie ticket (shampoo)
3) The least things I can have	1	2	3	4	5	6	7	The most things I can gain
4) Avoiding a negative decision outcome	1	2	3	4	5	6	7	Gaining a positive decision outcome
Section E: Manipulation checks								
Manipulation check for shopping motivation								
Same as study 1								
Manipulation check for type of product								
How much do you agree or disagree with the following words about the product offered to you. Purchasing a movie ticket (shampoo) is: [Measures: Same as study 1]								

Manipulation check for temporal needs congruency								
Please indicate the degree to which you agree or disagree with the following statements. Considering that "it has been a while since I watched a movie (shampoo)/I just watched a movie (shampoo) yesterday" makes me think of:								
1) I may need to watch a movie (buy a shampoo) now	1	2	3	4	5	6	7	I may need to watch a movie (buy a shampoo) in the future
2) This mobile coupon is offering me something that I may need now	1	2	3	4	5	6	7	This mobile coupon is offering me something that I may need in the future
3) This offer suits what I may need in the current shopping situation	1	2	3	4	5	6	7	This offer suits what I may need in a future visit to the shopping center
Section H: Task checks								
Same as studies 1 and 2								
Section I: Demographics								
Same as studies 1 and 2								

Appendix 4: Research questionnaire for study 4

Explanatory Statement
Same as study 2
Section A: General Questions
Same as studies 1 to 3
Section B: Describing a typical mobile service
Same as studies 1 to 3
Section C: Experimental Scenario
Same as study 3
Section D: Dependent Variables
Intention to redeem
• How likely would you be to go to Ciny Wood/All Stuff and Redeem this offer during your current visit? [Measure: Same as study 1]
Regulatory Fit
Same as study 2
Section E: Manipulation checks
Same as study 3
Section F: Regulatory focus primed by shopping motivation
Same as studies 1 to 3

Section G: Coupon proneness
Same as study 2
Section H: Task checks
Same as studies 1 to 3
Section I: Demographics
Same as studies 1 to 3

Appendix 5: Research questionnaire for study 5

Explanatory Statement
Same as studies 1 to 4 (the estimated survey completion time was specified to be about 15 minutes)
Section A: General Questions
Same as studies 1 to 4
Section B: Describing a typical mobile service
Same as studies 1 to 4
Section C: Experimental Scenario [Randomised in a between-subjects full-factorial design]
You will now be presented with a hypothetical shopping scenario. Please read through the scenario and try to imagine yourself in the described situation. Take your time as keeping the details in mind throughout the survey is important.
Condition 1: Shopping motivation: *Hedonic* Type of product: *Hedonic* Access convenience: *High/Convenient*
[Manipulation of shopping motivation: Same as studies 1 to 4] • *Come to Ciny Wood and buy a ticket for any of our now showing movies with 30% price off (Next to main entrance; Valid: four weeks).* Ciny Wood is a successful cinema chain that has recently started its business in your area and the movies it is showing now include your favorite choices. Also suppose it has been a while since you watched a movie. Suppose Ciny Wood is just one store from your current location (it will take you less than a minute to get there).

Condition 2:
Shopping motivation: *Hedonic*
Type of product: *Hedonic*
Access convenience: *Low/Inconvenient*

[Manipulation of shopping motivation and product type: Same as condition 1]

Suppose Ciny Wood is located at the other end of the mall (it will take you about 10 minutes to get there)

Condition 3:
Shopping motivation: *Hedonic*
Type of product: *Utilitarian*
Access convenience: *High/Convenient*

[Manipulation of shopping motivation: Same as conditions 1 and 2]

- *Come to My Pharmacy and buy any shampoo of your choice with 30% price off (Next to main entrance; Valid: four weeks).*

My Pharmacy is a successful retailing chain that has recently started its business in your area and it stocks all your favorite brands of shampoo. Also suppose it has been a while since you purchased shampoo

Suppose My Pharmacy is just one store from your current location (it will take you less than a minute to get there).

Condition 4:
Shopping motivation: *Hedonic*
Type of product: *Utilitarian*
Access convenience: *Low/Inconvenient*

[Manipulation of shopping motivation and product type: Same as condition 3]

Suppose My Pharmacy is located at the other end of the mall (it will take you about 10 minutes to get there).

Condition 5:
Shopping motivation: *Utilitarian*
Type of product: *Hedonic*
Access convenience: *High/Convenient*

[Manipulation of shopping motivation: Same as studies 1 to 4]

- *Come to Ciny Wood and buy a ticket for any of our now showing movies with 30% price off (Next to main entrance; Valid: four weeks).*

Ciny Wood is a successful cinema chain that has recently started its business in your area and the movies it is showing now include your favorite choices. Also suppose it has been a while since you watched a movie.

Suppose Ciny Wood is just one store from your current location (it will take you less than a minute to get there).

Condition 6:
Shopping motivation: *Utilitarian*
Type of product: *Hedonic*
Access convenience: *Low/Inconvenient*

[Manipulation of shopping motivation and product type: Same as condition 5]

Suppose Ciny Wood is located at the other end of the mall (it will take you about 10 minutes to get there)

Condition 7:
Shopping motivation: *Utilitarian*
Type of product: *Utilitarian*
Access convenience: *High/Convenient*

[Manipulation of shopping motivation: Same as conditions 5 and 6]

- *Come to My Pharmacy and buy any shampoo of your choice with 30% price off (Next to main entrance; Valid: four weeks).*

My Pharmacy is a successful retailing chain that has recently started its business in your area and it stocks all your favorite brands of shampoo. Also suppose it has been a while since you purchased shampoo.

Suppose My Pharmacy is just one store from your current location (it will take you less than a minute to get there).

Condition 8:
Shopping motivation: *Utilitarian*
Type of product: *Utilitarian*
Access convenience: *Low/Inconvenient*

[Manipulation of shopping motivation and product type: Same as condition 7]

Suppose My Pharmacy is located at the other end of the mall (it will take you about 10 minutes to get there).

Section D: Dependent Variables

Construal Level Activated by Access Convenience

We are now interested in how you would describe various general activities if you were in the shopping mall at the indicated distance from the Ciny Wood/My Pharmacy.
For the following questions, each time choose the option that best describes the listed general activity whilst imagining your distance from Ciny Wood/My Pharmacy.

1) Making a list	○ Writing things down	○ Getting organized
2) Reading	○ Following lines of print	○ Gaining knowledge
3) Washing clothes	○ Putting clothes into the machine	○ Removing odours from clothes
4) Measuring a room for carpeting	○ Using a yardstick	○ Getting ready to remodel
5) Cleaning the house	○ Vacuuming the floor	○ Showing one's cleanliness
6) Painting a room	○ Applying brush strokes	○ Making the room look fresh
7) Paying the rent	○ Writing a check	○ Maintaining a place to leave
8) Caring for houseplants	○ Watering plants	○ Making the room look nice
9) Locking a door	○ Putting a key in the lock	○ Securing the house
10) Voting	○ Marking a ballot	○ Influencing the election
11) Filling out a personality test	○ Answering questions	○ Revealing what you are like
12) Tooth brushing	○ Revealing what you are like	○ Preventing tooth decay
13) Taking a test	○ Answering questions	○ Showing one's knowledge
14) Greeting someone	○ Saying hello	○ Showing friendliness
15) Resisting temptation	○ Saying "no"	○ Showing moral courage
16) Eating	○ Chewing and swallowing	○ Getting nutrition
17) Travelling by car	○ Following a map	○ Seeing countryside
18) Having a cavity filled	○ Going to the dentist	○ Protecting your teeth
19) Talking to a child	○ Using simple words	○ Teaching a child something
20) Pushing a doorbell	○ Moving a finger	○ Seeing if someone is home

Section E: Manipulation checks

Manipulation check for shopping motivation

Same as studies 3 and 4

Manipulation check for type of product

Same as studies 3 and 4

Manipulation check for access convenience

According to the scenario as described above:

1) Ciny Wood/My Pharmacy would be far from my current location	1	2	3	4	5	6	7	Ciny Wood/My Pharmacy would be close to my current location
2) I cannot get to Ciny Wood/My Pharmacy quickly and easily	1	2	3	4	5	6	7	I can get to Ciny Wood/My Pharmacy quickly and easily
3) Going to Ciny Wood/My Pharmacy would not be convenient	1	2	3	4	5	6	7	Going to Ciny Wood/My Pharmacy would be convenient
4) Having access to Ciny Wood/My Pharmacy would be time-consuming	1	2	3	4	5	6	7	Having access to Ciny Wood/My Pharmacy would not be time-consuming

Section F: Task checks

Same as studies 1 to 4

Section G: Demographics

Same as studies 1 to 4

Appendix 6: Research questionnaire for study 5

Explanatory Statement
Same as studies 1 to 5 (the estimated survey completion time was specified to be about 20 minutes)
Section A: General Questions
Same as studies 1 to 4
Section B: Describing a typical mobile service
Same as studies 1 to 4
Section C: Experimental Scenario [Randomised in a between-subjects full-factorial design]
Same as study 5
Section D: Dependent Variables
Intention to redeem
[Same as studies 1 to 4]
Regulatory Fit
[Same as studies 1 to 4]
Section E: Manipulation checks
Same as study 5

Section F: Control Variables

Coupon proneness

[Same as studies 1 to 4]

Chronic regulatory focus

Please indicate the degree of your agreement with the following statements about yourself?

	Strongly disagree						Strongly agree
1) When I see an opportunity for something I like, I get excited right away	1	2	3	4	5	6	7
2) I frequently imagine how I will achieve my hopes and aspirations	1	2	3	4	5	6	7
3) I see myself as someone who is primarily striving to reach my "ideal self" - to fulfil my hopes, wishes, and aspirations	1	2	3	4	5	6	7
4) I worry about making mistakes	1	2	3	4	5	6	7
5) I frequently think about how I can prevent failures in my life	1	2	3	4	5	6	7
6) I see myself as someone who is primarily striving to become the self I "ought" to be - fulfil my duties, responsibilities and obligations	1	2	3	4	5	6	7

Section G: Task checks

Same as studies 1 to 5

Section H: Demographics

Same as studies 1 to 5

Appendix 7: Research questionnaire for study 7

Explanatory Statement

Same as studies 1 to 6 (the estimated survey completion time was specified to be about 20 minutes)

Section A: General Questions

Same as studies 1 to 6

Section B: Describing a typical mobile service

Same as studies 1 to 6

Section C: Measuring Revealed Shopping Motivation and Experimental Scenario

Last Shopping Trip

Please try to remember the last time you went to a major shopping mall. You may have visited the shopping mall for various reasons.

1) How long ago was this visit?
   - o Less than a week ago
   - o Between one and three weeks ago
   - o Between four and eight weeks ago
   - o More than two months ago

2) How often do you visit this shopping center?
   - o At least once a week
   - o One or a few times a month
   - o One or a few times per six months
   - o One or a few times a year

3) Did you visit by yourself or did you have company?
   - o I was by myself
   - o I was with my partner
   - o I was with my friend(s)
   - o I was with my family member(s)

4) What was your perception of the time you had available for that visit?

I was not under time pressure	1	2	3	4	5	6	7	I was under time pressure
I had enough time	1	2	3	4	5	6	7	I didn't have enough time
I had plenty of time	1	2	3	4	5	6	7	I had very little time

5) How long did your visit take?	○ Less than half an hour ○ Between half an hour and an hour ○ Between one and two hours ○ More than two hours

Revealed Shopping Motivation

Now, please indicate the degree to which each of the following statements represents the main purpose of your last visit to that major shopping mall.

	Strongly disagree						Strongly agree
1) To buy something that I needed	1	2	3	4	5	6	7
2) To find some items that I was looking for and leave the mall right away	1	2	3	4	5	6	7
3) To buy some necessary items	1	2	3	4	5	6	7
4) To find exactly what I wanted in the least amount of time	1	2	3	4	5	6	7
5) To socialize with others (friends, family members, etc.)	1	2	3	4	5	6	7
6) To browse around	1	2	3	4	5	6	7
7) To have a time-out from my daily routines	1	2	3	4	5	6	7
8) To relieve my sense of boredom	1	2	3	4	5	6	7
9) To make me feel better when I was in a down mood	1	2	3	4	5	6	7

Experimental Scenarios to Manipulate Product Type and Access Convenience
[Randomised in a between-subjects full-factorial design]

Now, imagine that currently you are in a major shopping mall with a similar purpose as you specified above for your most recent visit to a mall.

Until the end of the survey, please keep in mind the same purpose as you specified above for your visit to a mall.

Condition 1:
Type of product: *Hedonic*
Access convenience: *High/Convenient*

Imagine that you have recently subscribed to a mobile coupon service similar to the one described earlier. While at the shopping mall, you decide to see whether there is any offer available for today. You scan your mobile phone to receive an SMS coupon, and after a couple of seconds, you receive the following offer on your mobile phone:

- *Come to Mag Hub, browse through a world of various magazines, and buy the magazine of your choice with 30% price off (Next to Main Entrance; Valid: four weeks).*

Mag Hub is a successful magazine store that has recently started its business in your area and the magazines it is offering include all your favorite choices.

Suppose it has been a while since you purchased a magazine.

Also suppose Mag Hub is just one store away from your current location (it will take you less than a minute to get there).

Condition 2:
Type of product: *Hedonic*
Access convenience: *Low/Inconvenient*

[Manipulation of product type: Same as condition 1]

Also suppose Mag Hub is located at the other end of the mall (it will take you about 10 minutes to get there).

Condition 3:
Type of product: *Utilitarian*
Access convenience: *High/Convenient*

Imagine that you have recently subscribed to a mobile coupon service similar to the one described earlier. While at the shopping mall, you decide to see whether there is any offer available for today. You scan your mobile phone to receive an SMS coupon, and after a couple of seconds, you receive the following offer on your mobile phone:

- *Come to My Pharmacy and buy any deodorant of your choice with 30% price off (Next to Main Entrance; Valid: four weeks).*

My Pharmacy is a successful retailing chain that has recently started its business in your area and it stocks all your favorite brands of deodorant.

Suppose it has been a while since you purchased deodorant.

Also suppose My Pharmacy is just one store away from your current location (it will take you less than a minute to get there).

Condition 4:
Type of product: *Utilitarian*
Access convenience: *Low/Inconvenient*

[Manipulation of product type: Same as condition 1]

Also suppose My Pharmacy is located at the other end of the mall (it will take you about 10 minutes to get there).

Section D: Dependent Variables

Construal Level Activated by Access Convenience

We are now interested in how you would describe various general activities if you were in the shopping mall at the indicated distance from the Mag Hub/My Pharmacy.

For the following questions, each time choose the option that best describes the listed general activity whilst imagining your distance from Mag Hub/My Pharmacy.

[Measures: Same as study 5]

Section E: Manipulation checks

Manipulation check for type of product

How much do you agree or disagree with the following words about the product offered to you.

Purchasing a Magazine (Deodorant) is:

[Measures: Same as studies 1 to 6]

Manipulation check for access convenience

According to the scenario as described above:

1) Mag Hub/My Pharmacy would be far from my current location	1	2	3	4	5	6	7	Mag Hub /My Pharmacy would be close to my current location
2) I cannot get to Mag Hub /My Pharmacy quickly and easily	1	2	3	4	5	6	7	I can get to Mag Hub /My Pharmacy quickly and easily
3) Going to Mag Hub /My Pharmacy would not be convenient	1	2	3	4	5	6	7	Going to Mag Hub /My Pharmacy would be convenient
4) Having access to Mag Hub /My Pharmacy would be time-consuming	1	2	3	4	5	6	7	Having access to Mag Hub /My Pharmacy would not be time-consuming

Section F: Task checks

Same as studies 1 to 6

Section G: Demographics

Same as studies 1 to 6

Appendix 8: Research questionnaire for study 8

Explanatory Statement
Same as studies 1 to 7 (the estimated survey completion time was specified to be about 25 minutes)
Section A: General Questions
Same as studies 1 to 7
Section B: Describing a typical mobile service
Same as studies 1 to 7
Section C: Measuring Revealed Shopping Motivation and Experimental Scenario
Last Shopping Trip
Same as study 7
Revealed Shopping Motivation
Same as study 7
Experimental Scenarios to Manipulate Product Type and Access Convenience [Randomised in a between-subjects full-factorial design]
Same as study 7
Section D: Dependent Variables
Intention to redeem
• Still assuming the same purpose for visiting the mall, how likely would you be to go to Mag Hub/My Pharmacy to redeem this coupon during your <u>current</u> visit? Very unlikely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very likely Improbable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Probable Definitely would not redeem | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Definitely would redeem

Regulatory Fit

How much do you agree or disagree with the following statements:

Considering the scenario as described above, I would say this mobile coupon offer:

	Strongly disagree						Strongly agree
1) Would be in harmony with the main purpose(s) of my visit	1	2	3	4	5	6	7
2) Would help me achieve the intended outcome(s) of my visit	1	2	3	4	5	6	7
3) Would make it easy for me to accomplish what I am in the shopping mall for	1	2	3	4	5	6	7
4) Would concern what I need or want on this visit	1	2	3	4	5	6	7
5) Would give me a feeling of enjoyment if I redeemed it	1	2	3	4	5	6	7
6) Would make me feel right about redeeming it	1	2	3	4	5	6	7
7) Would be just right for me	1	2	3	4	5	6	7
8) Would make me feel motivated to continue my visit	1	2	3	4	5	6	7

Section E: Manipulation checks

Manipulation check for type of product

Same as study 7

Manipulation check for access convenience

Same as study 7

Section F: Control Variables

Coupon proneness

Same as studies 2, 4, and 6

Purchase spending

How often do you purchase magazines (deodorant) in a retail store?

- Once a week
- One every second week
- One every three weeks
- Once a month
- Once every second month
- Once every three to four months
- Once every five to six months
- Less frequently

How much do you usually spend on magazines (deodorant) on each purchase occasion?

- Less than $5
- $5 - $10
- $11 - $15
- $16 - $20
- $21 - $25
- $21 - $30
- $31 - $50
- More than $50

Section G: Task checks

Same as studies 1 to 7

Section H: Demographics

Same as studies 1 to 7