Understanding Channel Purchase Intentions: Measuring Online and Offline Shopping Value Perceptions

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Preface

I started my PhD in October 2001, just after 9/11. I remember telling my friends about my research project about online and offline shopping. They were enthusiastic, but told me they already had the answers to my research questions. Consumers would predominantly use the Internet for searching, and only for small purchases. They would use the Internet only to save time and effort. It needed no further research. I hope I can convince them that the reasons to shop online cannot be defined univocally, and that my research may act as a source for furthering their thoughts of why people shop online or offline. And, more importantly, that future research is still necessary to understand why people shop online or offline.

In this preface, I would like to thank the people that have supported me during my research. First, I want to wholeheartedly thank my supervisors Janny Hoekstra en Wander Jager. I have always enjoyed the stimulating meetings we have had, talking about sailing boats, holidays, family and research. You have always been very willing to listen and help. Janny, you have definitely contributed to this project by your supervision and care. I want to thank you for the interesting discussions we have had about managing customer relationships. Besides, you have always had a keen eye on improving my writing style. Wander, you have the ability to motivate me in times of trouble. You mostly used some sailing-related metaphor to describe the problem I encountered, and find a solution by extending this metaphor. I appreciate your cooperation, and I gratefully acknowledge your effort to help me develop my career.

Second, I also want to thank Anne Boomsma, Martin Wetzels, Liane Voerman, Marije Teerling for their helpful suggestions and comments regarding structural equation modeling. I hope I closely followed your thoughts; the usual disclaimer applies!

Third, I offer my sincere gratitude to the members of the examination committee who put the time and effort to read my dissertation, and provide me with constructive comments. This committee consists of Jo van Engelen, Ko de Ruijter and Peter Verhoef.

Fourth, I am indebted to the people of the cooperating companies, who allowed me to contact their clients. To preserve their anonymity, I will not mention their names. I have very much enjoyed the conversations we have had about the problems that arise in practice. Next, I want to thank the students that cordially helped me collecting the data. I would also like to acknowledge the help and financial support provided by the SOM Research School.

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Sixth, I am also grateful to many colleagues I worked with during my dissertation project. Joeri, I love your energetic aura. You have always challenged me to make the next step in my career. I owe you many thanks for this and the times you let me win the chess games. In this respect, I also want to thank the other members of the chess club for the joy and relaxation they gave me during the matches. Special thanks go to Leonieke, Jasper, Arvid and Alessio for making my PhD period interesting and enjoyable. Naturally, I want to thank my secretaries Nyske and Monique for their lovely tea breaks.

Finally, I would like to wholeheartedly thank my family and friends for supporting me. I particularly like to thank my mom and dad for their continuous love and care. You provided me a solid foundation by showing what is important in life. Many thanks to my sisters and brother for experiencing so many wonderful occasions and for their indispensable support.

Thijs Broekhuizen
Groningen, December 2005.

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1 Introduction

1.1 Channel evaluation from a consumer perspective

A consumer, John, wants to buy a book and considers his main shopping options. He decides that he can either go to his favorite bookshop that requires a five minute bike ride or turn on his computer and visit the website Amazon.com. The weather is nice, so that should not prevent him from doing his daily exercise. He generally likes to shop in the bookstore, as the piles of books and the social interaction that takes place with the other customers inspire him. He is especially attracted by the discounts and the service that are offered by this bookstore. Unfortunately, the lovely sales clerk, who was always very kind to him, has quit working. Furthermore, he currently does not have much spare time to socialize and browse the store. Next, there is a considerable chance that the local bookstore does not have his intended book on stock. Being familiar with buying books through the website, he feels confident to find this book within three clicks, and that Amazon has it on stock. In contrast to his first online purchases, he is now less concerned about possible credit card abuse. He also looks forward to reading the customer reviews just before purchasing the book online. After deliberating about the perceived costs and benefits of using both channels, he decides to buy the book through Amazon. This deliberation process can be described as the evaluation of channels from a consumer perspective.

As the number of people using the Internet for their shopping steadily rises, it is increasingly important for retailers to understand why consumers decide to buy products online or offline. According to a recent study conducted by Shop.org and Forrester Research (2005), online sales reached 4.6 percent of total retail sales in 2004, up from 3.7 percent in 2003 and 2.4 percent in 2002 in the US. Dutch consumers are also increasing their expenditures online; a Dutch study performed by Blauw Research and Thuiswinkel.org (2005) showed that online sales in the Netherlands increased from € 947

million in 2002 to € 1.2 billion euro in 2003, to €1.7 billion in 2004. The highest growth rates for 2004 were found in the markets for holidays, insurances and tickets (42%), and amusement (e.g. books, DVDs, CDs, software, games) (37%). The average online expenditures per online buyer also increased from €364 in 2003 to €424 in 2004. Despite online sales still account for less than 3 percent of total retail sales, the online growth rates still indicate that the online channel will play a more profound role in consumers' shopping activities.

Inarguably, online and offline channels present different shopping experiences even when the same products are purchased (Wolfinbarger and Gilly 2001). Instead of interacting with employees in a physical space, consumers interact in a virtual environment through the website interface (e.g. Alba et al. 1997; Hoffman and Novak 1996). Additionally, the Internet is praised for its capabilities to provide interactivity (chat, e-mail), personalized experiences (registration, user input, personalization), multimedia (Flash animations, movies), shopping tools (virtual sales assistant, search engine, order tracking), community (virtual communities, consumer reviews), increased product selection and information (cf. Wolfinbarger and Gilly 2001). Next, due to its in-home shopping characteristics online shopping is generally perceived to be more risky and, consequently, trust and risk play a more prominent role online (Forsythe and Shi 2003; Pavlou 2003). Not surprisingly, researchers have addressed that existing concepts, such as service quality or retail quality, may be inadequate to fully capture online shopping experiences (Wolfinbarger and Gilly 2003). Before one can compare channels from a consumer perspective, it is necessary to adopt an overall encompassing criterion. This study uses the concept of perceived value to enable this comparison, as it has been shown that perceived value explains consumer preferences and shopping behavior in many settings (Rust and Oliver 1994). It analyzes how consumers evaluate online and offline channels by measuring their shopping value perceptions for an online and offline retailer and their subsequent purchase intentions.

1.2 Purpose of the study

The main purpose of this research is to develop and test a model that enhances our understanding of how consumers evaluate online and offline channels for their purchasing. Rather than merely investigating the predictors of online shopping, this study focuses on understanding why consumers shop through the online or offline channel. More specifically, this study tries to explain how online and offline purchase intentions are constructed. The effects of the predictors can be interpreted as the reasons why consumers intend (not) to shop online or offline.

By explicating the underlying choice criteria, this research tries to increase our understanding of how consumers evaluate the online and offline channel for their purchasing. A general concept is required to enable comparisons between the two channels in order to explain consumers' purchase intentions. The concept of perceived value is chosen, as it represents a tradeoff between all perceived costs and benefits (Zeithaml 1988). Perceived value is capable of predicting purchase intentions for products and stores, and it is likely to predict channel purchase intentions as well (Chen and Dubinsky 2003). It acts as an 'umbrella' term (Woodruff 1997) and enables comparisons –from a consumer perspective– between the online and offline channel.

1.3 Research questions

This research first explores the factors consumers consider when evaluating channels for their purchasing. It is expected that the perceived costs and benefits of shopping through a particular channel determine consumers' intentions to use that channel. As such, the concept of perceived value (cf. Zeithaml 1988) will be used to determine the predictors[1] of online and offline perceived value and purchase intentions. This leads to the following research question:

[1] This study uses the term "antecedents" or "predictors" to refer to the antecedents of the dependent variables in the structural equation models (see Chapter 5). Similar to regression analysis, structural equation modeling infers causation from association. Although in its strictest terms causation is rarely found, in practice strong theoretical support can make empirical estimation of causation possible (Hair et al. 1998).

1. What are the antecedents of online and offline perceived value and purchase intentions?

Next, this study examines whether the *construction* of perceived value and purchase intentions online is different from offline. As the shopping experiences are different, consumers may vary in the criteria and the weights they attribute to them to form their value perceptions and purchase intentions. By measuring the relative weights of the antecedents of perceived value for both channels, this study shows how value and purchase intentions are constructed in each channel. As such, the relative importance of the antecedents of online and offline value and purchase intentions is investigated to see if certain antecedents have a more pronounced effect in either channel. The antecedents that have the strongest impact can be interpreted as the main reasons (not) to buy through a particular channel. Thus,

2. Do the effects of the antecedents of perceived value and purchase intentions differ between channels?

To gain additional insights into the determinants of consumers' online purchase intentions, this study explores whether experienced online buyers differ from those with less experience with respect to the importance they attribute to the antecedents. Prior research frequently distinguished between online shoppers and offline shoppers based on their prior online shopping experience with varying cut-off points. Parasuraman (1997) argued that consumers' perceptions of value and the construction of it evolve over time. For example, consumers who gain experience in online shopping may not only shop more efficiently in time, but they may also rely more strongly on the required time and effort expenditures. Next, customers who had gained much online experience relied less strongly on reputation than those with less experience (Einwiller 2003; Montoya-Weiss et al. 2003). In other words, the attributes that motivate consumers to adopt a channel may be different from the attributes during and after use (Parasuraman 1997; Parasuraman, Zeithaml and Malhotra 2005; Woodall 2003). Thus, it can be expected that there are differences between experienced and less experienced online buyers in the construction of online perceived value and purchase intentions. This study tries to elicit these differences by answering the following question:

3. Do the effects of the antecedents of perceived value and purchase intentions differ between experienced and less experienced online shoppers?

In sum, this research investigates how consumers evaluate channels by measuring the criteria consumers use to form their online and offline shopping value perceptions and purchase intentions. It investigates the strengths of the relationships across contexts. It also examines the differences in the strength of online shopping motivations between experienced and less experienced online shoppers.

1.4 Significance of the study

Today's consumers not only have an abundant store choice, but they also have a wide variety of channels to choose from. With the advent of multiple channels (e.g. Mobile Commerce, E-Commerce) and a corresponding increase in the competition between channels, the understanding of what motivates consumers to purchase from one channel rather than another becomes increasingly important to channel design and management (Black et al. 2002). Not surprisingly, scholars have called for more research to better understand why customers select particular channels for their purchasing (Black et al. 2002; Gupta, Su and Walter 2004; Inman, Shankar and Ferraro 2004; Nicholson, Clarke and Blakemore 2002; Schoenbachler and Gordon 2002). In response to these calls, this study aims to enhance our understanding of channel choice through analyzing consumers' formation of channel purchase intentions. Early research focused on understanding why consumers shop through store and nonstore formats (Gillett 1970; 1976; Korgaonkar 1984; Korgaonkar and Moschis 1982; Spence, Blackwell and Engel 1970). Nonstore formats here referred to mail order or catalog shopping. In recent years, studies discerned another nonstore retail format: Internet. Recent studies investigated why consumers shop through stores, catalogs, or the Internet (e.g. Black et al. 2002; Gehrt and Yan 2004; Keen et al. 2004). Most of these studies treat channels as a whole, neglecting that retailers within a channel can differ in their offerings. To create a more realistic setting, this study asks customers of specific websites and stores to form their expectations of shopping online and offline. Moreover, it tries to elicit differences in the criteria experienced and less experienced online shoppers use to form their online purchase intentions.

This study contributes to the existent marketing literature by comparing the offline and online channel side-by-side. Only a few of the most recent advances consider the use of

both channels simultaneously (Gehrt and Yan 2004; Keen et al. 2004; Montoya-Weiss, Voss and Grewal 2003; Shankar et al. 2003), as opposed to an adoption type paradigm where E-Commerce is considered in isolation. This side-by-side comparison makes it possible to increase our understanding of channel choice, as it makes explicit the choices consumers have and the tradeoffs they make. Moreover, as the Internet as a shopping channel has become more mature and accepted, it is more useful to investigate the intentions to *use* rather than to *adopt* the Internet. This study also makes a significant contribution to the literature by comparing the *constructions* of perceived value and purchase intentions (1) across the online and offline channel and (2) across experienced and less experienced online buyers. As such, it is possible to investigate whether certain factors play a more articulated role in either channel, and whether the strength of specific relationships online differ between experienced and less experienced online buyers. This comprehensive research approach increases our understanding of how consumers evaluate channels. Next, this study is one of the first studies to use the concept of perceived value to determine channel purchase intentions. In addition, this research introduces the construct of enjoyment to capture the hedonic aspects of shopping; the extant perceived value literature largely neglected the influence of this shopping benefit (e.g. Baker et al. 2002). This study investigates whether enjoyment has a distinct and genuine impact on purchase intentions, and whether it should be included in future perceived value models. Practically, managers can increase their understanding of what drives perceived value and channel purchase intentions. By surveying customers with the provided questionnaire, the relative strengths of channels and relative importance of criteria in each channel can be elicited. This provides managers valuable information about the key motivating and inhibiting factors; as such, they can effectively increase the value and purchase intentions for their customers. Chapter 8 provides a more detailed discussion.

1.5 Background on channel choice

When channels are considered in the decision to buy a certain product through a certain retailer, the choice automatically becomes more complex than just a product or store choice (Black et al. 2002). Apart from retailer and product factors, consumers also consider channel factors. Consequently, the choice is influenced by *product factors* (complexity,

diversification, product category risk), *consumer factors* (e.g. demographics, motivation, shopping orientations, experience), *retailer factors* (reputation, merchandise, service, price level), *channel factors* (e.g. channel accessibility, efficiency, channel risk) and *situational factors* (e.g. weather, moment of day, time pressure) (Black et al. 2002; Gehrt and Yan 2004; Nicholson et al. 2002). According to Belk's scheme (1975), type of product pertains to the situational factors; this research, however, treats product factors as a separate factor just like Black et al. (2002). Figure 1.1 shows the general factors that influence consumer choice.

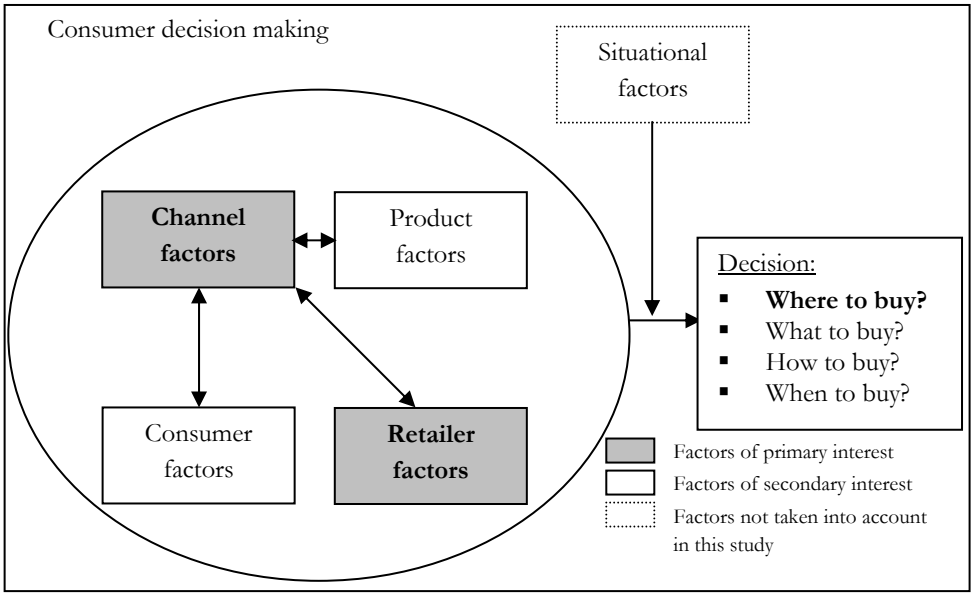


Figure 1.1: General factors affecting consumer decision making (adapted from Black et al. 2002, p. 171)

Before buying a product through a certain channel, consumers are expected to evaluate channels on their benefits and costs (Verhoef, Neslin and Vroomen 2005). In this respect, one could argue that in order to understand channel choice one should merely focus on the channel factors in order to determine the best option available to consumers (i.e. the channel with the highest utility). However, the performance of the channel is influenced by product, retailer, and consumer factors. As a result, channel choice is not solely based on the general merits of the channel itself (e.g. accessibility, efficiency, risk), but its utility must be seen in context of product factors, retailers' offerings and consumer abilities and

motives to use a particular channel. Finally, situational factors can have a strong influence on the actual decision.

Product factors may strongly affect the consumer's decision to shop online or offline. In other words, there are strong product-channel interactions (Black et al. 2002; Schoenbachler and Gordon 2002; Inman et al. 2004). This means that the channels' derived utility or suitability is dependent on the type of product or service that is purchased. For instance, the Internet is particularly suited for selling products that have predominantly search aspects, as opposed to products that are high in experiential aspects (cf. Alba et al. 1997). In addition, complex, higher involvement products (e.g. mortgages) are more suited to face-to-face channels, as they often require personal support (Black et al. 2002).

Retailer factors clearly impact channel choice. Perceptual differences in the offerings between online and offline retailers are likely to affect channel preference and use. Superior selections offered by online bookstores may attract customers shop online. In contrast, consumers may also decide to choose offline bookstores, because they seek personal advice. Clearly, the capabilities of retailers are partly determined by the channel itself.

Consumer factors, such as socio-demographic factors (e.g. gender, income, education, family sizes), psychographic factors and personality traits (e.g. lifestyle, opinion leadership, self-efficacy, trusting disposition) and behavioral factors (e.g. previous online shopping experience) clearly impact the consumers' utility derived from a channel (Dabholkar and Bagozzi 2002; Eastlick and Lotz 1999; Inman et al. 2004). These consumer-channel interactions imply that consumer factors impact perceptions of channel performance and channel preference.

Finally, *situational factors* (e.g. mood, time availability) have been shown to have a strong influence on consumer decision making (Belk 1975) and, in particular, channel choice (Nicholson et al. 2002; Gehrt and Yan 2004). Based on Belk's classification, Nicholson et al. (2002) proposed that channel selection is influenced by the physical setting (weather or climate), social setting (presence or absence of others), time-delimited context (time of day, time availability, season), task definition (type of product, gift giving), and antecedent states (mood).

Consumers are expected to seek the right mix of product, retailer, and channel factors to optimize their utility, given their motivations and their limited cognitive, physical and temporal resources. Channel choice is part of the decision-making process and should be seen in the light of the other four factors.

The goal of the current study is not to identify every factor that might affect online and offline purchase intentions, but rather to elicit consumers' main motivations to use a particular channel. The nature of this study is descriptive rather than predictive. One of the foundations of the conceptual model (see section 4.1) is that consumers evaluate shopping online versus offline in terms of the complete shopping experience rather than just the outcome of the process (e.g. Parasuraman, Zeithaml and Berry 1985; 1988). The reasoning behind this is that consumers generally optimize the full process of decision making (procedural rationality), not just the outcomes (substantive rationality) (Simon 1976). It is thus assumed that consumers decide whether to buy a particular product/service online or offline, based on *what* (outcome value) is delivered and *how* (process value) the product/service is delivered[2]. Consequently, given a particular product, channel factors and retailer factors are expected to largely explain the motivations to use a channel. **Retailer factors**, such as service quality, merchandise quality and price, play a role in shaping influence *what* (outcome value) is delivered. Note that channel factors may also impact the retailer offerings (see above). Apart from the retailers' capability of providing a valuable shopping experience, it can be expected that **channel factors** clearly influence *how* the product or service is delivered. Prior research indicated that the online shopping process is significantly different from the offline shopping experience even when the same product is purchased (cf. Childers et al. 2001; Wolfinbarger and Gilly 2001). **Consumer factors** play a relatively small role in this research –with the exception of the moderating influence of customers' prior level online experience that might explain differences in the construction of perceived value and intentions for the online channel (see section 4.2.2). Other consumer factors, such as age, gender, education, are likely to influence the value perceptions of using channels (i.e. channel's ease of use). However, it is assumed that the

[2] In this respect, Heinonen (2004) argues that consumers deliberate not only about what and how the product or service is delivered, but also on when and where it is delivered. This study investigates the spatial dimension (where), but not the temporal dimension (when).

influence of these consumer factors on the motivations to shop online or offline is captured by changes in the perceptions of channel use (channel factors). Moreover, the study's focus is not on understanding *who* buys online or offline, but rather *why*. **Product factors** also play a minor role in the research model, as this research is not interest in measuring the effect of product-channel interactions. To control for the influence of product factors, only one particular product is considered: books. Books are relatively simple products and are often sold through the Internet. For these products, consumers have a real opportunity to choose between channels.

1.6 Research design

This study investigates consumers' prepurchase evaluations of buying books offline and online. It synthesizes the E-Commerce and perceived value literature to develop a conceptual model that explains online and offline purchase intentions. Based on this literature review, it is proposed that online and offline purchase intentions are based on perceptions of service quality, merchandise quality, price and the shopping experience costs and benefits (i.e. time/effort costs, perceived risk, and enjoyment) (for details, see Chapter 4). The conceptual model is empirically tested in two studies by using structural equation modeling. Data are collected through a survey amongst 656 customers of a multichannel bookseller and 437 customers of a pure-play online bookseller. The relative importance of the predictors of perceived value and purchase intentions are first determined by investigating the direct and indirect effects. Next, based on conceptual and/or empirical support, it is hypothesized that certain factors play a more profound role in either context. To test for the differences in the strength of specific relationships between the online and offline context, structural invariance tests are performed (see section 4.2.1). Additionally, the moderating influence of the degree of prior online shopping experience is investigated for specific relationships within the online context (see section 4.2.2). This is determined by testing the differences in the strength of structural relationships between experienced and less experienced buyers.

1.7 Demarcations and assumptions of the study

It is tempting to undertake an analysis that would address all factors that explain channel purchase intentions. Such an undertaking is probably overly ambitious at this time, as empirical research about consumers' channel choice has just recently started to take place. To limit itself, this study concentrates on two relevant factors: channel and retailer factors, while controlling for certain consumer and product factors. The influence of situational factors is left out, as the focus is on the relatively enduring motivations to shop through either channel. Situational factors are expected to influence channel purchase intentions through altering the importance of criteria (cf. Van Kenhove, Van Waterschoot and De Wulf 1999; Gehrt and Yan 2004), but not through altering the perceived performance of channels; consumers that have little time available are likely to use the most time-efficient channel. Further, this study especially focuses on understanding mono-channel purchase intentions and not on possible multichannel behavior. Although the actual purchase takes place in one particular channel, consumers might engage in multichanneling prepurchase behavior (switching from one channel to another), resulting in somewhat blurred perceptions of individual channel performance. As a consequence, the proposed model is particularly suited for low-involvement, simple products in which multichanneling does less frequently occur (cf. Peterson, Balasubramanian and Bronnenberg 1997). For simplicity reasons, this study equates the online channel to the Internet, despite the advent of other online channels such as interactive television channels and wireless services (e.g. Kleijnen, De Ruyter and Wetzels 2004). Further, as will be discussed in Chapter 3, the expected value or utility derived from channels goes beyond the perceptions of shopping value; consumers may derive additional value from channels through fulfilling certain personal motives (e.g. role-playing, enhancing self-image) and social motives (e.g. peer group attraction) (Tauber 1972). This study, however, limits itself to the more specific purchase-related costs and benefits. As the focus is on channel choice from a consumer perspective, it logically adopts a business-to-consumer (B2C) rather than a business-to-business perspective (B2B). Finally, this study investigates websites that sell products; although the success of auctions online is apparent, for example eBay and Marktplaats.nl, the focus is on purchases from retailers rather than through auction sites.

Based on the theory of reasoned action (Fishbein and Ajzen 1975), this study assumes that consumers –at least in time– think about channel choice when making purchases. The reality of this assumption can be questioned, as habits and rituals may impose strong effects on consumer decision making (Tetreault and Kleine 1990). In order to minimize the chance that consumers do not deliberate about channel choice, this study investigates books that are frequently sold through the Internet. They particularly refer to search goods (cf. Darby and Karni 1973); for these products information on dominant aspects can be gathered prior to purchase. As such, consumers have a real option to choose between the two channels. Table 1.1 shows the classification based on involvement and the type of goods; the study's focus is on the down-left quadrant.

Table 1.1: The involvement-product type classification

	Search goods	**Experience goods**
High involvement	Mortgages, personal computers	Second-hand cars, houses, evening dresses
Low involvement	**Car insurances, books, CDs, DVDs, software**	Groceries, domestic and personal care appliances

1.8 Outline of the study

The content of this study is as follows. Chapter 2 provides an overview of the existent literature on E-Commerce in order to identify the main motivations and inhibitors of online shopping. It is here determined to what degree these motivations are unique to the online context. Next, Chapter 3 provides a background on the concept of perceived value. It addresses the classifications of value and the main determinants of perceived value and purchase intentions. Based on a symbiosis of the perceived value literature and E-Commerce literature, a research model is developed to capture online and offline purchase intentions. Chapter 4 discusses the conceptual model and its underlying hypotheses. Chapter 5 explains the methodology used to test the research model and the underlying hypotheses. Chapter 6 and Chapter 7 represent the main findings of the empirical studies, including the statistical procedures that were undertaken to test each hypothesis. Implications and future research possibilities are discussed in Chapter 8.

2 Determinants of Online Purchasing

2.1 Introduction

To understand why consumers shop offline or online, it is required to understand consumers' motivations to use online and offline stores. A substantial body of research has explained the reasons to shop through offline stores (for a review, see Baker et al. 2002). Recently, the reasons to shop online have also been extensively investigated by dealing with questions such as: What drives consumers to shop online? What do consumers really want from their online shopping experiences? What attributes are most important in their judgments of e-quality, e-satisfaction, e-value and e-loyalty? (Childers et al. 2001; Nicholson et al. 2002; Monsuwé, Dellaert and De Ruyter 2004; Parasuraman, Zeithaml and Malhotra 2005; Wolfinbarger and Gilly 2001; Zeithaml, Parasuraman and Malhotra 2000; 2002).

The reasons to use the Internet for purchasing cannot be univocally defined due to its immense scope (e.g. retailer websites, comparison or review websites, auction sites, peer-to-peer networks) and the variety of purchasing goals consumers may have (e.g. type of product). Researchers used different perspectives with varying scopes to investigate how and to what degree the Internet affects online consumer behavior. For example, some researchers focus exclusively on a part of the website, i.e. the atmospherics of the website (De Haes, Lievens and Van Waterschoot 2004; Eroglu, Machleit and Davis 2003); whereas others investigate the website's interface and use (Ranganathan and Ganapathy 2002; Supphellen and Nysveen 2001); still others go beyond the website and attempt to measure the total shopping experience (e.g. Francis and White 2002; Parasuraman et al. 2005; Wolfinbarger and Gilly 2003). Scholars have developed attributes to predict website quality (Yoo and Donthu 2001), satisfaction with a website (e.g. Muylle, Moenaert and Despontin 2004), intention to return to the website (e.g. Supphellen and Nysveen 2001), intentions to buy from a website (Loiacono, Watson and Goodhue 2002; Wolfinbarger and Gilly 2003),

satisfaction with online shopping (Evanschitzky et al. 2004; Szymanski and Hise 2000), and e-loyalty intentions (Anderson and Srinivasan 2003; Srinivasan, Anderson and Ponnavolu 2002). Some researchers focus on service providers (De Ruyter, Wetzels and Kleijnen 2001; Montoya-Weiss et al. 2003; Zeithaml et al. 2000), whereas others focus on e-tailers that offer merchandise (Chen and Dubinsky 2003; Wolfinbarger and Gilly 2003). These studies have all contributed to a better understanding of the motivations of consumers to use the Internet for their purchasing, but still authors call for more research on this topic (Black et al. 2002; Gupta et al. 2004; Inman et al. 2004; Nicholson et al. 2002; Schoenbachler and Gordon 2002). Appendix I shows the main findings of the literature review.

This chapter provides a background into the determinants of online purchasing, based on insights from the marketing and technology adoption/innovation diffusion literature. These research fields are used to reveal (1) the motivations and impediments to shop online, (2) the determinants of online channel adoption based on Davis' (1989) Technology Acceptance Model (TAM), (3) the determinants of e-quality, e-satisfaction, e-value and e-loyalty, and (4) the determinants of online channel use and preference. The first stream of research has a qualitative nature and often uses qualitative research techniques (e.g. focus groups) to provide an answer to what drives consumers to shop online. The second stream of research, the TAM literature, originates from the technology adoption and innovation diffusion literature; studies in this field explain the adoption of the Internet –as a technology or innovation– by relying heavily on the perceived characteristics of the Internet itself. The third stream originates from the marketing literature and elicits the antecedents of well-known prepurchase and postpurchase evaluations of online purchases (i.e. e-quality, e-satisfaction, e-value and e-loyalty). Here, the focus is less on the innovation itself, but rather on consumers' perceptions of what they receive from their shopping experiences. The last review puts the use of or preference for the Internet into a broader perspective; it considers why consumers use the Internet vis-à-vis other channels, given circumstances (situational factors), consumers' needs and capabilities (consumer factors), the online and offline offerings (retailer factors) and the type of product being purchased (product factors). The remainder of this chapter is as follows. The following four sections discuss each stream of research. Next, it is determined to what degree the online determinants are unique when compared to those found in the offline context. Finally, a summary is provided of the main determinants of online shopping.

2.2 Motivations (not) to shop online

Wolfinbarger and Gilly (2001) posed the important question what motivates consumers to shop online. As such, they conducted nine focus groups to investigate the attributes and experiences desired by (potential) online shoppers. They acknowledged that consumers shop differently depending on whether their motivations are primarily experiential or goal-oriented (cf. Babin, Darden and Griffin 1994). Next, they argued that online shopping is more likely to be goal-oriented than experiential; based on prior research they concluded that 66 to 80 percent of online purchases were goal-oriented. This high percentage can be explained, because online shoppers tend to be time-starved and want to shop efficiently with narrowly focused search actions (Wolfinbarger and Gilly 2001). Moreover, heavy users of the Internet tend to have a strong internal locus of control and thus have goal-oriented personalities (Hoffman, Novak and Schlosser 2002). Finally, the Internet facilitates utilitarian behavior as search costs are dramatically reduced (Alba et al. 1997; Bakos 1997; Lynch and Ariely 2000). Online shopping tends to be less hedonic, as the online shopping experience is still far less compelling than its offline counterpart (Wolfinbarger and Gilly 2001). Contrastingly, Childers et al. (2001) conclude that, while the instrumental aspects (saving time, shopping effectiveness) of the Internet are important predictors of attitude towards online shopping, hedonic aspects play at least an equal role.

Wolfinbarger and Gilly (2001) suggest that goal-oriented shoppers achieve greater freedom and control in the online environment, as they experience little pressure to purchase before they are absolutely ready. In the online environment, they are less committed because the investments made to visit the retailer are limited (e.g. no need for driving and parking). Moreover, they generally feel less pressured, due to the absence of salespeople. Online shoppers obtain more freedom and control through *convenience/accessibility, selection, availability of information,* and *lack of sociality*[3]. Convenience is mostly referred to as the ease of shopping and often includes elements of accessibility, comparison shopping and ease of shopping.

[3] Prior research investigated the shopping orientations of online shoppers, which can be used to elicit the motivations to shop online (see section 2.5). The results of these studies confirm the above findings of consumers' motivations to shop online; online shoppers have a strong need for convenience, but do not have a strong need for social interaction, immediate possession of goods, and tactile information.

Despite some inconveniences (e.g. difficulty of assessing quality online, insecurity about payments and postponed gratification), online shoppers generally indicate that shopping online is easier than offline due to the ease of access and comparison shopping (e.g. Bobbitt and Dabholkar 2001; Childers et al. 2001; De Ruyter et al. 2001; Monsuwé et al. 2004; Wolfinbarger and Gilly 2001; Yoon 2002; Zeithaml et al. 2002). Online shoppers also address that the wide selection is a motivation to shop online (Srinivasan et al. 2002; Szymanski and Hise 2000; Wolfinbarger and Gilly 2001; Yoon 2002). For example, the number of books available at Amazon.com is more than 23 times larger than the number of books of a typical Barnes and Noble superstore (Brynjolfsson, Hu and Smith 2003). Next, the availability of relevant information is an important reason to shop online. The wide availability of relevant information helps buyers to make more informed decisions (cf. Chen and Dubinsky 2003; Loiacono et al. 2002; Szymanski and Hise 2000; Wolfinbarger and Gilly 2001; 2003; Zeithaml et al. 2002). With the help of online recommendation tools, consumers can drastically reduce their search costs and make better decisions (Häubl and Trifts 2000). Finally, online shoppers indicate that they sometimes prefer to shop online because of the lack of sociality (Dabholkar and Bagozzi 2002; Nicholson et al. 2002; Wolfinbarger and Gilly 2001). They may prefer online shopping, as they believe offline shopping is too slow due to the anticipated inefficiency of service employees or the unwanted verbal interactions that could take place. However, the lack of sociality is sometimes seen as an inhibitor to shop online; consumers may want to speak to an employee when a complex product is purchased (Black et al. 2002; Francis and White 2004), or want the opportunity to interact with family and friends when hedonic products are purchased (Nicholson et al. 2002). Wolfinbarger and Gilly (2001) argue that freedom and control is the superordinate goal that is being fulfilled by the underlying four motivating factors. Other authors (Francis and White 2004; Hoffman et al. 2002; Koufaris et al. 2001) address (perceived) control as a distinct motivator to shop online. The self-service nature of online shopping delivers a high level of control over the purchase environment (Francis and White 2004; Meuter et al. 2000).

The factors that prevent consumers to shop online particularly refer to the increased levels of risk. It has been shown that the level of social, performance, physical, financial and psychological risks vary with the shopping channel (Cox and Rich 1964; Gillett 1976; Spence et al. 1970). In the online environment, the physical and temporal distance between

consumers and retailers create additional uncertainty, because product characteristics and retailer identity cannot be fully assessed during the transaction (Ba and Pavlou 2002; Jarvenpaa and Tractinsky 1999; Pavlou 2003) and because of the greater ease of cheating online (Einwiller 2003; Gefen 2000; Reichheld and Schefter 2000). In online environments, consumers have fewer tangible and verifiable cues regarding the retailer's capabilities and intentions (Urban, Sultan and Qualls 2000), leading to higher risk perceptions. Although the transaction appears to be fast and convenient, the background processes such as order flow, price discovery and order execution remain largely inscrutable (Konana, Menon and Balasubramanian 2000). Not surprisingly, privacy and security concerns are frequently mentioned as inhibitors of online shopping (Swaminathan, Lepkowska-White and Rao 1999; Wolfinbarger and Gilly 2003; Zeithaml et al. 2000) In this respect, trust is often seen as a facilitator of online shopping (e.g. Jarvenpaa and Tractinsky 1999; Pavlou 2003), as it reduces perceptions of risk (cf. Ba and Pavlou 2002; Einwiller 2003).

Other inhibitors may become apparent when buying physical products. Not being able to see, feel or experience a product prior to purchase may inhibit certain consumers to shop online (Li, Kuo and Russel 1999; Zeithaml et al. 2000). Moreover, consumers have to wait before their product is delivered, attenuating the power of immediate gratification and discouraging impulse shopping (Francis and White 2004; Rohm and Swaminathan 2004; Wolfinbarger and Gilly 2001). Finally, increases in consumers' perceived expenditures in returning or exchanging products might prevent consumers to shop online (Seiders, Berry and Gresham 2000).

One of the early debates that still has not reached consensus is whether price is a motivator to shop online. Research on online pricing has focused on whether the prices, price dispersion and/or price sensitivity are higher online than offline. It has been hypothesized that the Internet lowers search costs, making price information available to buyers and the online markets more competitive than conventional markets (Bakos 1997). Websites that facilitate price comparisons make consumers more price sensitive for common products, and lowers demand for unique items (Lynch and Ariely 2000). When comparing online and offline prices, Brynjolfsson and Smith (2000) found that online prices were 9-16% lower than offline retailer prices for books and CDs. Pan, Ratchford and Shankar (2002) compared the price levels of pure-play e-tailers (retailers that only sell online) with

multichannel retailers (retailers that sell online and offline). The results show that prices are lower for pure-play e-tailers than for multichannel retailers for CDs, DVDs, and computers; prices are similar for PDAs and electronics and higher for books and software. In a similar vein, Ancarani and Shankar (2002) showed that when list prices are considered for books and CDs, offline retailers have the highest prices, followed first by multichannel retailers and then by pure-play e-tailers. However, when shipping costs are included, multichannel retailers have the highest prices, followed first by pure-play e-tailers and then by traditional retailers. Contrary to the expectation that price dispersion is lower online, studies found that price dispersion online is substantial and no narrower than in conventional markets (Clemons, Hann and Hitt 2002; Brynjolfsson and Smith 2000). Different prices for identical products can still be justified when, for example, service quality levels are different among e-tailers. However, even when controlling for the heterogeneity in retailers' offerings, price dispersion among e-tailers is still substantial (Pan et al. 2002). Another explanation for the larger price dispersion online is that consumers do not solely base their decision on price, but also on other information such as product information, service quality and product quality. Lynch and Ariely (2000) showed that designing the website to facilitate quality comparisons, decreases price sensitivity for unique items. Consequently, authors have claimed that consumers may become less price sensitive, which may lead to higher prices (Degeratu, Rangaswamy and Wu 2000). Online buyers may also be less price sensitive because of relative high perceived time costs; they are willing to accept high prices rather than incur additional search costs. Ratchford, Pan and Shankar (2003) provided a final explanation for the price dispersion. They argued that the wide price dispersion could be the result of the immaturity of the online channel; they examined online prices based on data collected from BizRate.com in November 2000 and November 2001 and found that price dispersion decreased substantially between these two periods. In general, the online price studies indicate that online prices may differ from offline prices; however, this is mainly due to differences in the dispersion of prices. Consumers that are very price conscious may be motivated to use the online medium to search for the lowest prices, whereas less price conscious shoppers may also be motivated to engage in online shopping as it is easier to compare nonprice information. Not surprisingly, shopping orientations studies did not find a relationship between consumers' price-consciousness and the likelihood of online shopping (Donthu and Garcia 1999; Girard et al. 2003).

To summarize past research, online shoppers are generally motivated by the online's *convenience* (i.e. accessibility, comfort of shopping and saving time and effort), *wide selection/specialty merchandise*, *availability of relevant information,* and *control*. Inconsistencies appear regarding the online price level and lack of sociality as a motivator to shop online. The inhibiting factors of online shopping relate to increased levels of *perceived risk*. For physical products, additional inhibitors are identified, including the *impossibility to physically examine the product prior to purchase, the additional delivery time,* and *difficulties in returning faulty merchandise*.

2.3 Technology Acceptance Model

Prior technology adoption and innovation diffusion research studied the adoption and use of the Internet. Most researchers in this field applied the Technology Acceptance Model (TAM), or a modification of it, to predict Internet adoption and use. Davis and his colleagues (Davis 1989; Davis, Bagozzi and Warshaw 1989) introduced TAM to predict the adoption and use of information technologies, such as computers and spreadsheet software programs. TAM is a parsimonious yet powerful model for predicting user acceptance of these technologies. Researchers use TAM to predict online channel adoption and use, because the E-Commerce environment is heavily technology-driven (Pavlou 2003). The findings of TAM-related studies provide insights into the determinants of E-Commerce adoption and use.

TAM proclaims that perceived usefulness and perceived ease of use of a technology influence user's attitude toward using the technology, which in turn affects behavioral intentions, which ultimately determine adoption and use (Davis 1989; Meuter et al. 2005). Perceived usefulness (PU) is defined as "the degree to which a user believes that using the system will enhance his or her performance," whereas perceived ease of use (PEOU) refers to "the degree to which the user believes that using the system will be free from effort" (Davis 1989). While PU refers to the perceptions regarding the outcome of the experience, PEOU refers to their perceptions regarding the process leading to these outcomes (Childers et al. 2001; Monsuwé et al. 2004). If consumers perceive the Internet easier to use and to be more useful, it will increase their likelihood of adoption and usage (Teo, Lim and Lai 1999). PEOU also positively affects PU, as the easier the system is to use, the more

useful it can be (Venkatesh and Davis 2000). The impact of other external variables on behavioral intention is fully mediated by these two beliefs (Davis et al. 1989).

In their development of TAM, Davis et al. (1989) found evidence that attitudes predict intentions; however, subjective norm did not have a significant effect on behavioral intentions over and above PU and PEOU, and was therefore left out of the model. Some studies found support that subjective norm does not contribute to explaining behavioral intentions of using information technologies (e.g. Mathieson 1991; Keen et al. 2004), whereas other studies (e.g. Karahanna, Straub and Chervany 1999; Taylor and Todd 1995) show that subjective norm significantly alters intentions. Karahanna et al. (1999) more closely investigated this issue and found that the impact of subjective norms on behavioral intention is more profound for potential adopters than users. They explained this by the work of Triandis (1971) who suggested that social norms have a more pronounced effect in determining behavior when the behavior is new, as in adoption. With increasing direct experience, individuals are expected to rely less on others and more on their personal attitudes. Another explanation for the variation in findings is that subjective norm only seems to have a significant effect on intentions in mandatory settings, but not in voluntary settings (cf. Venkatesh and Davis 2000).

Self-Determination Theory and Motivation Theory (e.g. McGuire 1974) encouraged authors to extend the TAM to capture the more hedonic aspects, by including (perceived) enjoyment. According to these theories, consumers are motivated by extrinsic and intrinsic motivations. Extrinsic motivations relate to the drive to perform a behavior to achieve specific goals or rewards, while intrinsic motivations relate to perceptions of pleasure and satisfaction derived from performing the behavior itself (Deci and Ryan 1985; Vallerand 1997). The characterization of dual motivations is consistent with prior retail research, which has supported the presence of both utilitarian (extrinsic) and hedonic (intrinsic) motivations (Childers et al. 2001). In the utilitarian sense, consumers want to shop efficiently; thus, achieving their shopping tasks with a minimum of effort. On the other hand, consumers are also motivated by the hedonic aspects of shopping (Babin et al. 1994; Arnold and Reynolds 2003) referring to the aspects of fun and playfulness rather than task completion (Hirschman and Holbrook 1982). In TAM, extrinsic motivation is clearly captured by the PU construct (cf. Davis et al. 1989; 1992; Venkatesh and Davis 2000) as it

refers to saving time and increasing shopping effectiveness (Childers et al. 2001). PEOU refers to the process leading to the outcome and can be seen as an intrinsic motivator, but many authors (e.g. Childers et al. 2001; Davis et al. 1992; Monsuwé et al. 2004; Pavlou 2003) argue that PEOU does not fully capture intrinsic motivations. For obvious reasons, perceived enjoyment (or computer playfulness) is often added to capture the pleasure and satisfaction derived from performing the behavior, apart from any anticipated performance consequences (Davis et al. 1992).

Several studies tested TAM in the online context (e.g. Childers et al. 2001; Devaraj, Fan and Kohli 2002; Gefen, Karahanna and Straub 2003; Gefen and Straub 2000; Lederer et al. 2000). These studies confirm that user's beliefs, PEOU and PU, and enjoyment are key predictors of E-Commerce adoption and acceptance. Childers et al. (2001), for instance, found that each of the predictors positively affected consumers' attitudes towards online shopping. They also investigated the relative impact of PEOU, PU and enjoyment in both a utilitarian (i.e. grocery shopping) and hedonic (i.e. gift giving) context. Although the utilitarian aspects (i.e. PEOU, PU) of online shopping appeared to be important predictors of online shopping attitudes, the more immersive, hedonic aspects (i.e. enjoyment) played at least an equal role. Their final model explained 67% and 64% in the variance of the attitudes towards online shopping for the utilitarian and hedonic shopping context, respectively.

In search for a better understanding and prediction of E-Commerce adoption, many researchers included trust and/or risk with TAM. Trust and risk are essential in explaining E-Commerce adoption, as uncertainty is present in the technology-driven environment (e.g. Lee and Turban 2001; Gefen and Straub 2000; Gefen et al. 2003; Pavlou 2003; Swaminathan et al. 1999). Lee, Park and Ahn (2000) only incorporated risk in their TAM. They split perceived risk into transaction risk (i.e. the risk that consumers bear during purchasing) and product performance risk. Their findings indicate that transaction risk negatively affects PU and purchase behavior, whereas performance risk only negatively impacts purchase behavior, but not PU. Their model explains approximately 34% of the total variance in E-Commerce adoption. Pavlou (2003) integrated trust and perceived risk with TAM to predict online purchase intentions. The study predicted E-Commerce acceptance with help of the conceptual model, which is depicted in Figure 2.1. Two studies

(student and consumer sample) tested the model. A reasonable part (student sample: 64%, consumer sample: 37%) of the variance in self-reported purchase intentions is explained. Conclusively, the results show that apart from PEOU and PU, trust and risk appear to be major influencers of online purchase intentions.

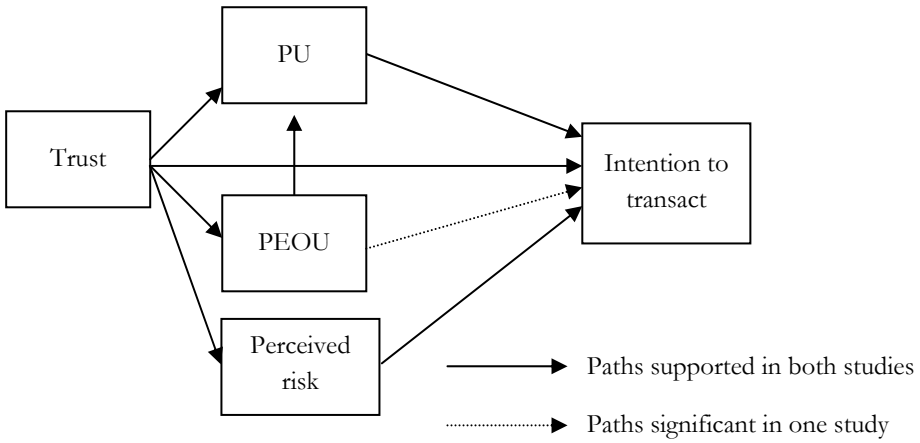


Figure 2.1: Integrating trust and risk with TAM (Pavlou 2003)

After analyzing the TAM literature, the following tentative conclusions can be drawn. First, when adapted to the online context, TAM is capable of explaining a substantial part of the variance in online shopping attitudes, intentions and behavior. This supports the general idea that the perceptions of the (expected) use of the innovation itself largely determine adoption and usage. The important role of enjoyment, as well as perceived risk and trust, necessitate the addition of these variables to capture online shopping intentions (Childers et al. 2001; Lee et al. 2000; Pavlou 2003). Second, the role of subjective norms in explaining online shopping attitudes and behavior seems to be rather small and is likely to become even smaller in the near future, as consumers become more familiar with the Internet and online shopping. With increasing online experience, consumers rely more on their own shopping experiences. Consequently, social norms are left out as potential explanatory variable. Next, this study does not adopt TAM, because of the following reasons. First, as TAM is designed to explain the adoption or use of a technology, it does not explicitly relate the technology to the competing alternatives from which consumers can choose. In this way, TAM deals with the Internet in isolation of the offline channel. Although PU refers to the *relative advantage* of using the Internet (i.e. the extent to which Internet shopping saves

time and increases shopping effectiveness) compared to an implicit standard, it does not make explicit the tradeoffs consumers have to make. Second, TAM focuses heavily on the perceptions of using the technology itself, underexposing the role of retailers. It implicitly assumes that e-tailers do not differ in their performance, when predicting online channel adoption. Third, the concept of PU is very broad (i.e. it actually refers to utility), and it does not distinguish between improving outcome quality and/or saving time and effort. Thus, it is unclear whether consumers perceive the Internet to be more useful because of superior products or assortments, better service, lower prices or time savings. Retail literature treated these elements as separate constructs (cf. Baker et al. 2002), providing retailers with more specific insights for improvement. Despite TAM predicts E-Commerce adoption and use to a large extent, it offers little insights in why consumers are motivated to shop online. Although a few studies explored the antecedents of TAM's key variables in the online context (Childers et al. 2001; Lee et al. 2000; Monsuwé et al. 2004; Pavlou 2003), relatively little is known about what constitutes PU, PEOU and enjoyment. Thus, TAM's strength particularly lies in its predicting power instead of its explaining power.

2.4 E-quality, E-value, E-satisfaction and E-loyalty

Marketing literature used the concepts of quality, value, satisfaction and loyalty to explain online behavior. The concepts of perceived quality (e.g. Parasuraman et al. 1985; 1988), perceived value (Bolton and Drew 1991), customer satisfaction (e.g. Oliver 1981), and customer loyalty (e.g. Morgan and Hunt 1994; Reichheld 1996; Sirohi, McLaughlin and Wittink 1998) have been identified as key influencers of purchase intentions and actual purchases (e.g. Taylor and Baker 1994) and as important indicators for offline retailers' success (e.g. Bolton 1998). These consumer judgments can be made before, during or after purchase and consumption and are likely to be important in the online context as well. Perceived quality refers to the performance, excellence or superiority of the product or service (e.g. Zeithaml 1988). Translating it to online retailers, perceived quality refers to the extent to which the website facilitates effective and efficient shopping, purchasing and delivery (Parasuraman et al. 2005; Zeithaml et al. 2002). Perceived quality is often found to be a precursor of perceived value (e.g. Parasuraman et al. 2005; Bolton and Drew 1991) and, sometimes, satisfaction (cf. Cronin, Brady and Hult 2000; Oliver 1993; Spreng and

Mackoy 1996). Perceived value refers to the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given (Zeithaml 1988). It takes into account all perceived monetary and nonmonetary costs and benefits. Perceived value is more personal and individualistic than perceived quality (Zeithaml 1988). Customer satisfaction is the result of a comparison between consumer's prior expectations and the perception of what is actually received (Oliver 1980); it is universally agreed to be a postpurchase and/or postuse evaluation (e.g. Fornell 1992; Oliver 1981). Consequently, most authors agree that perceived value is an antecedent to satisfaction (Woodall 2003; Woodruff 1997), although some authors argue that satisfaction is an antecedent to perceived value (Bolton and Drew 1991). Satisfaction refers to the cognitive and affective response (favorable versus unfavorable) (Westbrook and Oliver 1991), whereas perceived quality and perceived value are more cognitive in nature (Woodall 2003). Recent studies on perceived value, however, included emotional aspects as well (cf. Sweeney and Soutar 2001), making it more difficult to distinguish between the concepts. Satisfaction and loyalty are also distinct concepts (Bloemer and Kasper 1995; Oliver 1999). It is possible for a consumer to be loyal without being highly satisfied (e.g. when limited alternatives are available). Customer loyalty refers to the attitudinal and behavioral response towards a store or a brand expressed over time by consumers (Bloemer and Kasper 1995; Dick and Basu 1994; Jacoby and Chestnut 1978). This study uses the term to indicate the loyalty towards specific online and offline outlets and not towards channels as a whole (cf. Gehrt and Yan 2004; Keen et al. 2004).

The marketing literature still has not reached consensus about the causal relationships between quality, satisfaction, perceived value, and repurchase/loyalty intentions (cf. Cronin et al. 2000; Dabholkar, Shepherd and Thorpe 2000; Duman 2002). Perceived value and satisfaction have both been found to be predictors of repurchase or loyalty intentions (e.g. Bolton and Drew 1991; Dabholkar et al. 2000; Grewal, Monroe and Krishnan 1998). Next, some authors argue that satisfaction is an antecedent of perceived value (e.g. Bolton and Drew 1991; Naylor 1996) by arguing that perceived value is a higher-order variable that results from post-purchase evaluations, whereas others argue that satisfaction is more strongly related to future behavior and perceived value only acts as a predictor of satisfaction (e.g. Cronin et al. 2000). Based on the work of Oliver (1999) and Woodall (2003), it can be assumed that satisfaction and perceived value affect each other through

the more or less parallel and/or transmutant existence of both constructs in the consumers' evaluation process.

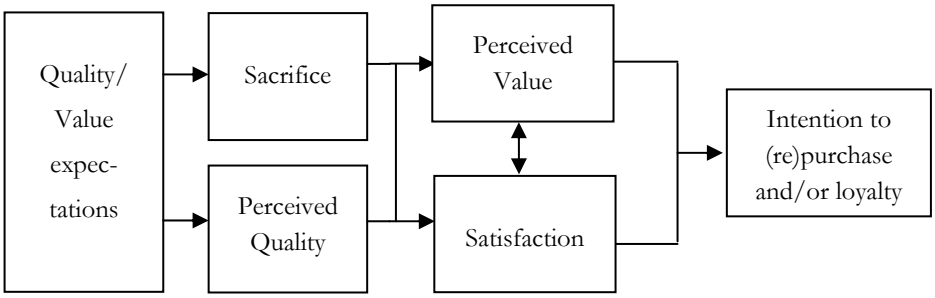


Figure 2.2: Relationships between quality, value, satisfaction and loyalty

Marketing researchers have attempted to measure (the antecedents of) quality and value perceptions, satisfaction and loyalty in online settings. Some authors argued that online and offline environments present different shopping experiences and that existing concepts and antecedents need to be adapted to the online context (Wolfinbarger and Gilly 2003). To better understand the underlying forces that determine online purchase intentions, this study reviews the e-quality, e-satisfaction, and e-loyalty literature with regarding purchasing.

2.4.1 Determinants of E-quality

Researchers used different connotations for defining e-quality. This section reviews the literature to identify the components and/or antecedents of e-quality. In doing so, the criteria emerge that consumers use to form their evaluations of e-quality. Although Loiacono et al. (2002) mainly focused on the quality of the interactions with the website rather than predicting purchase intentions, they included elements that refer to the relative performance of the website compared to other channels in delivering services online (i.e. online completeness, better than alternative channels). They use Fishbein and Ajzen's (1975) Theory of Reasoned action and Davis' (1989) TAM as a starting point. Customer service was initially identified as important influencer of website quality, but it was dropped because the sample was expected to have problems in expressing their thoughts, due to the absence of multiple interactions with the e-tailer. Their final website quality measure, WebQual™ contains twelve dimensions that relate to four overlapping constructs: ease of use, usefulness, entertainment, and complementary relationship (consistent image, better

than alternative channel, online completeness). The results showed that WebQual™ is highly correlated with intention to revisit the website (ϱ=.53) and intention to purchase (ϱ=.56).

Wolfinbarger and Gilly (2003) developed a reliable and valid scale of e-tail quality: eTailQ. They define e-quality as the perceived quality derived from the beginning to the end of the transaction, including information search, website navigation, ordering, customer service interactions, delivery and satisfaction with the ordered product. They excluded price, as it was not seen as part of the quality of the online experience. The analysis suggests four underlying factors: website design, fulfillment/reliability, privacy/security, and customer service. The four factors are defined as follows:

- *Fulfillment/reliability* is (a) the accurate display and description of a product so that what consumers receive is what they thought they ordered, and (b) delivery of the right product within the time frame promised.
- *Website design* includes all elements of the consumer's experience at the website (except for customer service), including navigation, information search, order processing, appropriate personalization and product selection.
- *Customer service* is responsive, helpful, willing service that responds to consumer inquiries quickly.
- *Security/privacy* is security of credit card payments and privacy of shared information.

They also link these factors to overall quality of the purchase experience, satisfaction, loyalty intentions and attitude towards the website, and concluded that their scale is a good predictor of these constructs. It appears that website design and fulfillment/reliability generally have the strongest impact on these judgments, whereas security/privacy and customer service play a lesser role. However, the authors note that security/privacy is highly correlated with website design (ϱ=.82); thus, it seems that security/privacy judgments are made on website elements, such as the professional look and feel of the website, as well as functionality of a website, and company reputation.

Zeithaml et al. (2000; 2002) conceptualized e-quality as "the extent to which a Web site facilitates efficient and effective shopping, purchasing, and delivery of products and services." In their definition, they clearly underline the importance of the utilitarian aspects

of online shopping. These authors argued that compared to the original SERVQUAL (Parasuraman et al. 1985; 1988), additional dimensions were needed to fully explain consumer evaluations of e-services. Initially, they derived 11 factors that consumers consider when evaluating e-SQ: access, ease of navigation, efficiency, flexibility, reliability, personalization, security/privacy, responsiveness, assurance/trust, site aesthetics, and price knowledge (Zeithaml et al. 2000). In a later study, they synthesized the extant literature and concluded the following concepts to be important: ease of use, information availability and content, privacy/security, and other criteria (access, responsiveness and personalization) (Zeithaml et al 2002). Still later, Zeithaml and her colleagues (Parasuraman et al. 2005) derived four dimensions –efficiency, system reliability, fulfillment, and privacy– forming the core service scale. In addition, they address three dimensions that only become salient when online customers have questions or run into problems, including responsiveness, compensation, and contact. The more insecure online environment causes a strong emphasis on service recovery. The authors also link the core scale with the well-known customer judgments, and find that efficiency and fulfillment are the dominant predictors, whereas system reliability (correct functioning of website) and privacy are of less importance.

2.4.2 Determinants of E-value

Chen and Dubinsky (2003) developed a model based on the existent perceived value literature (Dodds, Monroe and Grewal 1991; Sweeney, Soutar and Johnson 1999; Zeithaml 1988) and specific factors that make up the online shopping experience, including ease of use, informativeness, and customer service. Moreover, they introduced e-tailer reputation as a reducer of perceived risk. Surprisingly, e-tailer reputation did not significantly reduce risk perceptions, but this was explained through the low-risk products (i.e. books) that were bought by the respondents. Perceptions of product quality, price and the online shopping experience all equally affected perceived value. Perceived value, in turn, strongly affected online purchase intentions. The proposed model explained 37% and 24% of the total variance in perceived value and purchase intentions. The authors demonstrated that the traditional predictors of perceived value were also applicable to the online context.

2.4.3 Determinants of E-satisfaction

Several researchers investigated the determinants of satisfaction with online purchasing (Balasubramanian, Konana and Menon 2003; Evanschitzky et al. 2004). Szymanski and Hise (2000) selected several key factors and determined their influence on e-satisfaction. They concluded that convenience, website design (i.e. website is fast, uncluttered, and easy to navigate) and security of financial transactions are the dominant contributors of e-satisfaction. Merchandise perceptions, i.e. product information and product offerings, are of lesser significance to e-satisfaction. In a replication study performed by Evanschitzky et al. (2004), convenience and website design again appeared to be the dominant drivers of satisfaction, underling the importance of these factors in the online context.

Balasubramanian et al. (2003) investigated customer satisfaction for online investing. The investor's cumulative satisfaction with the online broker depends on perceptions of *price level*, *operational competence* (the online broker's ability to deliver high levels of day-to-day operational performance) and *trustworthiness* (reputation of and trust in the online broker). Trustworthiness of a particular broker, in turn, was determined by operational performance and environmental security (general trust in online brokers). The results showed, somewhat surprisingly, that general trust in online brokers had the biggest impact on e-satisfaction, followed by the online broker's operational excellence and trustworthiness. Price levels appeared to have the least impact on e-satisfaction. Online brokers can improve e-satisfaction by improving their individual performance and through collectively improving the general trust in online brokers.

2.4.4 Determinants of E-loyalty

Customer loyalty here refers to the attitudinal and behavioral responses customers have towards online and offline retail outlets (cf. Parasuraman et al. 2005). Srinivasan et al. (2002) identified eight antecedents that could potentially impact loyalty, including customization, contact interactivity, care, community, convenience, cultivation, choice and character. Results show that all these factors, except for convenience, impact loyalty. The eight factors are represented below:

- *Customization*: the ability of an e-tailer to tailor products, services and the transactional environment to its individual customers

- *Contact interactivity*: the availability and effectiveness of customer support tools on a website, and the degree to which two-way interactivity with customers is facilitated
- *Cultivation*: the extent to which an e-tailer provides relevant information and incentives to its customers in order to extend the breadth and depth of their purchases over time
- *Care*: the attention that an e-retailer pays to all the prepurchase and postpurchase customer interface activities designed to facilitate both immediate transactions and long-term relationships
- *Community*: the extent to which customers are provided the opportunity and ability to share opinions among themselves through comment links, buying circles and chat rooms sponsored by the e-tailer.
- *Choice:* the ability of an e-tailer to offer a wide range of product categories and a great variety of products to its customers
- *Character:* an overall image that the e-tailer projects to consumers through the use of inputs such as text, style, graphics, colors, logos, and the slogans on the website
- *Convenience:* the extent to which customers feel that the website is simple, intuitive and user friendly.

Although some of the factors are typical for the online context (e.g. community), most of these factors are also applicable to the offline context in order to stimulate loyalty. For example, employees can provide customized recommendations to customers stimulating customization and contact interactivity, while direct mailings can enhance care and cultivation. The factors that affect loyalty online and offline appear similar (cf. Reichheld and Schefter 2000), although the cost-effectiveness of channels in stimulating customer loyalty may differ.

Prior research frequently identified satisfaction as a predictor of loyalty in the offline context (Bolton 1998; Hellier et al. 2003; Mittal and Kamakura 2001). Anderson and Srinivasan (2003) found that the relationship between satisfaction and loyalty holds for the online context as well. Shankar et al. (2003) also linked satisfaction with loyalty; they investigated the levels of satisfaction and loyalty for hotel visits for online and offline bookers. They performed two studies; the first study investigated a group of customers

who had used both the online and offline channels, whereas the second study investigated online versus offline bookers for the same hotel chain. They did not find any significant main effect of the online channel on the levels of satisfaction; thus, whether the service was booked online or offline did not affect satisfaction with their hotel visits. However, online bookers were more loyal than offline bookers. The authors reason that consumers who use the online channel gain greater control over information and choice, leading to higher loyalty online. With the use of hotel websites, it is expected that consumers can make more informed decisions with less surprises. As a result, customers' confidence in the retailer increases, which builds 'fortitude' that prevents encroachment by competitive forces (Oliver 1999). Verhoef and Donkers (2005) also found evidence that the online channel itself has a positive effect on customer loyalty.

Past research also identified perceived value as predictor of loyalty (Cronin et al. 2000; Sirohi et al. 1998) Chen, DeVaney and Liu (2003) investigated the relationships between perceived value components and e-loyalty. They addressed that perceived value consists of three components: (1) value for money (based on relative price, merchandise quality and customer service), (2) trust (based on merchandise quality, customer service, safety and order fulfillment), and (3) shopping efficiency (based on order fulfillment). These three components were related to e-loyalty intentions. Shopping efficiency had the strongest impact on e-loyalty intentions, followed by trust and value for money.

Prior studies performed on the determinants of e-quality, e-value, e-satisfaction and e-loyalty provide useful insights into the factors that influence consumers' online shopping intentions. Studies on e-quality show that website design (navigation, layout, system reliability), efficiency (convenience, efficiency) and fulfillment/reliability are very important in explaining online intentions. Next, informativeness, security/privacy, and customer service (responsiveness, contact, compensation) are also of importance, albeit to a smaller extent. E-value literature identified similar determinants for explaining perceived value, including valence of the online shopping experience (ease of use, informativeness, customer service and efficiency), price and product quality. E-satisfaction studies showed that website design and ease of use were the dominant predictors of satisfaction, whereas security and merchandise perceptions (product information and product offerings) were of less significance. In another study, the general trust in e-tailers and the e-tailer's operational

competence largely determined satisfaction. E-loyalty literature also provided useful insights, but mainly confirmed the positive relationship between e-satisfaction and e-loyalty. All customer judgments are predominantly based on perceptions of the performance of the retailer (trust, reputation, price, service quality, merchandise quality) and the quality of the website interaction (ease of use, navigation, graphic style, informativeness). Note that some factors (e.g. informativeness, ease of use, and risk) are jointly determined by channel factors and retailer factors.

Despite some authors have stressed the unique capabilities of the Internet (e.g. Chen and Dubinsky 2003; Srinivasan et al. 2002), most studies find evidence that traditional evaluation criteria (e.g. convenience, information provision, price, merchandise quality, service quality, trust, and risk) also –to a large extent– explain online behavior. The Internet's unique capabilities to effectively build communities, provide interactivity through e-mail and chat, and apply personalization on a mass scale at low costs have not yet caused a dramatic shift in consumer behavior (cf. Wolfinbarger and Gilly 2003).

2.5 Determinants of channel use and channel preference

Apart from studying the determinants of online attitudes and shopping behavior, other studies have focused on the predictors of the use of and preference for the online channel versus other retail formats (e.g. catalog, stores). This field of research is more in line with this study, as it does not deal with the online channel in isolation of other channels. Moreover, this field of research proclaims that online shopping should be seen in the light of other general variables that are distinct from the channel itself. Most authors in this field agree that channel choice depends on *consumer factors* (e.g. socio-demographics, shopping orientations, lifestyle, past behavior), *retailer factors* (e.g. trust/reputation, merchandise, service), *product factors* (e.g. complexity, product risk), *channel factors* (e.g. ease of use, accessibility, channel risk), and *situational factors* (e.g. time availability, weather, mood) (e.g. Black et al. 2002; Gehrt and Yan 2004; Girard et al. 2003; Li et al. 1999). Table 2.1 shows the factors that were investigated in several studies performed in this field.

Table 2.1: General factors affecting channel preference

Study	Subject	Consumer factors	Retailer factors	Product factors	Channel factors	Situational factors
Black et al. (2002)	Influencers of channel choice	Demographics Shopping orientations Lifestyle Past behavior	Image Size Longevity Channel range	Complexity Price Product risk	Accessibility Channel costs Convenience Personal contact Channel risk	
Swaminathan et al. (1999)	Degree of online shopping	Shopping orientations	Reliability Convenience Price competitiveness Informativeness		Security Privacy	
Li et al. (1999)	Likelihood of online shopping	Demographics Shopping orientations Channel knowledge			Communication Distribution Accessibility	
Nicholson et al. (2002)	Preference for store, catalog and online shopping	Shopping orientations		Hedonic vs. functional	Accessibility Convenience Distribution Shopping experience	Shopping task
Girard et al. (2003)	Preference for online shopping	Demographics Shopping orientations		Search vs. Experience vs. Credence		
Gehrt and Yan (2004)	Channel preference for Internet, catalog, store	Demographics Past behavior	Transaction service Merchandise Retailer personality Price	Search vs. Experience		Time availability Shopping task

Consumer factors that have been studied to understand channel preference are classified according to socio-demographics, lifestyle/psychographics, past behavior and shopping orientations. The findings on socio-demographics initially showed that online shoppers tend to younger, wealthier, better educated, and are more likely to be male (Korgaonkar and Wolin 1999; Girard et al. 2003; Kwak, Fox and Zinkhan 2002; Li et al. 1999). Recent research, however, suggests that the online population is moving from elite to mainstream (Forsythe and Shi 2003; Gehrt and Yan 2004) and that demographics are less suited for explaining why consumers (do not) use channels (cf. Dabholkar and Bagozzi 2002; Gehrt and Yan 2004). Online shoppers have a 'wired' lifestyle with scarce leisure time (Lohse, Bellman and Johnson 2000; Swinyard and Smith 2003) and will prefer the more convenient, easily accessible online channel (Black et al. 2002). Additionally, online

shoppers possess an internal rather than an external locus of control (Hoffman et al. 2002), and act more goal-directed rather than experiential (Wolfinbarger and Gilly 2001). They have more experience with and knowledge of computers and the Internet (Bhatnagar, Misra and Rao 2000; Girard et al. 2003; Li et al. 1999), and are more technology ready (Parasuraman 2000). As a result, they are more confident in using the online channel for their purchasing (Black et al. 2002). Shopping orientations refer to the general predisposition toward buying behavior and may help explaining the preference for a shopping retailer format (Girard et al. 2003; Korgaonkar 1984). A number of shopping orientations have been used to distinguish between online and offline shoppers. These shopping orientations implicitly address the reasons why consumers shop, i.e. recreational shoppers seek fun, economic shoppers seek low price, and convenience shoppers seek time and effort savings. Table 2.2 shows the results of prior studies that investigated the influence of shopping orientations on online shopping. A positive relationship (+) shows that the shopping orientation positively affects the likelihood of online shopping or that it discriminates between online and offline shoppers. For example, Li et al. (1999) found that compared to offline shoppers, online shoppers were stronger motivated by convenience (column A), but had a less strong need for tactile information prior to purchase (column I). The need for recreational shopping and price consciousness did not explain differences between online and offline shoppers (columns B and C).

Prior studies show mixed results. It appears that online shoppers have a strong need for convenience, but do not have a strong need for social interaction, for the physical examination of the product prior to purchase, nor for the immediate possession of the product. Whether shoppers are motivated by variety (variety-seeking tendency), price (price consciousness), best buys (economic orientation), impulse buying (impulsiveness), shopping enjoyment (recreational orientation), brands (brand consciousness) does not consistently impact the likelihood of online shopping. Although shopping orientations studies provide useful insights into the motivations of online shoppers, they do not capture the richness of why people shop online, as the number of shopping orientations in empirical settings is often limited. Although it becomes clear which type of shoppers tend to prefer which channel, the tradeoffs consumers make are largely ignored. For example, convenience shoppers tend to use the Internet –predominantly- for its related time and effort savings, but it is not clear what they give up to attain these time and effort savings.

Table 2.2: Shopping orientations affecting likelihood of online shopping

Study	A	B	C	D	E	F	G	H	I	J
Donthu and Garcia (1999)	+		n.s.	+	n.s.	+	n.s.			
Eastlick and Lotz (1999)	+	-	n.s.			n.s.	n.s.			
Girard et al. (2003)	+		+	n.s.	n.s.	n.s.				
Li et al. (1999)	+	n.s.	n.s.						-	
Rohm and Swaminathan (2004)	+		n.s.	n.s.				-		-
Swaminathan et al. (1999)	+							-		

A Convenience orientation: shoppers prefer to shop with minimum amount of time and effort
B Economic orientation: shoppers prefer to comparison shop for best buys (good quality/price ratio, wide selection)
C Recreational orientation: shoppers prefer to shop for enjoyment
D Variety-seeking tendency: shoppers prefer to shop for different and new products
E Price-consciousness: shoppers have a strong need to get the lowest price
F Impulsiveness: shoppers have a strong need to purchase with no advance planning
G Brand consciousness: shoppers have a strong need to buy brand name products
H Social interaction orientation: shoppers have a strong need to socialize
I Tactile information orientation: shoppers have a strong need to experience (e.g. feel, see, touch) products before buying
J Immediate possession orientation: shoppers have a strong need to immediate possess the product purchased

Retailer factors (i.e. online and offline retailer's offerings and competencies) also influence channel choice. The more positive the consumer's perceptions are towards the online/offline retailer's capabilities, the more likely the corresponding channel will be chosen. Prior studies identified the following influencers of channel choice: retailer's reliability, convenience, price competitiveness, informativeness and merchandise (Black et al. 2002; Swaminathan et al. 1999; Gehrt and Yan 2004). Next, as the online channel is more novel and risky, consumers will use trust and reputation as risk relievers in channel selection. Consequently, the size, longevity and range of channels are seen as influencers of online channel preference (Black et al. 2002).

Product factors have a strong impact on channel choice and channel preference (Black et al. 2002; Gehrt and Yan 2004; Keen et al. 2004; Nicholson et al 2002). More expensive, risky and complex products are less amenable to be sold through the online channel, as these products often require personal interaction with employees (Black et al. 2002). The Internet is particularly preferred for relatively standardized products and repeat purchases (Nicholson et al. 2002). Hedonic products are more likely to be sold through the offline

channel, as this channel is better capable of addressing the need for a prolonged and social experience (Nicholson et al. 2002). Products that require physical examination are naturally more suited to be sold through the offline channel (Nicholson et al. 2002; Girard et al. 2003; Gehrt and Yan 2004). In this respect, the classification of search, experience and credence goods is often used (Girard et al. 2003; Gehrt and Yan 2004). For example, consumers who shop for clothing (experience good) tend to find the traditional store most appropriate, followed by the catalog and the Internet (Gehrt and Yan 2004).

Clearly, the performance of the channel itself impacts channel choice. *Channel factors* that have been proposed to influence channel choice include the channel's accessibility and convenience, communication utility, distribution utility, risk (privacy and security), ability to provide personal contact and shopping experience (Black et al. 2002, Li et al. 1999; Nicholson et al. 2002; Swaminathan et al. 1999). Online shopping is generally valued for its convenience and accessibility, and its time and effort savings. Nicholson et al. (2002) found that an increase in consumers' cognitive effort, however, balances these temporal benefits. A final reason for the online shopping preferences is to avoid sales personnel. Offline shopping preference was not strongly affected by the time and effort required when shopping for hedonic products, as "you go shopping to pass time, not to save it" (Nicholson et al. 2002). Catalog shopping was often preferred for its temporal convenience and the affective feelings derived from browsing the catalog and purchasing something special. The ease of browsing and the related feelings of escapism were the dominant drivers of catalog preference. Consumers did address that the delivery delays and errors were detrimental aspects of catalog shopping (Nicholson et al. 2002).

Situational factors impact channel choice through altering the relative importance of evaluation criteria. For example, consumers with limited time available are more concerned with transaction service (shopping convenience and reliability) and merchandise quality, than with retailer personality (shopping atmosphere and retailer familiarity) and are most likely to prefer catalogs, followed by the Internet and traditional stores (Gehrt and Yan 2004; Maher, Marks and Grimm 1997). Consumers tend to prefer to shop offline, when they feel a need to socialize and when the purchase is for themselves rather than for others (gift giving) (Gehrt and Yan 2004; Nicholson et al. 2002), whereas they prefer to shop online for the lack of social interaction when mood is low (Nicholson et al. 2002).

Prior studies suggest that consumers in general still prefer to shop through the physical stores rather than through the online channel and catalog (Gehrt and Yan 2004; Keen et al. 2004; Nicholson et al. 2002). However, in some circumstances other channels are preferred. Prior research also demonstrated that channel choice is a complex issue with multiple interactions (cf. Black et al. 2002). Product-channel interactions appear, as the type of product (e.g. search versus experience good) can strongly influence the preference for a channel. Consumer-channel interactions are present as the consumer's level of prior experience and expertise affects the channels suitability and preference. Retailer-channel factors may also be apparent; for example, consumers may prefer to shop online because they believe that e-tailers hold superior assortments, because of different cost-structures (cf. Brynjolfsson et al. 2003). Finally, situational factors can also impact the preference for channels; consumers with little time available often prefer the most convenient channel.

Although these studies on channel use and preference provide very useful information about why consumers adopt a channel, they are very general and mostly neglect the fact that retailers' performance within a channel can differ. They often compare channels in its own right rather than stores belonging to a channel. In other words, similar to the TAM studies, they implicitly assume that all retailers pertaining to one particular channel are alike in terms of their offerings. It might be true that consumers prefer a channel, because they like a particular retailer that happens to belong to that channel. Nicholson et al. (2002) controlled for this by analyzing consumers' motivations to buy via different channels for the same retailer. In a similar vein, Montoya-Weiss, Voss and Grewal (2003) investigated how consumers evaluate the use of the online and offline channel for the same retailer. They conducted two studies to investigate the determinants of online channel use with a multichannel service provider. They argue that consumers base their online channel use on the relative assessment of the service quality provided by the online and the alternative (offline) channel, and on online channel risk perceptions. In their model, online service quality is determined by the following website design criteria: navigation structure, information content and graphic style. Channel risk perceptions are influenced by information content and graphic style and general Internet expertise. The authors argue that offering multiple channels to consumers may have both competitive and complementary effects: competitive in that higher perceived service quality of one channel over another will lead to channel *preference*; complementary in that higher perceived service

quality will lead to higher overall *customer satisfaction* with the service provider. The results suggest that consumers' use of online channel and overall satisfaction is determined by three website design factors (navigation structure, information content, and graphic style) and two sets of consumer evaluations (relative service quality and risk). In addition, changes in the service quality in either channel impact online channel use and overall satisfaction. This result indicates that consumers partially base their online channel use on the performance of alternative channel. Figure 2.3 shows the model and the tested relationships.

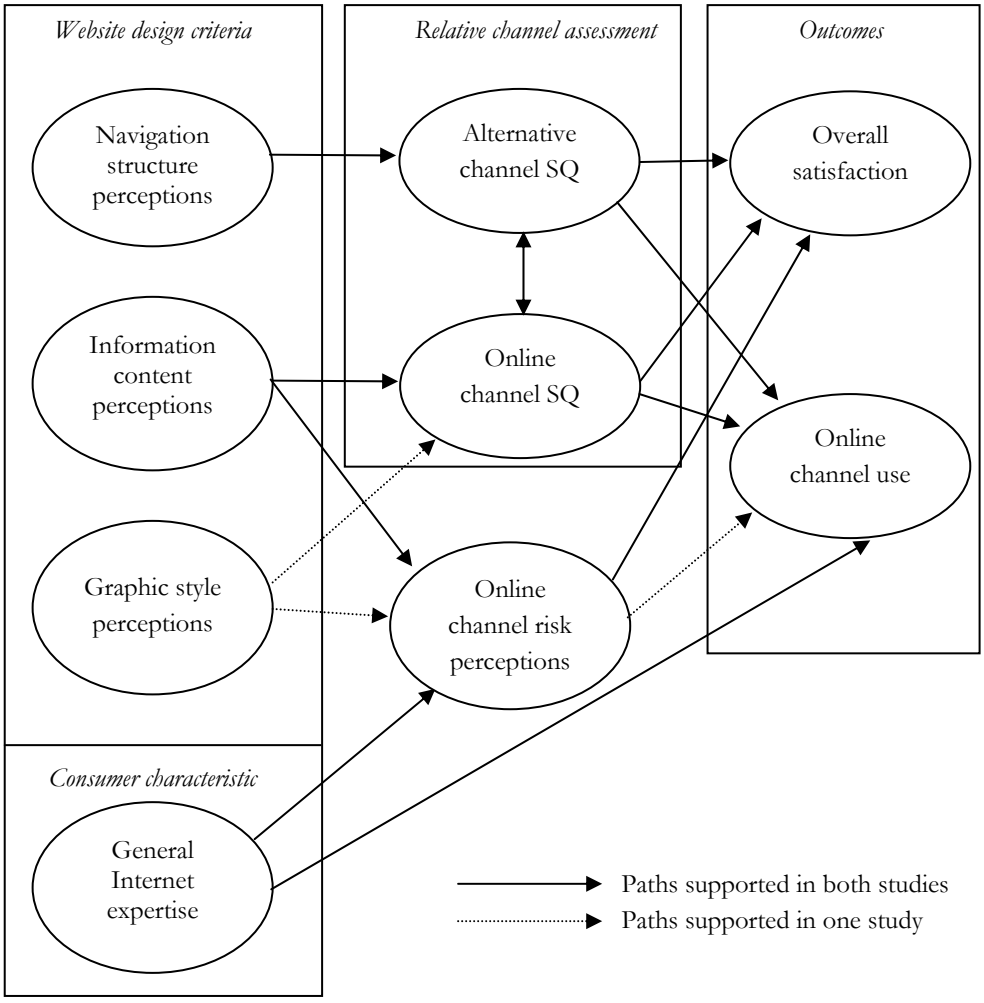


Figure 2.3: Determinants of online channel use (Montoya-Weiss et al. 2003, p. 450)

2.6 Common or unique determinants?

With the advent of the Internet, many authors were primarily interested in demonstrating the differences between online and offline shopping (Alba et al. 1997; Butler and Peppard 1998; Häubl and Trifts 2000). The decision to shop online or offline is the same as the decision to buy through an online or offline store. As such, scholars have investigated whether the evaluative criteria (i.e. store attributes) of offline retailers differ from those of online retailers. According to Chen and Dubinsky (2003) there are predictors of value that are unique to the online context, including ease of use, informativeness, and reputation. However, all of these variables have already been identified in the offline context as components of store image and influencers of consumer behavior (Berry 1969; Lindquist 1974). In a similar vein, Lim and Dubinsky (2004) argued that online stores have unique attributes vis-à-vis offline stores, such as navigation and interactivity (i.e. customer support, personal-choice helper, surfer postings). Again, a closer investigation shows that the attributes refer to traditional ones: navigation resembles store layout, which has long been identified as important store attribute in the offline retail context (Berry 1969), whereas customer support and personal choice helper relate to aspects of customer service (Dabholkar et al. 1996), and surfer postings could be interpreted as an information source similar to word-of-mouth. Wolfinbarger and Gilly (2002) attenuated the uniqueness by arguing that although some store attributes are common to the online and offline stores (e.g. merchandise assortment, service policies, layout and reputation), others are not (e.g. clientele). Based on a review of store attributes, Lohse and Spiller (1998; 1999) early identified that consumers to a great extent consider the same attributes to compare online stores with offline stores. This study questions the uniqueness of the store attributes and determinants of online shopping. Appendix II provides a classification of store attributes, which is based on prior offline studies, and inserts the store attributes found in online studies. Appendix II shows that online and offline retailers to a great extent share common evaluative criteria. Although the lower-level attributes may appear different (e.g. website interface versus physical store setting, navigation versus store layout), it is posed that consumers evaluate online and offline shopping on the same criteria at a slightly higher abstract level (i.e. store attribute level). Consumers may attribute different scores and different weights to online and offline store attributes, but the most relevant attributes for shopping are common to both channels (cf. Verhoef et al. 2005). For example, due to

higher risk perceptions, trust plays a more important role online. However, both risk and trust play a significant role offline (Doney and Cannon 1997; Sweeney et al. 1999).

2.7 Conclusion

This chapter reviewed the literature to investigate the determinants of online purchasing. The motivations and impediments to shop online were first discussed. On balance, online shoppers tend to shop online for reasons of ease of use/convenience, increased selection/specialty merchandise, availability of relevant information, lack of sociality which results in more control. The reasons not to shop online are mainly due to the higher risk levels. In this respect, reputation and trust are often mentioned as facilitators of online purchasing. For physical products, consumers may also refrain from online shopping because of the impossibility to physically examine the product prior to purchase, the additional delivery time, and difficulties in returning faulty merchandise. Next, a review of TAM literature showed that adaptations of TAM are well capable of predicting E-Commerce adoption, but are less capable of clearly explaining why consumers shop online. TAM studies demonstrated the importance of perceived enjoyment, risk and trust as important predictors of online purchase intentions. Subsequently, the predictors of e-quality, e-value, e-satisfaction, and e-loyalty were reviewed. These important consumer judgments addressed that evaluations of channel factors (interactions with the website), as well as retailer factors (offerings/capabilities of the retailer) explained purchase intentions. The predictors of these online consumer judgments largely resembled those found in offline studies. Then, the determinants of online channel use and preference were investigated. This field of research tries to understand online shopping at a more abstract level by relating it to other retail shopping formats and by incorporating consumer, retailer, product, and situational factors. Channel choice is by definition more complex than product and store choice and should be seen in the context of these variables. The studies conducted in this field, among other things, investigated the shopping orientations, which closely resemble the motivations to shop online. Online shoppers have a strong need for convenience, but do not have a strong need for social interaction, for the physical examination of products prior to purchase, nor for the immediate possession. The use of shopping orientations to explain channel purchase intentions is, however, limited as it does

not show the tradeoffs consumers make. Another limitation is that these studies frequently treat channels as a whole, neglecting the fact that retailers may significantly differ in their offerings within a channel. Retailer factors clearly influence channel choice, as they substantially influence what and how the product or service is delivered. Differences in the retail offerings online versus offline play a profound role in explaining why consumers intend to shop through an online or offline retailer (cf. Montoya-Weiss et al. 2003). As it is hardly possible to include all factors that influence channel purchase intentions, this study decides to focus on two relevant factors: channel factors and retailer factors. Given a particular product, channel factors and retailer factors are expected to largely explain the motivations to use a channel.

Although past research has been very beneficial in identifying the determinants of online buying behavior, it largely ignored the issue of channel choice. Most studies consider the Internet in isolation of other channels (e.g. Wolfinbarger and Gilly 2003; Szymanski and Hise 2000). As a result, the performance of the Internet vis-à-vis other channels is largely disregarded; it only elicits the motivations to adopt/use the online channel. To better understand channel purchase intentions, it is desired to make explicit the options consumers consider. Additionally, it is desired not to treat channels as such, as it neglects the differences between retailers within the same channel (see above). This study tries to overcome these deficiencies by measuring the perceptions of buying through specific online and offline stores. Based on a comparison of online and offline store attributes, this chapter concluded that consumers consider the same criteria to evaluate online and offline stores, but that they may differ in their scores and the weights they attribute to evaluation criteria. In this respect, the concept of perceived value is chosen as it represents a tradeoff between all *perceived* costs and benefits, enabling comparisons between online and offline shopping. The next chapter provides a background on perceived value.

3 Perceived Value

It is essential to know *what* consumers value, before one can truly understand channel purchase intentions and channel choice. What do consumers really want from their online and offline shopping experiences? What attributes are most important in their judgments of value? What drives them to use one channel over another? This research proposes that the channel purchase intentions depend on the expectations of value, i.e. a tradeoff between the perceived benefits and costs derived from using channels for purchasing. To compare both channels from a consumer perspective, the concept of perceived value is chosen, as it represents a consumer's overall assessment of the utility based on perceptions of what is received and what is given (cf. Zeithaml 1988). Perceived value is expected to significantly influence channel purchase intentions, and by measuring its predictors, it can provide insights in how value is constructed in both channels. This chapter starts with a theoretical background on the definitions and nature of value. Next, it shows how consumers form their evaluations of value, followed by a classification of purchase-related costs and benefits. Finally, the chapter provides the main antecedents of perceived value and purchase intentions that are used as input to the conceptual model.

3.1 Theoretical background on value

There are many ways to describe value. Woo (1992) identified four general meanings of value for people. First, value is "what is of true worth to people in the broad context of the well-being and survival of individuals, and by extension, of the species as a whole" (p.85). Here value is reflected by the values consumers strive for in life, similar to the 'human values' of Rokeach (1973). Second, it means "what a society collectively sees as important…regardless of whether or not such highly valued objects of consumption really contribute to his or her well-being" (p.85). This is a more collective/objective

interpretation of value. Third, value refers to "what the individual holds to be worthwhile to possess, to strive or exchange for" (p. 85). In comparison with the second definition, this is more individual and subjective. Fourth, value refers to "the amount of utility that consumers see as residing in a particular object and they aim to maximize out of a particular act of buying or consuming (p. 85). This last definition refers to the value that is derived from the purchase, consumption and disposition of products and services. This study focuses on the fourth definition and extends it to the context of evaluating channels for purchasing. The next section provides a background on four different types of value.

3.1.1 Intrinsic, exchange, use and utilitarian value

Woodall (2003) reviewed the extensive literature on perceived value, or as he calls it 'value for the customer.' He used a historical perspective to describe how value has been treated in the fields of economics and philosophy. He distinguished four types of value (intrinsic, exchange, use, and utilitarian value), based on whether the value assessment is subject-based or object-based (i.e. individual vs. collective), and on whether value should be seen in light of market characteristics and/or consumer sacrifices. *Intrinsic value* refers to the objective-based value that resides within the product, independent from market circumstances. This objective value assessment is made when people analyze the intrinsic product characteristics before, or during use. In this respect, Frondizi (1971) argued that all objects have 'qualities' but if a quality is not valued, then it remains a quality. If it is valued, then it becomes an intrinsic value. *Exchange value* is also object-based, but influenced by market circumstances. For example, people attribute value to oil through an economic constant, which largely depends on the market circumstances (e.g. scarcity). *Use value* is subjective-based and is perceived as individuals evaluate the product during, or just after use. It is associated with the rewards persons individually derive from using the product, and is thus highly subjective. Finally, *utilitarian value* is also subject-based, but now refers to the point when intrinsic value and/or use value are compared with the sacrifice the person made in order to experience those forms of value. According to Woodall (2003), the utilitarian approach is to balance 'all the good and the bad.' Here value is seen as the outcome of a personal comparison of sacrifices and benefits, an outcome that is essentially utilitarian in nature. The utilitarian approach assumes that the value derived by one individual is likely to be different from the value derived by another, because of the

personal attribution of value. Value is here solely determined by the individual consumer (Woodruff 1997; Holbrook 1999), and only exists on the consumers' terms (Piercy 1997).

Figure 3.1 shows Woodall's (2003) conceptual model, which represents the different types of values and the impact of human values on these types of value. It is assumed that human values (e.g. quality of life, belongingness) guide consumers in their daily decision making by affecting the criteria by which value judgments are made. As such, human values are seen as influencers of value (Woodall 2003). The four types of value illustrate the diversity in meanings of value, and the difficulty of conceptualizing the concept of value (cf. Zeithaml 1988). Woodall complicates the issue of what constitutes value by arguing that "value is neither use, nor exchange; it is neither object-based, nor subject-based; it is neither my view, nor your view, it is all of these things." He proposes that the types of value may play a more (less) substantial role in the formation of value, according to the situation itself and the individual consumer's value system.

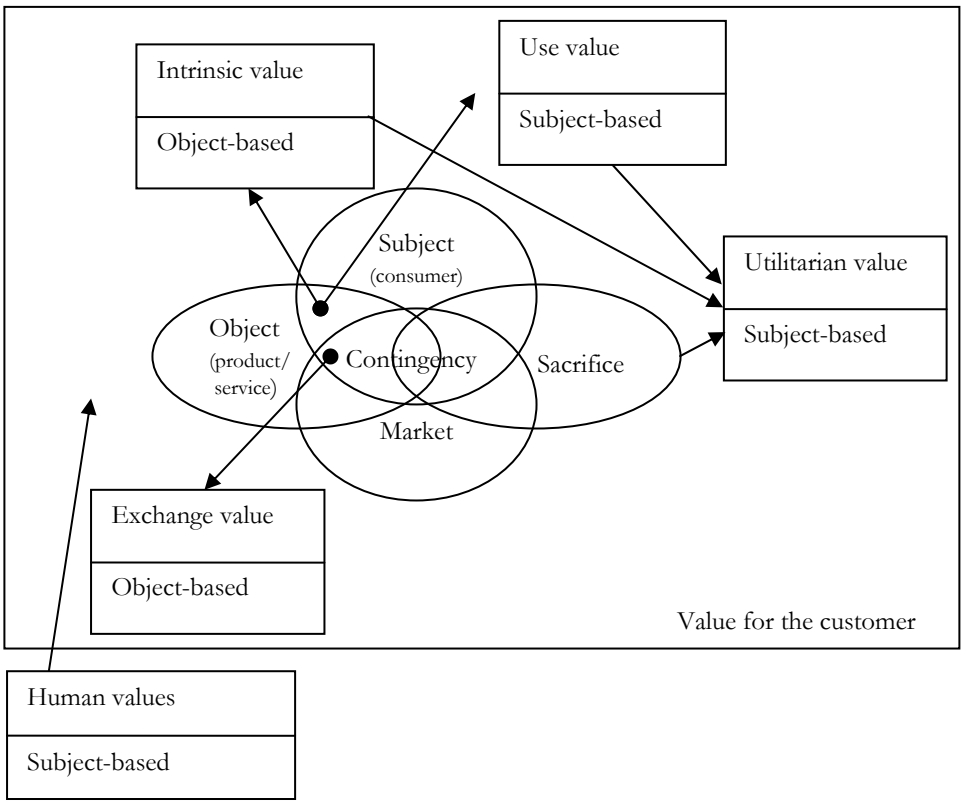


Figure 3.1: Intrinsic, exchange, use and utilitarian value (Woodall 2003)

3.1.2 Definitions of perceived value

Researchers used different terms to define the construct of perceived value, although most of them meant the same concept (Woodruff 1997). Based on ninety marketing-related articles, Woodall (2003) found eighteen different names for the value consumers derive from buying and using the product. The most commonly used marketing terms include *perceived value* (e.g. Chang and Wildt 1994; Dodds et al. 1991; Monroe 1990), *customer value* (e.g. Anderson and Narus 1998; Dodds 1999; Holbrook 1994; 1996; Oh 2000; Woodruff 1997), *value* (Berry and Yadav 1996; De Ruyter et al. 1997; Ostrom and Iacobucci 1995) and *value for money* (Sirohi et al. 1998; Sweeney et al. 1999). Less frequently used terms are *value for the customer* (e.g. Reichheld 1996), *value for customers* (e.g. Treacy and Wiersema 1993), *customer perceived value* (e.g. Grönroos 1997), *perceived customer value* (Chen and Dubinsky 2003; Lai 1995), *consumer value* (e.g. Holbrook 1999), *consumption value* (Sheth, Newman and Gross 1991), *buyer value* (e.g. Slater and Narver 1994), *service value* (e.g. Bolton and Drew 1991), *acquisition* and *transaction value* (Grewal et al. 1998; Parasuraman and Grewal 2000), *net customer value* (e.g. Butz and Goodstein 1996), *perceived service value* (LeBlanc and Nguyen 2001), *consumer surplus* (e.g. Brynjolfsson et al. 2003) and *expected value* (Huber et al. 1997).

Table 3.1 lists a number of definitions that have been used in the literature. Despite the varying terms and definitions, the following commonalities among these definitions stand out: (1) perceived value is inherent in or linked through the use to some product, service or object, (2) perceived value is something perceived by consumers rather than objectively determined, and (3) perceptions of value typically involve a tradeoff between what the consumer receives and what he or she gives up to acquire and use a product or service (Woodruff 1997).

Table 3.1: Definitions of perceived value

Author(s)	Definition
Chen and Dubinsky (2003, p. 326)	a consumer's perception of the net benefits gained in exchange for the costs incurred in obtaining the desired benefits
Holbrook (1994, p. 27)	an interactive relativistic consumption preference experience
Monroe (1990, p. 46)	a tradeoff between the quality or benefits they perceive in the product relative to the sacrifice they perceive by paying the price
Spreng, Dixon and Olshavsky (1993, p. 51)	a consumer's anticipation about the outcome of purchasing a product or service based on future benefits and sacrifices
Schechter (1984), cited in Zeithaml (1988)	all factors, both qualitative and quantitative, subjective and objective, that make up the complete shopping experience
Sirohi, McLaughlin and Wittink (1998, p. 228)	what you [consumer] get for what you pay
Woodall (2003, p. 21)	any demand-side, personal perception of advantage arising out of a customer's association with an organisation's offering, and can occur as reduction in sacrifice; presence of benefit (perceived as either attributes or outcomes); the resultant of any weighted combination of sacrifice and benefit (determined and expressed either rationally or intuitively); or an aggregation, over time, of any or all of these.
Woodruff (1997, p. 142)	a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goal and purposes in use situations
Woodruff and Gardial (1996: p. 20)	a customer's perceived perception of what they want to happen in a specific use situation, with the help of a product and service ordering, in order to accomplish a desired purpose or goal
Zeithaml (1988, p. 14)	a consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given

3.1.3 Context-dependent nature of perceived value

Previous research has unanimously confirmed the context-dependent nature of perceived value (Bolton and Drew 1991; Francis and White 2004; Holbrook 1994; Mathwick et al. 2002; Parasuraman 1997; Woodall 2003; Zeithaml 1988). That is, the construction of

perceived value differs between objects (product types), individuals, and circumstances (time, location, and environment).

Not only do consumers differ in their evaluation of value between products and services (Zeithaml 1997), but also regarding the evaluations of the same product (Overby, Gardial and Woodruff 2004; Zeithaml 1988). Even for the same product, individual consumers value different qualities, or the same qualities to different degrees (Heskett et al. 1997; Holbrook 1999; Parasuraman 1997; Spreng et al. 1993; Zeithaml 1988).

Even when the same individual evaluates value, he or she value may the product differently in time. Woodall (2003) explained that consumers can construct value before purchasing (ex ante value), at the point of purchase and/or direct experience (transaction value), after the purchase (ex post value), and after use/experience (disposition value). Other authors also classified types of value based on the timing of evaluation. Grewal et al. (1998a) distinguished between (1) acquisition value, (2) transaction value, (3) in-use value, and (4) redemption value. *Acquisition value* refers the consumer's net gain (or tradeoff) from acquiring the product or service. It is associated with the benefits consumers think they are going to receive by acquiring the product/service relative to the monetary costs given up to acquire the product. The predicted value is based on the expected benefits and costs related to product purchase, use and disposition. *Transaction value* can be derived at the point of purchase when consumers experience the pleasure of getting a good financial deal (Thaler 1985). Consumers may experience additional pleasure if they feel they get a bargain (e.g. was €200, now €150). *In-use value* involves the utility derived from using the product/service by evaluating the actual benefits and costs related to its use. Finally, *redemption value* relates to the residual benefit at the time of disposing the product or terminating the service (Grewal et al. 1998a). The nature and determinants of perceived value may change over the various consumer cycle stages (Parasuraman 1997); that is, the relative emphasis on each component may change over time. While acquisition and transaction value dominate the first stages, in-use and redemption value may become salient during later stages of product/service usage. Thus, the antecedents or components of perceived value will differently impact consumers' evaluations of value at different points within the consumption process (De Ruyter et al. 1997; Woodall 2003; Zeithaml, 1988).

In line with this reasoning, Woodruff (1997) explained that consumers may consider different attributes and consequences and value them differently in time, such as when purchasing versus when using a product. Purchasing involves choosing, and that requires consumers to distinguish between product alternatives and evaluate which alternative is preferred. In contrast, during or after use, consumers are more concerned with the performance of the chosen product in specific use situations. Gardial et al. (1994) showed that consumers at the time of purchase rely more on the product attributes than they do during or after use. During and after use, the consequences become more salient. Consumers then learn about value in the form of preferred attributes, attribute performances, and consequences from using a product[4]; they form evaluative opinions about the actual value of using a product, i.e. use value. Thus, during the choice task consumers predict value by relying heavily on the product attributes, whereas during use they evaluate value predominantly on the consequences of use. In this respect, Parasuraman (1997) put forward that the attributes that motivate a consumer's initial purchase of a product may differ from the criteria that define value during use right after purchase, which in turn may differ from the determinants of value during long-term use. Consumers update evaluations and the importance of criteria through sequential purchases (Bolton 1998). In a similar vein, the attributes that motivate a consumer's initial use of a channel may be different from the criteria after using it. More experienced online shoppers are better capable of predicting the consequences of online channel use, and may rely stronger on the consequences that can be attained by using that channel compared to less experienced online shoppers. Thus, it can be expected that differences exist in the construction of value between experienced and less experienced online shoppers. This study, among other things, tries to elicit these differences.

This research uses prepurchase value perceptions because, as such, consumers that have not used a particular channel are still capable of expressing their *expectations* of the use of that channel. Although they may have no experience with the exact consequences, they will probably have expectations about its use based on the channel attributes and opinions of others. These perceptions are likely to drive intentions and behavior. According to the

[4] Note that this particularly applies to experience goods where consumers can define the quality of the product after use (cf. Darby and Karni 1973). For credence goods, consumers face difficulties in evaluating quality even after multiple consumptions.

belief-updating paradigm (e.g. Bolton 1998), consumers who are familiar with online shopping form their expectations based on their prior experiences and current updates. These perceptions are likely to predict consumers' intentions. Recall from Chapter 2 that the predictors of attitude of using an information system change over time, as individuals start using the system. Pre-adoption attitude is based on a rich set of perceptions, including PU, PEOU, result demonstrability, visibility and trialability, whereas post-adoption attitude is only based on the instrumental beliefs of PU and image enhancements (Karahanna et al. 1999). Consequently, for both experienced and less experienced online shoppers, prepurchase expectations are likely to drive future purchasing intentions, and both shoppers may weigh these expectations differently to infer perceptions of value.

3.1.4 Multi-dimensional nature of perceived value

Apart from the context-dependent nature of perceived value, the literature also confirmed its multi-dimensional nature, referring to multiple axiological dimensions or components of value. Researchers tried to classify the underlying dimensions with regard to purchasing and consumption. A broad approach is offered by Sheth et al. (1991); they distinguished between five dimensions of value: (1) functional value (attributed-related, utilitarian benefits), (2) social value (social or symbolic benefits), (3) emotional value (experiential or emotional benefits), (4) epistemic value (curiosity-driven benefits), and (5) conditional value (situation-specific benefits). *Functional value* is concerned with the utility derived from the product quality and product performance. *Social value* is the utility derived from the product's ability to enhance social self-concepts, such as status. *Emotional value* refers to the utility derived from the feelings, or affective states that a product generates. *Epistemic value* refers to the surprise or novelty aspect of a product; a product's capacity to arouse curiosity, offer novelty or satisfy a desire for knowledge. *Conditional value* refers to the situation in which the value judgment is made. For example, specific situations such as Valentines Day and weddings can strongly enhance the perceptions of value. Products often deliver a mixture of these types of values. For example, wine can act as an occasion (conditional value) and/or celebration enhancement (emotional value), while also complementing meals and enhancing the taste of food (functional value). Moreover, consumers sometimes seek to heighten their status by being knowledgeable about wines and to create a favorable impression within a social atmosphere (social value). The

classification of Sheth et al. (1991) is characterized as benefit-driven because it only discusses the benefits without explicitly linking it with the costs consumers bear (Duman 2002).

Based on the classification of Sheth et al. (1991), Sweeney and Soutar (2001) developed a multiple item scale (i.e. PERVAL) to measure perceived value. They omitted conditional value and epistemic value, as they were seen as less critical for a *general* measure of perceived value. Conditional value was omitted because it arises from situational (temporary) factors, whereas epistemic value was left out because the novelty or surprise aspect might only be apparent for hedonic products rather than for a wider product range. Based on the work of Zeithaml (1988), they split up functional value into quality and price arguing that some consumers perceive value as low price, whereas others perceive value when there is a balance between quality and price. The two components (quality and price) have different effects on perceived value for different consumers. Consequently, the perceived value scale comprised four dimensions: quality/performance, price/value for money, emotional value and social value. The scale was tested based on the consumers' perceptions of a consumer durable and found to be reliable and valid in a prepurchase and postpurchase situation.

Other classifications have also been used to represent the axiological value dimensions. De Ruyter and his colleagues (De Ruyter et al. 1997; Lemmink, De Ruyter and Wetzels 1998) used the following value dimensions for services: emotional, practical and logical value. The emotional value dimension represents the emotional or affective side of the consumption experience, whereas the practical dimension refers to the functional consumption-related benefits. The logical dimension concentrates on the evaluation of the benefits against its costs (i.e. service quality vs. price). While the classification of Sheth et al. (1991) only discusses benefits, this classification takes into account the costs.

These classifications clearly broadened the concept of value by going beyond the functional value of purchasing and/or consuming products. It made clear that consumers also derive social, emotional and epistemic value from their shopping activities. These abstract value dimensions that were originally designed to elicit the product or service value dimensions can also be translated to a channel context. In doing so, functional value refers to the

instrumental product-related and shopping-related benefits and costs consumers obtain from using the channel, whereas the social value refers to the utility derived from the channel's capability to enhance social concepts, such as self-confidence and status. When consumers use channels for purchasing, they may also derive emotional value through experiencing affective feelings and/or epistemic value through surprises and curiosities. The value of using channels under specific situations can obviously attenuate or increase value (conditional value). Section 3.3 discusses the value dimensions that are taken into account in this study.

3.2 Consumers' formation of expected value

Although the axiological value dimensions are very beneficial in classifying the possible costs and benefits, they are rather abstract and do not show how consumers form judgments of *expected* value. Past research also tried to explain how consumers form value expectations of buying and using their products (cf. Woodruff 1997; Zeithaml 1988). Consumers are expected to purchase their products in order to help attaining their end goals or human values, such as quality in life, world at peace, and social recognition (cf. Rokeach 1973). Consumers form expectations of value based on lower-level abstractions in a means-end way: concrete attributes are the means to achieve the more abstract consequences, which are used to achieve the human values or end goals (cf. Howard 1977; Gutman 1982; Woodruff 1997; Zeithaml 1988). Figure 3.2 shows that goals are organized hierarchically with the consumer's end goals or human values at the highest level, the consequences in the middle, and product attributes at the lowest level (Parasuraman 1997; Woodruff 1997). *Attributes* are the concrete descriptions that show what the product entails/possesses. *Consequences* refer to the outcomes from these product attributes. These outcomes refer to what the product or object can do for the consumer; they can be both negative and positive (Woodruff and Gardial 1996). *Values* refer to the most abstract end goals or human values, and are linked with the consequences. Consumers have their own personalized set of human values, which guide them in their daily shopping behavior (Rokeach 1973; Woodall 2003). For instance, a consumer that scores high on being kind to the environment may refrain from buying a particular brand of batteries that is harmful to the environment.

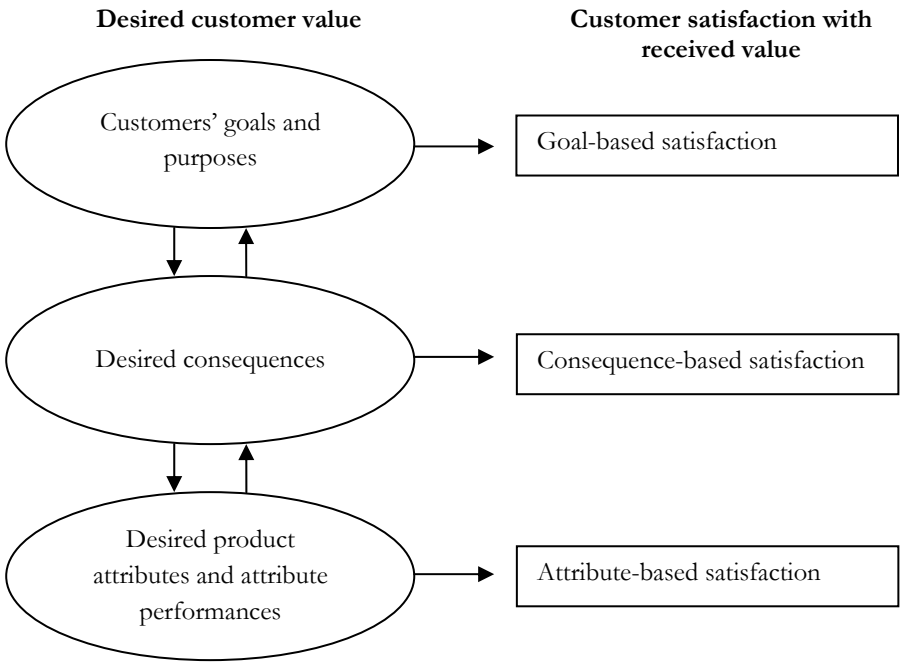


Figure 3.2: Customer value hierarchy model (Woodruff 1997, p. 142)

The studies of Woodruff (1997) and Zeithaml (1988) concentrate on the formation of value for *products*. In accordance with this means-end approach that explains how consumers evaluate products in terms of value, consumers also link lower-level store attributes (e.g. opening hours, navigation perceptions, information availability) to more abstract consequences such as service quality, merchandise quality, and perceptions of value[5] (cf. Baker et al. 2002; Kerin, Jain and Howard 1992). These consequences refer to the perceived costs and benefits of shopping online or offline, and may help consumers attain their personalized set of human values. The next section tries to classify the main costs and benefits consumers consider when purchasing.

[5] Although perceived quality and perceived value both belong to the desired consequences, perceived value is considered to have a higher abstraction level than perceived quality (Zeithaml 1988). Multiple levels of abstractions may exist within each of the three stages; the basic idea remains that consumers organize information in a hierarchical manner.

3.3 Classification of purchase-related costs and benefits

Most authors agree that perceived value refers to a tradeoff between all salient costs and benefits (e.g. Monroe 1990; Zeithaml 1988). To understand what constitutes value researchers have tried to classify these perceived benefits and costs. Early research focused on explaining perceived value of products, and defined perceived value as the tradeoff between product quality and price (Monroe 1990), or as a value-for-money assessment (Dodds and Monroe 1985). Sirohi et al. (1998) call this value-for-money assessment, "what you get for what you pay." Some authors addressed that viewing value as a tradeoff between only quality and price is too simplistic (e.g. Bolton and Drew 1991), particularly when products are not the focal point of interest. When consumers, for instance, evaluate the value of services, other criteria are needed to explain the apparent benefits and costs. The service literature (e.g. Grönroos 1982; Parasuraman et al. 1985; 1988) indicated that apart from what is delivered (i.e. outcome value), the way the service is delivered (i.e. process value) is pivotal to the evaluation of service quality. Even though this distinction helped researchers to better predict the consequences of service quality (cf. Zeithaml, Berry and Parasuraman 1996), this approach is still limited as it ignores the sacrifices made (Cronin et al. 2000). Next, when evaluating retailers, consumers evaluate service quality, as well as merchandise quality (Mazursky and Jacoby 1986). In this context, Dodds (1999) argued that retailers provide most value when the product is of the highest quality, supported by the best service quality, and offered at the lowest price. Additionally, Kerin et al. (1992) argued the importance of the shopping experience in explaining the value perceptions of a retailer. Consumers evaluate more than just the quality of the product and the additional services delivered in relation to price; they optimize the full process of decision making (procedural rationality), not just the outcomes (substantive rationality) (Simon 1976). In doing so, they generally make a tradeoff between the cognitive efforts and decision accuracy (Payne, Bettman and Johnson 1993).

This research uses Zeithaml's (1988) classification and insights from shopping literature to classify the purchase-related costs and benefits. Value judgments are predominantly influenced by evaluations of *perceived quality* (product and service-related benefits), *monetary and nonmonetary costs*, and *hedonic shopping benefits*. *Perceived quality* refers to the consumer's judgments about a product's or service's overall excellence or superiority. It acts as a global

assessment, resulting from product and service-related benefits. Next, consumers endure monetary and nonmonetary costs when buying products. *Monetary costs* refer to the price consumers have to pay. Studies investigate perceived price rather than the objective price, as consumers often do not evaluate the exact price, but rather encode it as 'cheap', 'reasonable' or 'expensive' based on their internal reference price (Zeithaml 1988). Zeithaml (1988) views perceived price as costs, but other authors claim that price has a dual effect (Agarwal and Teas 2001; Dodds et al. 1991; Monroe 1990: Teas and Agarwal 2000). Price is a financial sacrifice, but it also positively influences perceptions of value through increased product quality perceptions. However, as the net effect of price on perceptions of value seems to be negative (Dodds et al. 1991), it is often placed among the costs (see Table 3.2). Apart from monetary costs, consumers make other types of sacrifices to obtain or use the product or service (Becker 1965). These *nonmonetary costs* particularly refer to the time and effort –both mentally and physically– and the psychological costs (e.g. uncertainty, frustration, anger, fear) made by the consumer. Although time/effort expenditures and psychological costs are conceptually related constructs (e.g. crowding can result in more time usage and psychological discomfort), researchers have treated them as distinct (cf. Baker et al. 2002; Zeithaml 1988). The psychological costs refer to the consumer's mental stress or emotional labor during the shopping experience, whereas time and effort costs refer to the non-emotional investments made by the consumers (Baker et al. 2002). In her classification, Zeithaml (1988) mainly focused on the shopping costs, but shopping literature (e.g. Babin et al. 1994; Babin and Darden 1995; Hirschman and Holbrook 1982) indicated that consumers also derive positive feelings from purchasing; they experience *hedonic shopping benefits*. This stream of research addresses that consumers evaluate shopping experiences along utilitarian and hedonic dimensions; they experience utilitarian and hedonic value. The utilitarian dimension reflects whether consumers achieve their shopping goals with minimum investments in time and effort. To improve utilitarian shopping value, consumers must save time and/or reduce effort by engaging in goal-directed behavior that is instrumental, purposive, and task-specific (Hoffman et al. 2002). The hedonic dimension represents the experiential value consumers derive from the shopping process; it refers to emotional and epistemic value (cf. De Ruyter et al. 1997; Sheth et al. 1991). In this respect, consumers are more concerned with entertainment and enjoyment value; they engage in experiential behavior that is likely to be hedonic, ritualized and reflects nonlinear search (Hoffman and Novak 1996). Some authors leave out

enjoyment because nonmonetary costs are assumed to have a much stronger impact on consumer behavior (e.g. Baker et al. 2002). This research, however, takes into account the emotional value dimension by suggesting that enjoyment has a distinctive positive effect on purchase intentions. Particularly for hedonic, experiential products, the affective side of shopping experience plays a pivotal part. Yet, this study does not classify the shopping benefits related to social value (value derived from social approval and enhancement of self-image), epistemic value (value derived from curiosity and novelty) and conditional value (value derived from a particular situation). It focuses on the utilitarian and hedonic shopping value derived from the transaction itself. Consequently, it includes the functional and emotional value aspects of shopping. Analogous to the work of Sweeney and Soutar (2001), the influence of conditional value is seen as less important because the survey asks customers to give their *general* prepurchase evaluations without referring to a special occasion. Next, social value and epistemic value are expected to be partly captured by shopping enjoyment. Table 3.2 shows the classification of the purchase-related costs and benefits that constitute shopping value, i.e. value derived from shopping activities.

Table 3.2: Classification of purchase-related perceived costs and benefits

Costs		**Benefits**	
Monetary	**Nonmonetary**	**Functional/ Utilitarian**	**Nonfunctional/ Hedonic**
Perceived price	Time and effort expenditures	Product quality	Enjoyment, pleasure, surprise
	Psychological costs (risk, anxiety, stress, frustration)	Service quality	

3.4 Antecedents of perceived value and purchase intentions

Although perceived value is highly personal and idiosyncratic (Zeithaml 1988), scholars have tried to find common predictors of perceived value to understand what constitutes value and purchase intentions. Over the years, a considerable body of literature has empirically investigated the antecedents that determine product value and product choice (e.g. Bolton and Drew 1991; Zeithaml 1988), and store value and store choice (e.g. Baker et al. 2002; Donovan et al. 1994; Sirohi et al. 1998; Zeithaml et al. 1996). Most authors in this

field used Zeithaml's classification of perceived costs and benefits to predict perceived value and purchase intentions (e.g. Baker et al. 2002; Sirohi et al. 1998; Sweeney et al. 1999). As such, they often treated the benefits and costs both as *antecedents* and as *components* of value (see Dabholkar et al. 2000). Before addressing the criteria consumers use for their purchasing, this observation is explained. Research on value dimensions (e.g. functional value, emotional value) focuses on the components or constituents of value. It focuses on construct definition, denoting what perceived value includes or comprises (Rossiter 2002). In this respect, perceived value is seen as the (weighted) summation of its components. When these components are not related to an overall measure of perceived value, it is not possible to capture the effect or importance of each dimension (Dabholkar et al. 2000; Sweeny and Soutar 2001). Contrastingly, research has also addressed how the concept of perceived value behaves in retail settings, referring to the determinants and consequences of (the components of) value. This type of research focuses on understanding the relationships between constructs. Here, the benefits and costs sometimes act as components of value, and as antecedents of value. For instance, time and effort costs are seen as antecedents of perceived value (Zeithaml 1988), but can also simultaneously act as a component of value (cf. Baker et al. 2002). Studies focusing on the interrelationships often take a more practical view, and use the identified costs and benefits without explicitly addressing whether they are used as components or predictors of value (e.g. Baker et al. 2002; Cronin et al 2000). However, the complex nature of the perceived value concept sometimes necessitates researchers to model benefits/costs simultaneously as antecedents and components of value. The second stream of research provides us additional insights into how customers evaluate value. For example, research on the value dimensions cannot explain the dual effect of price (cf. Agarwal and Teas 2001; Dodds et al. 1991). This study focuses on (the strengths of) the interrelationships as the focus is on understanding the construction of perceived value and purchase intentions in each context. It also addresses which factors are treated as predictors and which are treated as components of value (see section 4.1.1).

Channel choice has many similarities with store choice and to a lesser degree with product choice (cf. Inman et al. 2004). In accordance with store choice, the decision is likely to be made on the perceptions of price, merchandise quality, service quality, shopping costs and benefits. In fact, the choice between shopping online or shopping offline resembles the

decision to buy through an online or an offline retailer. Note that these retailers can refer to a single multichannel retailer. Thus, it is likely that the criteria consumers consider for their store choice match those for channel choice. Consumers generally evaluate store alternatives on a number of store attributes (Lindquist 1974), which serve as a means to determine value. Consequently, the extant literature on product value and store value is investigated to identify the relevant antecedents that affect online and offline shopping value and intentions.

3.4.1 Product value and product choice

A number of studies investigated how value perceptions are formed and how these perceptions influence product choice. For example, a study by Sweeney et al. (1999) showed the role perceived risk has in the quality-value relationship for durable goods. They concluded that consumers do not only consider the immediate benefits and sacrifices, but also contemplate about the longer-term implications of the product's ownership, including performance and financial risk. Perceived risk is considered a sacrifice, as it involves psychological costs. The results showed that product quality, relative price (i.e. relative to products with similar features), risk and functional and technical service quality defined perceived value. Perceived risk played an important role in the quality-value relationship; it was found to be a significant mediator of this relationship. Product and service quality reduced perceptions of risk, which, in turn, affected perceived product value. Additionally, the mediating role of perceived value was questioned; thus, whether it was necessary to include perceived value as a mediator, or whether it was possible to directly link service quality, merchandise quality, risk and relative price with willingness-to-buy. The results indicated that perceived value was found to be significant mediator and should be included.

Teas and Agarwal (2000) also researched the antecedents of perceived product value. Their model included perceived quality and perceived sacrifice that indirectly influenced perceived value through perceptions of performance and financial risk. Perceived quality was negatively related to performance risk, whereas price was positively associated with financial sacrifice, as well as perceived quality (dual effect of price). The results demonstrate that perceived quality and perceive sacrifice have an indirect effect on perceived product value through performance risk and financial risk.

3.4.2 Store value and store choice

Much of the store choice literature builds upon research on perceived product value. Naturally, compared to product value, the shopping experience plays a more profound role in explaining store value. Next, for retailers that offer physical merchandise, merchandise quality, referring to both the quality of selection and products, often replaces product quality. Finally, the quality of the additional services delivered by retailers is seen as an indicator of store value (Dabholkar, Thorpe and Rentz 1996; Sirohi et al. 1998; Sweeney et al. 1999).

Kerin et al. (1992) identified price, merchandise quality and shopping experience as predictors of value perceptions of a supermarket. They concluded that the shopping experience had the largest effect on store value. Shopping experience perceptions were here defined by store cleanliness, variety and selection, employee friendliness, check cashing policy and checkout waiting time. The shopping experience included utilitarian (selection and variety) and hedonic aspects (employee friendliness).

Sirohi et al. (1998) investigated antecedents and consequences of perceived value for a grocery retailer. The antecedents of perceived value, which was defined as *value for money*, included perceived relative price (i.e. retailer's price relative to its competitors), sales promotion perceptions (i.e. price deals, having sale items in stock), and to a lesser extent on service quality and merchandise quality perceptions. Merchandise quality and service quality had both a direct and indirect effect (through perceived value) on store loyalty perceptions.

Baker et al. (2002) integrated theories from cognitive and environmental psychology with Zeithaml's (1988) classification to predict merchandise value and store patronage intentions. Their conceptual model includes interpersonal service quality (i.e. functional service quality), merchandise value, and shopping experience costs (i.e. time and effort and psychological costs). As with many authors (cf. Zeithaml 1988), these authors merely incorporate consumers' shopping experience *costs*, ignoring the shopping experience *benefits*. Two studies were conducted by confronting students with simulated shopping experiences through a card-and-gift store. Their results showed that merchandise value was defined by perceived by merchandise quality and monetary price, but not by the types of shopping experience costs. Merchandise value, service quality and shopping experience costs all

appeared to have a direct effect store patronage intentions. The relative importance of the criteria on patronage intentions was also investigated; merchandise value had the strongest impact, followed by psychological costs, service quality and time/effort costs.

Chen and Dubinsky (2003) developed a model to measure perceived customer value in an e-commerce context. They actually investigated the antecedents of store value for an online retailer. They stressed that the existent perceived value models can be used to determine perceived value and purchase intentions in the online context. Clearly, they built upon existent perceived value models, but they also add factors that specifically relate to the online shopping context. These specific E-Commerce factors include relevancy of information, ease of use and customer service, which define the valence of online experience. Moreover, they inserted e-tailer reputation as a reducer of risk. When omitting these specific E-Commerce determinants, the original empirically tested model of Sweeney et al. (1999) shows up. Their results show that store value perceptions are determined by the valence of experience, perceived risk, product price, and product quality.

Prior perceived value studies show the following antecedents of perceived product/store value and purchase intentions: *product quality* or *service quality* (Bolton and Drew 1991; Chang and Wildt 1994; Dodds et al. 1991; Cronin et al. 2000; Grewal et al. 1998b), *merchandise quality* (Baker et al. 2002; Sirohi et al. 1998)*, perceived sacrifice* (Cronin et al. 1997; 2000) consisting of *price* (Chang and Wildt 1994; Dodds et al. 1991), *time and effort expenditures* (Baker et al. 2002), *psychological costs* (Baker et al. 2002) or *perceived risk* (Chen and Dubinsky 2003; Sweeney et al. 1999; Teas and Agarwal 2000). Other studies have touched upon *enjoyment*, by referring to the hedonic aspects of the shopping experience (Chen and Dubinsky 2003; Kerin et al. 1992). Table 3.3 summarizes the six main criteria (i.e. service quality, merchandise quality, price, time/effort costs, psychological costs and enjoyment) consumers consider when shopping.

3.5 Conclusion

This chapter reviewed the perceived value literature in order to identify the dimensions and/or and antecedents of value, which are likely to affect channel purchase intentions.

The marketing literature confirms that perceived value is linked through the use to some product, service or object; is something perceived subjectively; and, involves a tradeoff between the salient perceived benefits and costs. Prior research reported the context-dependent and multi-dimensional nature of perceived value. Although perceived value is highly personal and idiosyncratic (Zeithaml 1988), researchers have tried to classify common purchase-related costs and benefits. A stream of research focuses on the axiological dimensions or components of perceived value; this stream of research sees perceived value as the (weighted) summation of the identified components. Another stream of research is more interested in understanding the interrelationships and sometimes allows the benefits and costs to act as components and antecedents of value. This study follows the last stream of research, as it provides additional insights into the relative effects of the antecedents of perceived value and purchase intentions. Next, it fits better with how consumers actually make evaluations of shopping online and offline (cf. Dabholkar et al. 2000). A review of the product and store value literature showed the following classification of purchase-related costs and benefits: service quality, merchandise quality, monetary price, time/effort costs, psychological costs and enjoyment. In addition to this, the *construct* of perceived value (i.e. value for money) has been found to frequently act as a mediator between the components and purchase intentions (e.g. Sweeney et al. 1999). Consumers are expected to consider these seven criteria when evaluating online and offline stores. Chapter 4 discusses the interrelationships between these criteria.

Table 3.3: Antecedents of perceived shopping value and purchase intentions

Study	Service quality	Merchan-dise quality	Monetary Price	Time/ effort costs	Psycho-logical costs	Enjoy-ment
Agarwal and Teas (2001)		Product quality	Price		Perfor-mance risk, financial risk	
Baker et al. (2002)	Inter-personal service quality	Merchan-dise quality	Monetary price	Time/ effort costs	Psychic costs	
Bolton and Drew (1991)	Service quality		Sacrifice			
Chang and Wildt (1994)	Quality		Price			
Chen and Dubinsky (2003)	Customer service	Product quality	Product price	Valence of experience	Perceived risk	Valence of experience
Cronin et al. (2000)	Service quality		Sacrifice			
Dodds, Monroe and Grewal (1991)		Product quality	Sacrifice			
Kerin, Jain and Howard (1992)		Merchan-dise quality	Price	Shopping experience		
Sirohi, McLaughlin and Wittink (1998)	Service quality	Merchan-dise quality	Relative price and Promotions			
Sweeney, Soutar and Johnson (1999)	Technical and functional service quality	Product quality	Relative price		Performance /financial risk	
Teas and Agarwal (2000)	Perceived quality		Sacrifice			

4 Conceptual Model

Chapter 2 and 3 analyzed the consumers' motivations and evaluation criteria to shop online or offline. The reasons to shop online or offline are determined by the expected consequences of shopping, that is the expected perceived costs and benefits. Chapter 3 introduced the concept of perceived value, as a means to measure the perceived costs and benefits in order to explain online and offline shopping intentions. By identifying the perceived benefits and costs of shopping, comparisons between online and offline shopping are possible. The first section introduces the conceptual model with its underlying hypotheses. The second section addresses the hypotheses regarding the relative importance of criteria across contexts and across experienced and less experienced buyers.

4.1 Conceptual model of channel purchase intentions

To enhance our understanding of channel purchase intentions, this study uses a means-end analysis to investigate online and offline value perceptions and purchase intentions. The basic assumption is that the value perceptions of the use of channels drive behavior. The more value consumers expect to receive from a particular channel, the more likely it is chosen. Empirical studies (e.g. Baker et al. 2002; Sirohi et al. 1998; Sweeney et al. 1999), often use more narrow definition of perceived value, and try to capture it by using a value-for-money construct. Apart from the value-for-money construct, empirical studies use additional factors are used to explain purchase intentions For example, past studies found that service quality (Baker et al. 2002; Brady and Cronin 2001; Cronin et al. 2000; Sirohi et al. 1998), merchandise quality (Sirohi et al. 1998), time/effort and psychological costs (Baker et al. 2002), and perceived value of a competing alternative (Sirohi et al. 1998) had a

direct impact on behavioral intentions. The perceived value from the competing channel[6] represents the choice consumers have between the online and offline channel. This study proposes that consumers take into account price, merchandise quality and service quality, the shopping experience costs and benefits[7] (i.e. time and effort expenditures, psychological costs and enjoyment), as well as the perceived value from the competing channel to form their channel purchase intentions. This study measures value for money to capture customers' expected value perceptions, but this *construct* is less comprehensive than the *concept* of perceived value (i.e. tradeoff between all salient costs and benefits).

In developing the conceptual model, it is important that the model not only explains the online and offline value perceptions and purchase intentions to a large extent, but also reflects the major differences between using the online and offline channel. The base model uses the key precursors from extant perceived value research (e.g. Agarwal and Teas 2001; Baker et al. 2002; Chen and Dubinsky 2003; Sweeney et al. 1997; 1999, Teas and Agarwal 2000) and enjoyment. Next, the extended model also incorporates attributes that play a profound role in the online context (Chen and Dubinsky 2003), but which also play a significant role in the offline context. This extension is made to make sure that the model does not ignore important predictors of online perceived value and purchase intentions. Moreover, these additional attributes –reputation, ease of use, and informativeness– are likely to explain possible differences between the constructions of online and offline perceived value and purchase intentions. The base model will be first discussed, followed by the extended model of channel purchase intentions.

4.1.1 Base model of channel purchase intentions

Figure 4.1 displays the antecedents of perceived value and purchase intentions. The conceptual model itself is well founded in the literature; it, however, introduces enjoyment as an additional predictor of purchase intentions. Note that this study treats the shopping

[6] The author is aware that channels may not always be "competitive" as they may provide "complementary" effects for multichannel retailers through cross-channel synergies (cf. Montoya-Weiss et al. 2003).

[7] The shopping experience costs and benefits refer to the value derived from the shopping activity itself. These costs and benefits, however, do not comprise all purchase-related costs and benefits (e.g. price, merchandise quality and service quality) (see section 3.3).

experience costs and benefits, depicted in the square box, as components of value, rather than as predictors of the value construct[8]. This study argues that this model holds for *both* the online and offline context: consumers consider the same benefits and costs, but may vary in their performance scores and weights they attach to them (see Verhoef et al. 2005). To the author's best knowledge, this is the first study that defines the construction of online and offline perceived value and purchase intentions in a side-by-side approach. By analyzing the magnitude of the determinants of perceived value and purchase intentions, it is possible to define the importance of them in each channel. In a next step, the relative strength of motivations can be determined. As a result, it is not only possible to see which factors determine perceived value and purchase intentions in each context, but also which factors have a more profound effect in one channel vis-à-vis the alternative channel. For example, time/effort costs may play an important role in both contexts, but an even greater role in the online context. In the following section, each of the proposed relationships of the model will be discussed.

[8] This study investigated the relationships between the shopping experience costs/benefits and perceived value, i.e. the shopping experience costs/benefits as antecedents of value. The results showed that of the six relationships, only one relationship (online context: time/effort costs → perceived value) was significant. The total effect of time/effort costs on online intentions was virtually the same as the direct effect was attenuated and the relationship between perceived value and intentions was insignificant. For the sake of parsimony, this relationship was left out.

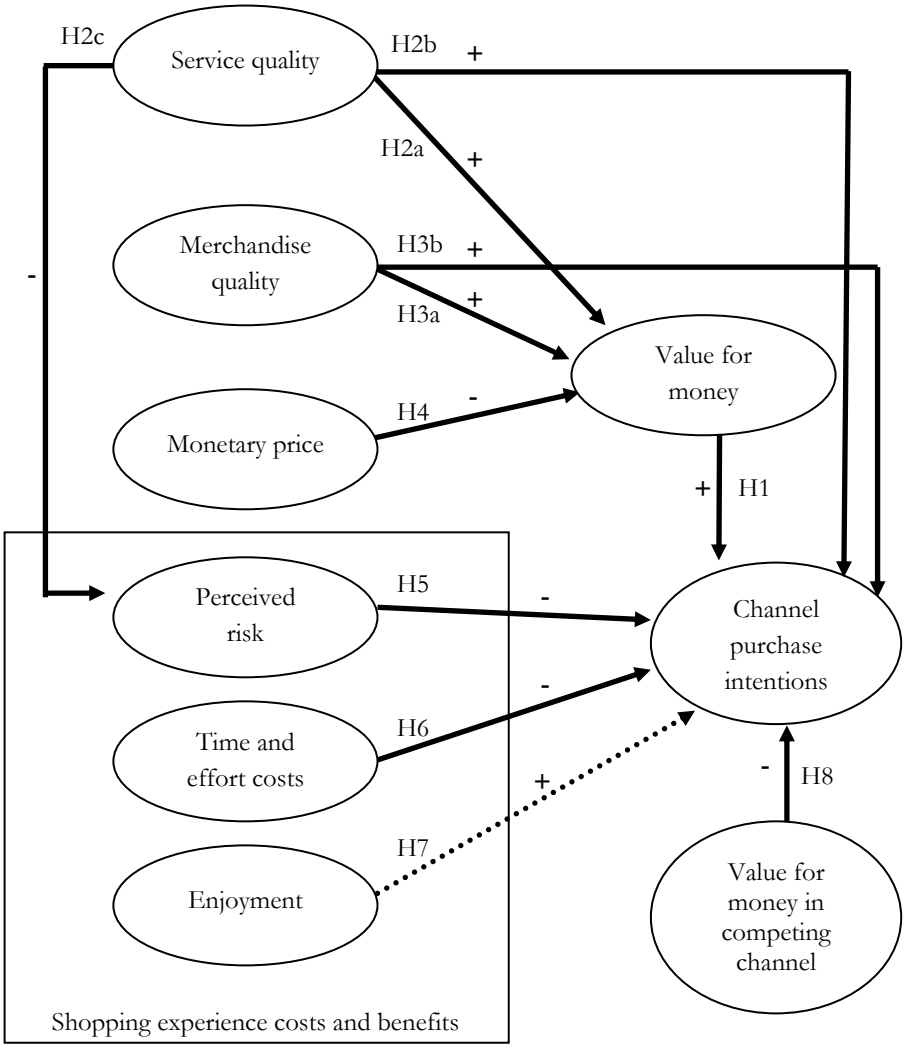


Figure 4.1: Base model of channel purchase intentions

Arrows in the model

Previously unexplored relationship that is proposed on theoretical support

Previously explored relationships with empirical and theoretical support

Perceived value: perceived value for money

Perceived value is inherently linked with positive consequences for consumers. Consumers choose one product, store or channel over another because they believe they will get better more value than they could expect from an alternative (Gale 1994). Perceived value is frequently linked with *behavioral intentions* (Bolton and Drew 1991; Cronin et al. 2000), such as *store patronage intentions* (Baker et al. 2002), *purchase intentions* (Chen and Dubinsky 2003; Grewal et al. 1998b), *willingness-to-buy* (Dodds et al. 1991; Grewal et al. 1998a; Monroe 1990; Sweeney et al. 1999), *likelihood of repurchase* (Oh 2000) *store loyalty intentions* (Sirohi et al. 1998), and *intention to recommend* (Cronin et al. 2000; Sirohi et al. 1998), but also with *customer loyalty* (Grewal et al. 2003; Rust and Oliver 1994) and *satisfaction* (Cronin et al. 2000).

Perceived value has been shown to be an antecedent of purchase intentions in the offline channel (Baker et al. 2002; Sirohi et al. 1998), as well as the online channel (Chen and Dubinsky 2003). Researchers indicate that perceived value, being a richer evaluation criterion, is a better predictor of purchase intentions than perceived quality (Bolton and Drew 1991). This study uses the construct value for money[9] customers to explain the intentions to shop through an online or offline retailer (cf. Sirohi et al. 1998). The more value consumers get for their money through a particular channel, the higher their intentions to use that channel for purchasing. It is proposed that:

H1 Perceived value for money is positively associated with purchase intentions

Service quality

Service quality is here referred to as the customers' perceptions of overall service quality provided by online and offline retailers. The level of service received by customers is frequently noted as a component of store image or attitude (e.g. Baker, Grewal and Parasuraman 1994; Berry 1969; Reardon and Miller 1995; Sirohi et al. 1998) and it is an important aspect of shopping in a retail context (Baker et al. 2002). In the offline context, consumers can interact with service personnel, whereas in the online context they can interact by means of e-mail, customer feedback, FAQs, and toll-free phone numbers (Lim

[9] Note that the construct perceived value does not comprise all relevant purchase-related costs and benefits; consequently, it is less comprehensive than the concept of perceived value, which also includes the shopping experience costs and benefits.

and Dubinsky 2004). The traditional SERVQUAL scale –developed in the field of pure or interpersonal services– entails five dimensions that define the service quality. When applied to retailers that sell merchandise, service quality is often referred to as *customer service* (Chen and Dubinsky 2003; Wolfinbarger and Gilly 2003) or *retail service quality* (Dabholkar et al. 1996); it includes elements, such as *tangibles* (e.g. appearance and convenience), *personal interaction* (e.g. friendliness, helpfulness, assurance, and responsiveness of employees), *reliability* (e.g. keeping promises and doing it right), *problem solving* (e.g. return handling and complaint handling), and *service policies* (opening hours, parking facilities, warranties) (Baker et al. 1994; Dabholkar et al. 1996; Dickson and Albaum 1977; Samli, Kelly and Hunt 1998). These elements also apply to online service quality. Online consumers want an appealing website that performs correctly (Wolfinbarger and Gilly 2003; Zeithaml et al. 2000), often prefer some form of personal interaction and quick response of service personnel (Chen and Dubinsky 2003; Parasuraman et al. 2005), strongly rely on reliability/fulfillment (Wolfinbarger and Gilly 2003; Zeithaml et al. 2002), want quick and easy access to service personnel when problems occur and sometimes want to be compensated (Parasuraman et al. 2005; Zeithaml et al. 2002), and prefer clear-stated service policies about privacy, security, and shipping and handling (Wolfinbarger and Gilly 2003).

There has been a debate on the interrelationships between service quality, value and satisfaction, and their impact on purchase intentions (for a review, see Cronin et al. 2000). On the other hand, there seems to be consensus on the positive effect service quality has on perceived value (Bolton and Drew 1991; Cronin et al. 1997; 2000; Sirohi et al. 1998; Sweeney et al. 1999). In general, the more favorable consumers' service quality perceptions, the higher the perceptions of value.

More favorable perceptions of service quality also lead to reductions of perceived risk (Sweeney et al. 1999). The rationale behind this is that salespeople, being part of evaluations of service quality, can assure consumers and take away mental stress (Baker 1987; Hartline and Ferrell 1996; Sirdeshmukh, Singh and Sabol 2002; Spence et al. 1970). Salespeople's advice as a risk-reducing strategy is particularly needed in high-risk purchasing situations (Black et al. 2002; Mitchell and McGoldrick 1996). In the online context, service quality also has an attenuating effect on risk perceptions. More favorable perceptions towards a retailer's reliability, return handling, responsiveness, policies and

problem solving are generally associated with lower risk (Wolfinbarger and Gilly 2003). As such, higher service quality leads to lower risk perceptions in both the online and offline context. Although research showed that the effects of service quality on behavior are largely mediated by value perceptions (Dodds et al. 1991; Sweeney et al. 1999), other studies also found a *direct* link between service quality and purchase intentions (e.g. Cronin et al. 2000; Sirohi et al. 1998; Zeithaml et al. 1996). Based on the prior discussion, the following hypotheses are developed:

H2a Service quality is positively associated with perceived value for money
H2b Service quality is positively associated with purchase intentions
H2c Service quality is negatively associated with perceived risk

Merchandise quality

When retailers are considered that are closer to the "tangible-dominant" end of Shostack's (1977) continuum, merchandise quality becomes an important value driver (Mazursky and Jacoby 1986; Wolfinbarger and Gilly 2002). This study defines merchandise quality as the customer's overall quality perceptions of merchandise and variety provided by the online and offline retailer. Merchandise quality consists of number, quality and composition of alternatives (Berry 1969). Prior research found a positive relationship between perceptions of *product* quality and perceived value (Dodds et al. 1991; Monroe 1990). Several authors (Baker et al. 2002; Kerin et al. 1992; Sirohi et al. 1998) extend this finding to retail settings and use the term merchandise quality as a predictor of perceived value. The rationale behind this is that with higher merchandise quality, consumer needs will be more easily met because of the wide selection and availability, but also because these selections are likely to contain products of higher quality (Szymanski and Hise 2000), which is likely to increase perceptions of value.

Apart from the indirect effect on purchase intentions through influencing perceived value, other studies also found a *direct* link between merchandise quality and intentions (e.g. Sirohi et al. 1998). Merchandise quality has consistently been found to be important concerning the offline context (e.g. Baker et al. 2002; Berry 1969; Lindquist 1974; Reardon and Miller 1995; Samli et al. 1998) and in the online context (Francis and White 2004; Szymanski and Hise 2000; Wolfinbarger and Gilly 2003). Thus,

H3a Merchandise quality is positively associated with perceived value for money

H3b Merchandise quality is positively associated with purchase intentions

Monetary price

Price is a key attribute for consumers when evaluating retailers (Berry 1969; Lindquist 1974; Lim and Dubinsky 2004). Monetary price is defined as the customers' perceptions of the prices offered by the online and offline retailer. These inferences are generally made by comparing observed prices with internal reference prices (Grewal et al. 1998b; Zeithaml 1988). Consumers frequently have difficulties in recalling the actual prices of the products (Monroe 1990), and rather encode it as 'cheap' or 'expensive' (Zeithaml 1988).

Previous studies that examine the price-value relationship (Chang and Wildt 1994; Dodds et al. 1991; Sirohi et al. 1998) consistently found a negative relationship between price and perceived value. Price is seen as an important cost criterion in consumers' value judgments; the higher the price perceptions, the lower are the value perceptions. Other authors used *relative* price, indicating the perceived price of a product compared to other products with similar features (Chen and Dubinsky; Sweeney et al. 1999), or the price level of a store price level compared with its competitors (Sirohi et al. 1998). These studies also provide evidence that the higher the perceived relative price, the less is the perceived value.

Perceived monetary price does not only act as a cost driver; it can also serve as an indicator of product quality. It is frequently mentioned that price has a dual effect (Agarwal and Teas 2001; Dodds et al. 1991; Grewal et al. 1998a; Monroe 1990; Teas and Agarwal 2000). Price is a financial sacrifice, but it also positively influences perceptions of value through increased product quality perceptions. However, the net effect of price on perceptions of value seems to be negative (Dodds et al. 1991). Zeithaml (1988) argued that a general price-quality relationship does not exist. The price-quality relationship only seems to hold for moderately priced, frequently purchased goods, such as grocery products (Kerin et al. 1992; Rao and Monroe 1989). This study does not expect to find evidence for this latter relationship, as books are commodities in which the price does not signal quality.

Other research (Chen and Dubinsky 2003; Agarwal and Teas 2001) has argued that price also has an effect on (financial) risk. The higher the price, the more financial risks are

involved, as the severity of making a wrong decision increases. Similar to Sweeney et al. (1999) and Baker et al. (2002), this study does not hypothesize a relationship between monetary price and risk (or psychic costs), as it is argued that the relative low price of buying books involve no major psychological costs during the shopping experience. Based on the discussion above, this leads to the following hypothesis:

H4 Perceived monetary price is negatively associated with perceived value for money

Psychological costs: perceived risk

Consumers can bear psychological or emotional costs in order to receive their products. Past research treated these types of costs as distinct from the time and effort costs (cf. Zeithaml 1988). Baker et al. (2002, p. 122) define the psychological costs as the consumers' mental stress or emotional labor during the shopping experience, whereas time and effort costs refer to the rational aspects of the shopping experience costs. These psychological costs often originate from perceptions of risk (Carmon, Shanthikumar and Carmon 1995). Perceived risk can be defined as the overall amount of uncertainty perceived by a consumer in a particular purchase situation (Cox and Rich 1964); it refers to the subjective –not objective– expectation of a loss (Stone and Grønhaug 1993). Decision making generally produces consequences that cannot be anticipated with certainty, and some of these consequences are unpleasant (Bauer 1960: p. 30), leading to psychological discomfort (Stone and Grønhaug 1993). In their prepurchase evaluation, consumers often experience uncertainty as they think about the chances that something might go wrong or perform less than expected; this uncertainty increases psychological costs.

A number of risk dimensions have been proposed, including financial, product performance, physical, social, and psychological risk and time/convenience loss (cf. Kaplan, Szybillo and Jacoby 1974; Peter and Tarpey 1975). Most of these studies involved risks concerning the purchase and use of products. When related to buying products through channels, consumers may be afraid to lose (some of) their money (financial risk), to run the risk that the product purchased will not function as expected and/or will not fulfill their needs (product performance risk); to injure themselves (physical risk); to encounter the risk that peers will not accept their choices or to embarrass themselves in public (social risk); to waste time and/or experience inconvenience (time/convenience risk)

and, finally, to run the risk of psychological discomfort (psychological risk). These various risk dimensions are often mediated through psychological risk to influence overall risk, as customers' psyche generally translates any type of risk into feelings of discomfort (Stone and Grønhaug 1993). As such, it can be assumed that consumers prior to purchase consider future benefits and sacrifices and discount them in an overall measure of expected risk (cf. Spreng et al. 1993). Next, perceived risk has been empirically shown to have an effect on value perceptions and purchase intentions in the offline context (e.g. Agarwal and Teas 2001; 2004; Shimp and Bearden 1982; Sweeney et al. 1999), as well as in the in the online context (Einwiller 2003; Forsythe and Shi 2003; Pavlou 2003).

Shopping in the offline environment is perceived as rather safe, although some people (e.g. elderly people) rather engage in in-home shopping to avoid physical injuries and possible robberies. Conversely, shopping online is generally perceived as being more risky (Donthu and Garcia 1999; Pavlou 2003). This is mainly due to the in-home shopping aspects. Prior research found that consumers associate a higher level of risk with nonstore shopping (Akaah and Korgaonkar 1988; Spence et al. 1970; Gillett 1970). Apart from the in-home shopping aspects, the Internet is a relatively new and complex shopping environment causing more failures than its established counterpart. Consumers often have not gained much experience with online shopping and therefore lack relevant knowledge about how to deal with certain aspects (Einwiller 2003). This may lead to frustrations that prevent consumers from online purchasing (Lohse and Spiller 1998). Forsythe and Shi (2003) examined the impact of four types of risk –financial, product performance, time/convenience, and psychological (privacy concerns) risk– on online patronage behavior (e.g. frequency of purchasing, dollar amount spent). The results show that financial risk was the most consistent predictor of patronage behavior, followed by time/convenience risk, product performance risk and privacy concerns. Despite privacy is frequently cited as a reason not to purchase online (e.g. Ranganathan and Ganapathy 2002; Swaminathan et al. 1999; Szymanski and Hise 2000), Forsythe and Shi (2003) found no significant influence of it on patronage behavior.

Baker et al. (2002) argued that time/effort costs and psychological costs are distinct, but related concepts. However, they did not suggest a structural relationship between them, but correlated them in their model. In a similar vein, this study acknowledges the possible

correlations between the three shopping experience costs and benefits[10] (time/effort costs, perceived risk, and enjoyment), but does not propose any structural relationships between them.

Several studies showed that perceived risk negatively impacts perceived value (Agarwal and Teas 2001; 2004; Shimp and Bearden 1982; Sweeney et al. 1999; Teas and Agarwal 2000). These studies, however, explained perceptions of *product value* rather than *store value*. For example, Sweeney et al. (1999) found a direct impact of performance/financial risk on perceived value for a consumer durable. In this case, the greater the risk of having a product that performs less than expected or losing money, the less value consumers receive. Baker et al. (2002) investigated store value perceptions and showed that psychological costs affected purchase intentions, but did *not* affect perceived value. It seems that the psychological shopping experience costs have a direct impact when evaluating retailers. In other words, these shopping costs operate as a distinct component of value rather than being an antecedent of perceived value for money. Other studies also found support that perceived risk has a direct influence on purchase intentions (Lee et al. 2000; Montoya-Weiss et al. 2003; Pavlou 2003). Cox and Rich (1964), for example, found that some shoppers perceived intolerable amounts of risk that prevented them from telephone shopping. Perceptions of risk are negatively associated with online purchase intentions and online channel use (Forsythe and Shi 2003; Jarvenpaa and Tractinsky 1999; Lee et al. 2000; Montoya-Weiss et al. 2003). It is hypothesized that perceived risk has a direct effect on the intentions to buy through an online or offline retailer, but does not alter perceptions of value. Hence, the previous arguments suggest the following hypothesis:

H5 Perceived risk is negatively associated with purchase intentions

Time and effort costs

Time and effort costs refer to the customers' perceptions of the time/effort required to shop through the online or offline channel. The convenience and time-resource management literature indicates that consumers generally perceive time and effort as costs.

[10] For instance, higher perceptions of risk are expected to be negatively correlated with enjoyment. Simultaneously, higher perceptions of risk are likely to be positively correlated with time and effort expenditures (cf. Chaudhuri 2000; Dowling and Staelin 1994).

Especially when consumers engage in goal-directed behavior rather than experiential behavior, they are motivated to acquire their products or services in an efficient and timely manner with a minimum of irritation (Babin et al. 1994). Consumers' interest in conserving time and effort has long been identified (e.g. Anderson 1972; Kelley 1958; Schary 1971). High income, time-poor consumers require a lot of value from the limited hours available and may be willing to pay more money to enjoy their leisure time (Engel, Blackwell and Miniard 1995). They attach more value to time because of their higher opportunity costs (Marmorstein, Grewal and Fishe 1992). Additionally, consumers want to spend their limited cognitive capacity efficiently and may decide that certain purchases are not worth investing a lot of cognitive effort (Simon 1976). Retailers currently develop strategies to enable consumers to save time by making the shopping process less time consuming and more convenient (Berry, Seiders and Grewal 2002). The efficiency of shopping has been recognized to be a key influencer of consumer behavior in the offline context (Engel et al. 1995; Kerin et al. 1992), but seems even more important in the online context due to the utilitarian nature of online shopping (Kim and Lim 2001; Parasuraman et al. 2005; Srinivasan et al. 2002; Szymanski and Hise 2000; Zeithaml et al. 2000).

Zeithaml's (1988) classification treats time and efforts costs as predictors of perceived product value, assuming that the effect of these costs on purchase intentions are mediated through perceived value (Baker et al. 2002). Kerin et al. (1992) found support that shopping experience perceptions were directly associated with store value perceptions. Consumers incur time/effort costs during the shopping process and they implicitly place a premium on their time (Marmorstein et al. 1992; Schary 1971), attenuating perceptions of value. Other researchers propose that time and effort expenditures directly influence store purchase intentions. Consumers, for example, will decide not to shop through retailers when the expected time and effort costs are too high (Hui and Bateson 1991). Baker et al. (2002) tested the effect of time/effort costs has on perceived value and purchase intentions. Time/effort costs only appeared to have a direct effect on purchase intentions, but not on perceptions of value. In line with this, this study does not hypothesize a relationship between time and effort costs and perceived value for money, but only between time/effort costs and purchase intentions.

H6 Time and effort costs are negatively associated with purchase intentions

Enjoyment

Enjoyment refers to the experiential value that is derived from the online and offline shopping process. For experiential products such as books, the shopping process is often fun or entertaining for its own sake, apart from any other performance measures that may be anticipated. This study uses the construct of enjoyment to capture the intrinsic value that is derived from the shopping experience, such as visual appeal, pleasure, escapism, arousal, excitement, and surprise (Mathwick et al. 2002).

Although online shopping is often renowned for its utilitarian benefits (cf. Mathwick et al. 2002; Parasuraman et al. 2005; Wolfinbarger and Gilly 2001; Zeithaml et al. 2002), it has also been argued that hedonic aspects of online shopping are important predictors of online shopping attitudes and online purchase intentions (Childers et al. 2001; Kim and Lim 2001). However, on balance, it appears that enjoyment plays a less profound role in the online context, because the online shopping experience is far less compelling than its offline counterpart (Wolfinbarger and Gilly 2001).

Environmental psychologists demonstrated that a favorable impression of environments or shopping experience may influence consumers' emotional states and consequent behavior (cf. Mehrabian and Russell 1974; Eroglu et al 2003; Wakefield and Baker 1998). Retail environments may evoke feelings of pleasure and arousal that directly affect consumers' behaviors (Bitner 1992; Donovan and Rossiter 1982; Eroglu et al. 2003; Hui and Bateson 1991). Consumers experiencing positive affect exhibit higher approach responses (i.e. staying/buying), whereas those experiencing a more negative affect display more avoidance responses (i.e. leaving/not buying). Past research also showed that positive feelings lead to more unplanned spending (Babin and Darden 1996; Donovan et al. 1994). The rationale for this relationship is that consumers who are in positive moods are more likely to reach decision resolution and spend less time to reach a decision (Isen 1989). Moreover, if shoppers have had their moods improved during the shopping experience, they may give something back in the form of a small purchase (Babin and Darden 1996). Thus, this leads to the following hypothesis:

H7 Perceived enjoyment is positively associated with purchase intentions

Perceived value competing channel

Consistent with brand, store and channel choice literature (e.g. Ailawadi, Neslin and Gedenk 2001; Montoya-Weiss et al. 2003; Sirohi et al. 1998), it is assumed that higher perceptions of value for the alternative channel will attenuate purchase intentions in the corresponding channel. It is assumed that consumers compare channel performance relative to alternative channels before using (Montoya-Weiss et al. 2003). Consumers simply choose a channel over another, because they believe they will get better perceived value than they could expect from an alternative (cf. Gale 1994).

H8 Perceived value in the competing channel is negatively associated with purchase intentions

4.1.2 Extension of base model

To ensure that no important influencers of online value are left out, elements that play a profound role in the online context are included in the basic perceived value model (see Figure 4.2). A review of the literature indicates that reputation/trust, ease of use and informativeness play a profound role in the online context; they can be seen as significant influencers of perceived value and purchase intentions in the online context. These additional factors can help explaining how key antecedents of perceived value and purchase intentions are influenced (cf. Chen and Dubinsky 2003). The next section describes three store attributes that play a profound role in the online context, but also play a role in the offline context (see Chapter 2). They are seen as lower level store attributes (with the exception of reputation) that have their effect on intentions through the more abstract purchase-related consequences (Zeithaml 1988). Figure 4.2 shows the extended model of perceived value.

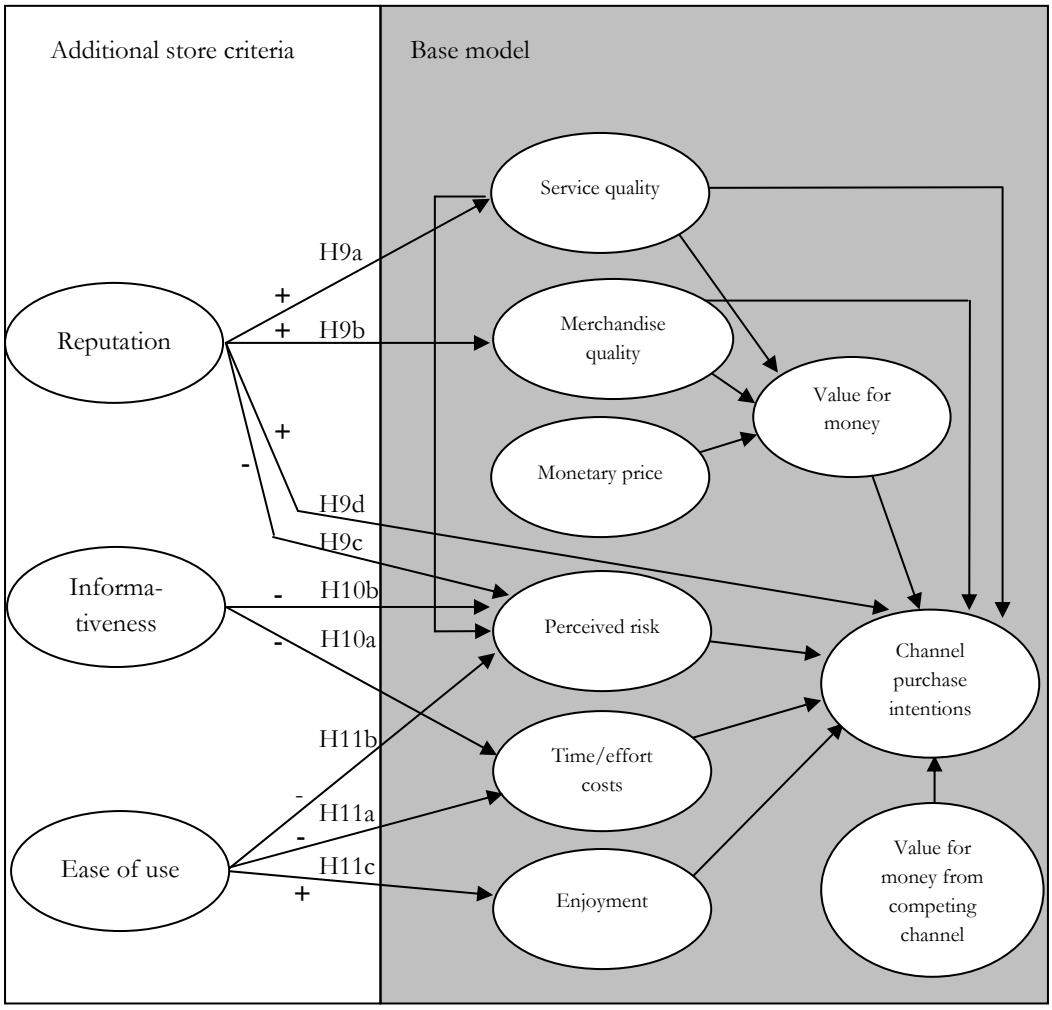


Figure 4.2: Extended model for channel purchase intentions

Reputation/trust

Reputation and trust are essential in adequately explaining online shopping behavior (Pavlou 2003; Swaminathan et al. 1999), but they also explain offline consumer patronage (Agarwal and Teas 2001; Berry 1969; Dodds et al. 1991; Grewal et al. 1998b; Morgan and Hunt 1994). Reputation is often used synonymously with store image. However, reputation differs slightly from store image as it refers to the public evaluation of the credibility and accountability of retailers (Einwiller 2003). Image tends to be more individually based and overall encompassing.

Reputation is an important influencer of the likelihood of online shopping (Swaminathan et al. 1999) and is intertwined with trust: reputation refers to the extent to which the general public belief that the store is honest and concerned about its customers (Doney and Cannon 1997), whereas trust refers to the individual's willingness to rely on a store in which he or she has confidence (Moorman, Deshpandé and Zaltman 1993). Not surprisingly, reputation is often found as predictor of trust (Einwiller 2003; Jarvenpaa and Tractinsky 1999). Trust can be defined as the confidence of the trusting party that the trustworthy party is reliable, has high integrity and is associated with such qualities as consistency, competency, honesty, fairness, responsibility, helpfulness and benevolence (Morgan and Hunt 1994). In other words, trust refers to the consumers' willingness to be vulnerable to the actions of retailers, based on the expectation that a retailer will perform a behavior that is beneficial to them, irrespective of the ability to monitor or control these retailers (Mayer, Davis and Schoorman 1995). Trust is a critical factor in any relationship in which the trustor (i.e. consumer or retailer) does not have direct control over the actions of a trustee (i.e. retailer or consumer), and where possible negative consequences may arise when one party is not fulfilling its promises (Mayer et al. 1995). As such, trust and risk are also closely related. Actually, risk is a necessary condition for trust to be operative (Mitchell 1999). Trust is a vital mechanism to reduce perceptions of risk (cf. Einwiller 2003; Jarvenpaa and Tractinsky 1999). Consumers compare the levels of risk and trust; the higher the initial risk perceptions, the more trust is needed to facilitate a transaction (Mayer et al. 1995).

Consumers often use extrinsic cues (e.g. reputation, store image) to infer quality (Agarwal and Teas 2001; Zeithaml 1988). They do not examine every purchase into detail by comparing product attributes, but rather simplify their choice by basing their choice on global judgments, such as brand image, store image or reputation (Teas and Agarwal 2000). Zeithaml (1988) argued that consumers rely more heavily on extrinsic attributes for initial purchase situations, when intrinsic cues are not available, and when quality is difficult to evaluate. In the online context, it is rather difficult for consumers to evaluate merchandise/product quality and security of transactions upfront. Consumers therefore often rely heavily on the e-tailer's reputation (Lee and Turban 2001), especially those with limited prior shopping experience (Einwiller 2003).

For the sake of parsimony, this study does not differentiate between reputation and trust and uses a combined reputation/trust construct. This construct refers to the customers' perceptions of the online/offline retailer's reputation and trustworthiness. Based on the assumption that consumers use extrinsic cues to infer perceived quality, reputation/trust is expected to positively influence service quality and merchandise quality (Zeithaml 1988). Past research already showed that reputation (store name) is positively related to perceptions of quality (Agarwal and Teas 2001; 2004). It is also hypothesized to reduce perceptions of risk; the more reputable and trustworthy a store is perceived to be, the more likely risk perceptions are reduced. Finally, a direct relationship between reputation/trust and (online) purchase intentions is hypothesized based on prior findings (Einwiller 2003; Pavlou 2003; Yoon 2002). This leads to the following hypotheses:

H9a Reputation/trust is positively associated with service quality
H9b Reputation/trust is positively associated with merchandise quality
H9c Reputation/trust is negatively associated with perceived risk
H9d Reputation/trust is positively associated with purchase intentions

Informativeness

The provision of information is a store attribute that has been identified to be important in the offline context (Berry 1969), as well as in the online context (Wolfinbarger and Gilly 2001; Zeithaml et al. 2000; 2002). Consumers generally search for information in order to eliminate anxiety and reduce the discomfort produced by uncertainty or perceived risk in a choice situation (Jasper and Oullette 1994; Montoya-Weiss et al. 2003; Roselius 1971). However, information search leads to time and energy costs, and possible excessive cognitive efforts. In this respect, consumers that are confronted with too much information (i.e. information overload) tend to be less satisfied, less confident, and more confused (Lee and Lee 2004). Consumers only find *relevant* information to be useful and valuable (Chen and Dubinsky 2003). This study defines informativeness as the extent to which an online or offline store is perceived to provide *relevant* information for purchasing. Informativeness is not limited to product information, and includes information aspects such as information about end price, payment options, and service policies and conditions. Although informativeness partly overlaps with 'search convenience' (cf. Seiders et al. 2000), many authors differentiate this construct from ease of use (Zeithaml et al. 2000;

Wolfinbarger and Gilly 2003). While search convenience refers to the speed and ease of retrieving product information, informativeness is concerned with the relevancy of information to make a well-informed decision.

The online context is praised for its prepurchase information provision (Alba et al. 1997; Lynch and Ariely 2000). For example, comparison websites can provide substantial amounts of in-depth information about products and enable comparisons to find their desired product (Häubl and Trifts 2000). However, online stores are inadequate to distribute tactile information, which makes it difficult for consumers to assess the quality of products requiring physical examination. Additionally, skilled salesmen can customize answers to consumers' information needs, which facilitate choice drastically. Contrastingly, the skills of salespeople have been questioned; experienced online buyers often doubt the competence of salespeople, and report they appreciate the direct obtainment of information without having to go through a salesperson (Wolfinbarger and Gilly 2001).

When stores are perceived to distribute more relevant information, consumers can more easily and quickly reach a decision. In this way, search costs for products and product-related information are drastically reduced. It is thus expected that an increase in informativeness saves time and (cognitive) effort. Next, the provision of relevant information reduces consumers' risk perceptions (Jasper and Oullette 1994; Montoya-Weiss et al. 2003). This leads to the following hypotheses:

H10a Informativeness is negatively associated with time and effort expenditures
H10b Informativeness is negatively associated with perceived risk

Ease of use

This study defines ease of use as the customers' perceptions of overall convenience of offline/online shopping. In the offline context, ease of use has been described by retailing concepts, such as: accessibility (Berry et al. 2002), store layout and design (Lohse and Spiller 1998), ease of navigating through the store, and fast checkout (Arnold, Oum and Tigert 1983). Often authors refer to the term 'convenience' to describe the ease of using a channel (cf. Childers et al. 2001). According to Seiders et al. (2000) there are mainly four ways to enhance convenience, namely by improving access, search, possession and

transaction convenience. Retailers that are convenient: are easy to reach (access convenience); enable consumers to speedily identify and select/order the desired products (search convenience); make it easy to obtain the desired products (possession convenience); and expedite the purchase and return of products (transaction convenience).

In the online context, ease of use has been termed *usability* (Swaminathan et al. 1999) or *efficiency* (Parasuraman et al. 2005; Zeithaml et al. 2000). Usability, which includes navigation and ease of use (search functions, download speed, overall design, ease of ordering), is a key factor in realizing the promise of E-Commerce (Swaminathan et al. 1999). Efficiency is referred to as the consumers' ability to get to the website, find their desired product and information associated with it and check out with minimal effort (Zeithaml et al. 2000), clearly establishing the link between ease of use and time/effort savings. In early E-Commerce literature, technical functioning of a website was identified as strong influencer of ease of use. When websites are not functioning properly (e.g. website unavailability, long download times), it can seriously harm the online experience and raise psychological costs. A large part of this problem has been solved, as consumers have gained higher speed access and retailers have invested in the technical functioning of their websites.

Previous TAM studies indicated that ease of use predicts attitudes towards online shopping (e.g. Childers et al. 2001; Pavlou 2003). Ease of use particularly refers here to the accessibility and convenience of online shopping (Childers et al. 2001). Obviously, channels may differ in their ease of use. While the online channel is generally perceived as superior in accessing retailers, finding relevant information and selecting/ordering the desired product with minimum time and effort invested (with the exception of physically examining products), the offline channel seems to outperform the online channel in the latter stages (e.g. ease of payments, immediate possession of goods, exchange and return of products and other postpurchase services) (Seiders et al. 2000). This superiority of offline channels in the final stages is likely to hold only for physical products. Financial services, for example, do not require physical prepurchase examination, can be obtained at a distance, and do not require exchange and return services.

As mentioned before, the ease of using a channel is strongly related to the time and effort required. When consumers perceive channels as being easier to use, they can more easily

and quickly obtain the desired product, leading to time and effort savings (Childers et al. 2001). Additionally, when channels are more convenient, things are less likely to go wrong (Seiders et al. 2000). This leads to reductions in frustration and, in turn, reduces risk perceptions. At the same time, it has been proven that increased convenience makes the shopping process more appealing, and, in turn, leads to more enjoyment (Childers et al. 2001).

A widely discussed topic within TAM is whether ease of use has a direct effect on intentions. Empirical studies supported the direct link between PEOU and intentions/behavior (e.g. Teo et al. 1999; Venkatesh 2000; Venkatesh and Davis 2000), whereas others found insignificant results (Gefen and Straub 2000; Lee et al. 2000; Pavlou 2003). This study does not hypothesize a direct effect of ease of use on purchase intentions, as the task at hand involves purchasing rather than making book inquiries. Ease of use has a direct effect when the task is integral part of the interface (e.g. book inquiry, browsing), but not when the channel is used as a means to fulfill tasks that are not solely intrinsic to the interface (Gefen and Straub 2000). This leads to the following hypotheses:

H11a Ease of use is negatively associated with time and effort expenditures
H11b Ease of use is negatively associated with perceived risk
H11c Ease of use is positively associated with enjoyment

4.2 Relative importance of criteria

As mentioned in Chapter 3, the construction of perceived value and purchase intentions may vary between contexts (i.e. channels), and between (groups of) persons. For example, Childers et al. (2001) tested whether enjoyment was a stronger predictor of attitude towards online shopping in the hedonic shopping context versus the utilitarian shopping context. They found a stronger relationship between enjoyment and attitude in the hedonic context, concluding that enjoyment was a stronger motivator in the hedonic context. Next, Einwiller (2003) found that more online buyers who have experience with an e-tailer relied less on reputation as an indicator of trust. In a similar vein, this study tests the strength of

relationships that are expected to differ between channels (online versus offline context), and between groups of buyers (online versus offline buyers).

This study deals with the issues as follows. First, the strength of the relationships found in the online and offline context are compared. Second, this study investigates the moderating influence of online shopping experience on shopping in the online context. Most studies tend to study direct effects of factors, for example, by measuring the influence of perceived value on purchase intentions. However, at times, it is much more meaningful to investigate the moderating effects of factors (Dabholkar and Bagozzi 2002; Mittal and Kamakura 2001), such as consumer traits or situational influences, on the strength of relationships.

By investigating the strength of the relationships among channels and among groups of buyers, insights are provided into (1) whether certain factors play a more (less) profound role in either context and (2) whether online buyers rely stronger (weaker) on certain factors in the online context. The hypotheses regarding the strength of relationships are discussed for channels, and for groups of buyers.

4.2.1 Differences in importance of criteria between the online and offline channel

Based on the literature review on the determinants of online purchasing (see Chapter 2), it is argued that online shoppers shop online because they seek *relevant information* (Li et al. 1999; Rosen and Howard 2000; Rowley 2001; Swaminathan et al. 1999), *ease of use* (Anderson and Srinivasan 2003; Wolfinbarger and Gilly, 2001), *time and effort savings* (Anderson and Srinivasan 2003; Bhatnagar et al. 2000; Rosen and Howard 2000) and *wider selections* (Szymanski and Hise 2000; Srinivasan et al. 2002; Wolfinbarger and Gilly 2001; Yoon 2002). One could expect that these factors then also play a more prominent role for online shoppers to shop online, compared to the factors that motivate offline shoppers to shop offline. However, although online shoppers attribute higher scores to the performance of the online channel relative to the offline channel, it is still uncertain whether they also rely more heavily on these factors in explaining their perceptions of value and purchase intentions. For example, online shoppers may be motivated to shop online because of the superior merchandise quality offered, but this does not necessarily mean

that the relationship between merchandise quality and perceived value in the online context is stronger (i.e. higher beta) than that in the offline context.

Similar to the work of Childers et al. (2001), this study proposes that differences exist in terms of the importance of utilitarian and hedonic aspects of shopping. Due to the utilitarian aspects of online shopping, it is expected that time/effort costs are of greater importance in explaining online purchase intentions compared to offline purchase intentions. Simultaneously, enjoyment is to be expected of lesser importance in explaining intentions in the online context. Childers et al. (2001) called for research to determine whether enjoyment has a stronger impact on online shopping behavior than offline shopping behavior. This study addresses this issue, and proposes that enjoyment more strongly affects purchase intentions in the offline environment compared to the online context. In other words, it is expected that in the offline context shoppers are more concerned with enjoyment than those in the online context. Next, based on online studies (Einwiller 2003; Pavlou 2003; Swaminathan et al. 1999), it is presumed that perceived risk and reputation play a more dominant role online. Apart from the higher risk perceptions of online shopping, it is thus expected that the relationship between perceived risk and intentions is stronger in the online context. Next, it has been found that consumers generally attach more importance to reputation as risk reliever in the online context, because of the absence of intrinsic product cues that are generally used to evaluate quality (Black et al. 2002; Zeithaml 1988). Therefore, the relationship between reputation and perceived risk is expected to be stronger in the online context. Finally, it is proposed that merchandise quality more strongly affects intentions in the online context than in the offline context. Consumers have consistently been found to be motivated to shop online because of the superior assortments (Gehrt and Yan 2004; Szymanski and Hise 2000; Wolfinbarger and Gilly 2001). This leads to the following hypotheses:

For base model:

H12: Time/effort expenditures have a more pronounced effect on purchase intentions in the online context than in the offline context

H13: Enjoyment has a less pronounced effect on purchase intentions in the online context than in the offline context

H14: Perceived risk has a more profound effect on purchase intentions in the online context than in the offline context

H15: Merchandise quality has a more profound effect on purchase intentions in the online context than in the offline context

For extended model:

H16: Reputation has a more profound effect on perceived risk in the online context than in the offline context

4.2.2 Differences in importance of criteria between more and less experienced online buyers for the online channel

Dabholkar and Bagozzi (2002) argue that most studies tend to study the *direct effects* of external factors. They suggest –together with other researchers (Baron and Kenny 1986; Mittal and Kamakura 2001)– that hypothesizing direct effects may be somewhat redundant and obvious and it is much more meaningful to investigate the *moderating effects* of external factors, such as consumer traits (e.g. prior online shopping experience) or situational influences. Prior research suggested that the nature and strength of relationships between constructs may change during the various stages of a customer's familiarity or experience with a company (Parasuraman 1997; Parasuraman and Grewal 2000; Woodruff 1997). For example, Verhoef, Franses and Hoekstra (2002) found that the duration of a relationship with a provider moderated the relationships between important relational constructs (i.e. satisfaction, affective commitment) and the number of services purchased. Bolton (1998) addressed that the relationship between cumulative satisfaction and retention is enhanced by the level of experience customers have with the continuous service provider. In other words, more experienced customers rely stronger on their cumulative satisfaction – compared to those who have less experience– as they can rely more strongly on their own experiences. Other research reported that the importance of trust in explaining service usage decreased with increasing relationship age (Grayson and Ambler 1999); trust affected customers use of services in short-term relationships, but had no effect in long-term relationships. Past research thus suggests that the level of experience with a retailer can moderate the relationships between important relational constructs. In addition to this, information research demonstrated that the antecedents of user adoption and use of an information technology (IT) change with experience; nonadopters use a richer set of

criteria to evaluate the IT than adopters do (Karahanna et al. 1999). Adopters were only concerned with the instrumental benefits of using the IT. In line with this reasoning, customers that have experience with shopping through a particular website may rely stronger on the instrumental consequences of using this website. Finally, E-Commerce literature suggested that differences may exist in the evaluative processes in judging e-SQ and attitude toward online shopping, due to customer traits such as the level of online shopping experience and technology readiness (Bobbitt and Dabholkar 2001; Monsuwé et al. 2004; Parasuraman et al. 2005). In other words, (groups of) customers may vary in the weights they attribute to the antecedents of online purchase intentions. In sum, there is evidence that the level of prior online shopping experience may act as a moderator of the relationships in the research model.

This study investigates the moderating influence of prior online shopping experience in the online context. It is assumed that the strength of relationships in the online context can be attenuated or strengthened through the level of prior online shopping experience. More specifically, the importance of reputation tends to decrease with increasing levels of familiarity with online shopping (Einwiller 2003; Montoya-Weiss et al 2003). Einwiller (2003) found that customers who had gained much experience with a particular retailer were significantly less influenced by retailer's reputation than those who had never or rarely bought something from the respective retailer. For customers who have high levels of familiarity, reputation is not frequently used as a means to reduce risk as they can rely on their own prior experiences. Moreover, more experienced online shoppers tend to have a strong internal locus of control and are more innovative (Hoffman et al. 2002); for them risk generally plays a less inhibiting role. Thus, it is expected that the relationships between reputation and risk (Hypothesis 20), and risk and online purchase intentions (Hypothesis 17) are attenuated by the level of prior online shopping experience. Next, the level of prior online shopping experience is expected to strengthen the relationship between time/effort costs and purchase intentions. More experienced online shoppers tend to have an internal locus of control (Hoffman et al. 2002), are goal-directed (Wolfinbarger and Gilly 2001), and have a 'wired' lifestyle with scarce leisure time (Lohse et al. 2000). For them time/effort savings significantly alter their behavior. Gehrt and Yan (2004) also found that more experienced Internet users rely more strongly on shopping convenience. Once they have experienced the time and effort savings, they rely more strongly on these instrumental

benefits (Karahanna et al. 1999). It is thus expected that those online shoppers in general rely more heavily on the time/effort costs. In a similar vein, it is expected that the level of prior online experience attenuates the relationship between enjoyment and purchase intentions. Once, customers have become used to shopping online, they rely less on the enjoyment received as they are driven by the instrumental time/effort costs. Wolfinbarger and Gilly (2001) state that experienced online shoppers rather see purchasing as "buying" instead of "shopping" and are less concerned about the enjoyment they receive. On the other hand, customers who have little prior experience are expected not to shop online because of the lack of enjoyment. They generally rely more heavily on the enjoyment than those with much online shopping experience. This leads to the following hypotheses:

For base model:

H17: The relationship between perceived risk and purchase intentions is attenuated in the online context by the degree of prior online shopping experience

H18: The relationship between time/effort costs and purchase intentions is strengthened in the online context by the degree of prior online shopping experience

H19: The relationship between enjoyment and purchase intentions is attenuated in the online context by the degree of prior online shopping experience.

For extended model:

H20: The relationship between reputation and perceived risk is attenuated in the online context by the degree of prior online shopping experience

5 Research Methodology

This chapter explains the research methodology. First, the research technique is addressed, followed by the research instrument. Next, a background of the two empirical studies is given. Finally, the research procedure is discussed, which will be used as a guideline in Chapter 6 and in Chapter 7.

5.1 Structural equation modeling

Structural equations modeling (SEM) is used as a means to analyze the hypothesized relationships. SEM starts with a theoretically based model, which is transformed into a path diagram. It does not only allow researchers to analyze a set of latent factors much like independent and dependent variables in regression analysis (Segars and Grover 1993), but also provides a comprehensive means assessing and modifying theoretical models (Karahanna and Straub 1999; MacKenzie 2001). As such, SEM offers great potential for furthering theory development. SEM is able to accommodate multiple interrelated dependence relationships in a single model. It provides a confirmatory test to a series of causal relationships. Jöreskog and Sörbom (1982) initially proposed that each equation in the model represents a causal link rather than a mere empirical association. The causality issue that SEM proclaims is often criticized (Hair et al. 1998). Causation refers to the principle by which cause and effect are established between two variables. It requires that there is a sufficient degree of association between the two variables, that one variable occurs before the other, that one variable is clearly the outcome of the other, and that there are no other reasonable causes for the outcome (Hair et al. 1998). Although in its strictest terms causation is rarely found (e.g. chemical reactions), in practice strong theoretical support can make empirical estimation of causation possible (Hair et al. 1998, p. 579).

5.1.1 Reasons to adopt structural equation modeling

The reasons to adopt SEM in this study are based on the work of Steenkamp and Baumgartner (2000). They provide three principles of SEM that fit with the aim of this study, including: (1) focus on theoretical explanation rather than on prediction, (2) incapability of directly measuring encompassing constructs, and (3) necessity of the inclusion of measurement error. First, SEM is covariance-based rather than variance-based. The estimation techniques used in SEM attempt to minimize a function that depends on the differences between the variances and covariances implied by the model and the observed variances and covariances. Compared to other modeling techniques, SEM is more focused on explaining marketing phenomena than on predicting specific outcome variables. In line with this, this study attempts to explain why consumers intend to purchase online or offline, rather than to predict the intentions to shop online or offline. Second, the constructs (i.e. factors) that are used in this study (e.g. service quality, informativeness, perceived value) are rich in nature and cannot easily be defined; they differ among persons and situations. As a result, they cannot be directly observed. They can only be measured through observable measures (i.e. items) that vary in their degree of observational meaningfulness and validity. A single indicator is not likely to capture the full theoretical meaning of each underlying construct and, consequently, multiple indicators are necessary. Third, observed measures of theoretical constructs always have some measurement error, and the correspondence between constructs and their measures has to be an explicit component of the model. In SEM, the interplay between constructs and measures plays a crucial role in theory development and model testing, and in deriving empirical generalizations. Apart from these principles, SEM is also capable of comparing relationships between latent factors across groups and contexts (Steenkamp and Baumgartner 2000), making the choice for SEM an obvious one.

5.1.2 Assumptions, requirements and issues of SEM

This section provides the assumptions, requirements and related issues of SEM.

Assumptions. SEM generally assumes linear relationships, although it is possible to account for nonlinearity (Hair et al. 1998). This assumption seems not to be troublesome, as other perceived value studies also commonly assume and find linear relationships between the

identified factors (Baker et al. 2002; Dodds et al. 1991; Sweeney et al. 1999). Next, this study uses a maximum likelihood estimation (MLE) based on the variance-covariance matrix. ML estimation is commonly used in practice and provides consistently efficient estimation under the assumption of multivariate normality and is relatively robust against moderate departures from the latter (Diamantopoulos and Siguaw 2000). Compared to other multivariate techniques, SEM is more sensitive to distributional characteristics of the data, particularly to the departure from multivariate normality or a strong kurtosis (Hair et al. 1998). A lack of multivariate normality is particularly troublesome, because it substantially inflates the chi-square statistic and provides parameter estimates with too much statistical power (Hair et al. 1998).

Sample size. SEM requires relatively large sample sizes for robust estimates. As a rule of thumb, researchers suggested relatively large sample sizes (N>200) for SEM (Hair et al. 1998). Comrey and Lee (1992) suggested that a sample size of 50 is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good, and 1,000 is excellent. According to Hair et al. (1998) there are many factors impacting the required sample size. When misspecification is suspected, the model is overly large or complex, the data exhibit nonnormal characteristics, or an alternative estimation procedure is used, a larger sample size than 200 is needed. As some authors (Hair et al. 1998; Kline 1998) suggest, it is more helpful to think in terms of the number of respondents per estimated parameter. These authors suggest a minimum of at least five respondents for each estimated parameter, with a ratio of 10 respondents per parameter considered as most appropriate. As the proposed model is relatively complex (estimation of approximately 60 parameters), the studies require a minimum sample size of 300.

Missing data. There are several ways to treat missing data in SEM. One standard method for dealing with incomplete data is to just eliminate any observations where some data are missing: listwise deletion. This is the most frequently used method (Hair et al. 1998). This method can be unsatisfactory if sample sizes are small. Another standard approach is called pairwise deletion, in which each sample moment is calculated separately. This method only excludes an observation from the analysis when it is missing a value that is needed for the computation of that particular moment (Arbuckle and Wothke 1999). A third approach is data imputation. Here, the missing values are replaced with imputed values, after which

consequent analysis are performed. In Chapter 6 and 7, it is discussed which approach (listwise deletion, imputation) is used.

Reflective versus formative models. This study uses reflective measurement models to estimate the base model, rather than formative indicators (Diamantopoulos and Winklhofer 2001). As such, it is assumed that the latent variable causes the observed items, instead of the items causing the latent variable. It is a challenging to decide whether to specify the observed items as reflective or formative indicators of the latent constructs (Diamantopoulos and Winklhofer 2001; Jarvis, MacKenzie and Podsakoff 2003; Parasuraman et al. 2005). With formative models it is necessary to include all relevant concepts that form the construct, because dropping an indicator may alter the meaning of the construct. Therefore, there has to be a very high level of agreement among researchers on the factors that determine each latent construct. On the other hand, with reflective models the meaning generally does not alter when dropping an item (Jarvis et al. 2003). Although many of the constructs are well established in the psychometric and marketing literature, it seems to be an almost impossible task to ensure the nomological and criterion-related validity for all latent constructs. This blocks the decision to choose for formative models. Apart from this, the reasons for choosing reflective over formative models are based on the following criteria (Jarvis et al. 2003): the relative homogeneity and hence interchangeability of items pertaining to a latent construct, the high degree of covariation among items, and the expectation that the items (e.g. items of perceived value) are likely to be affected by the same antecedents (e.g. price, service) and have the same consequences (increase or decrease purchase intentions).

5.2 Instrumentation

A self-administrated questionnaire was used to collect data. Apart from questions regarding the background of the respondents, the final questionnaire entailed 11 relevant constructs (8 constructs in base model, 3 additional constructs in extended model) that were measured for the online and offline context. Respondents had to express their prepurchase evaluations towards using the online and offline channel for buying books. As such, the perceptual differences between using the online versus the offline channel could be elicited.

5.2.1 Pilot study

A pilot study was performed with a convenience sample of 102 respondents in order to investigate the scales. The goals of this pilot study were to investigate the reliability of the scales and to check the scales' face validity. Items were generated from a literature review and with help of marketing academics. The initial questionnaire comprised 71 pairs of statements, and additional socio-demographic questions. Respondents indicated that the questionnaire was too extensive and that they felt uncomfortable answering the "same" statement three of four times. Two constructs (i.e. socialization and perceived control) comprising eight items were left out of the model. Additionally, Cronbach's alphas, item-to-total correlations and exploratory factor analyses were used to reduce the number of questions. After analysis, 40 items were retained. Finally, marketing academics were asked to judge the constructs' content validity; they indicated that the selected items closely represented the underlying constructs.

5.2.2 Operationalization of the constructs

For SEM it is necessary to develop valid and reliable scales that have robust psychometric properties (Hair et al. 1998). Ideally, each construct is measured by multiple indicators in order to account for measurement error (Steenkamp and Baumgartner 2000). If possible, validated scales were used from previous research. In order to facilitate comparisons between the online and offline context, the constructs were operationalized in a generic form. A very concrete item (e.g. credit card theft) would be less likely to apply to both contexts; therefore, more abstract items were developed (e.g. level of risk). All the constructs in the questionnaire were measured by multiple items with seven-point Likert scales, anchoring at 1 (strongly disagree) and 7 (strongly agree). Table 5.1 displays the items used in this study, their sources, and their corresponding item number.

Service quality

Service quality is an elusive and abstract construct that is difficult to measure (Cronin et al. 2000). SERVQUAL, developed by Parasuraman et al. (1988) is one of the most widely used and cited measure for service quality in the offline context (Dabholkar et al. 1996). There is some controversy about the extent to which the traditional SERVQUAL captures service quality in the online context, especially when retailers that sell merchandise are considered.

Leading service researchers (Grönroos et al. 2000; Parasuraman et al. 2005; Zeithaml et al. 2000) stress that additional dimensions are needed in order to fully explain consumer evaluations of e-services. Online shopping is more utilitarian, and based on ease and speed; online shoppers only need assistance when problems occur and/or when they have questions to be answered (Wolfinbarger and Gilly 2003; Zeithaml et al. 2000). In these circumstances, they often demand quick responses, such as order delivery confirmation or answers to e-mail questions.

Another disputed aspect refers to whether service quality is a single construct or consists of multiple underlying constructs. Sweeney et al. (1999) distinguished between functional (how the service is delivered) and technical (what is received from the service) service quality and found that these were distinct factors in their perceived value model. Sirohi et al. (1998) initially used three separate constructs –store operations, personnel service, store appearance– to define service quality, but discriminant tests showed that they related to one overall service quality factor. This study also uses one factor to address the influence of retail service quality on perceived value and purchase intentions[11].

Here, service quality is measured by the overall quality, the quality of the additional services delivered, courtesy, responsiveness and fulfillment/reliability. These five items were adapted from Baker et al. (2002), Dabholkar et al. (1996), and Wolfinbarger and Gilly (2003). The tangible aspects (i.e. physical environment, website) were excluded from the scale, as the respondents in the pilot study indicated that they were difficult to compare.

Merchandise quality

Merchandise quality consists of number, composition and quality of alternatives. Sirohi et al. (1998) measured merchandise quality for a supermarket in terms of the quality of the merchandise, the variety of grocery items, and the appropriateness of the items. This study investigates commodity-like products (i.e. books); thus the perceived quality of the books itself is expected to be the same across contexts. Contrastingly, the perceived quality of the selection of books may differ between the online and offline channel. Note that a larger assortment does not lead instantly lead to higher merchandise quality perceptions. Similar

[11] Based on the exploratory factor analyses in Chapter 6 and Chapter 7, it appeared that all five items pertained to the same factor: service quality.

to information overload, consumers may refrain from extensive choice that can lead to confusion (Huffman and Kahn 1998). This study uses two items to measure whether the store/website offers a good selection and whether it provides a wide selection of books that fits the individual customer's needs (cf. Sirohi et al. 1998; Wolfinbarger and Gilly 2003).

Monetary price

Monetary price refers to the customers' perceptions of the prices offered by the website and the physical store. This study measures it by including both the general price level and sales promotions. A few studies have separated sales promotions from price (cf. Sirohi et al. 1998); this study, however, combines sales promotions with the general price level to develop one overall measure of the price level. Other studies distinguished between perceived monetary price and perceived transaction value (i.e. the pleasure of getting a good financial deal) (Thaler 1985; Grewal et al. 1998a). This study, however, does not make this distinction, as it deals with prepurchase evaluations and not actual purchase evaluations or postpurchase evaluations. It uses two items (see Table 5.1) to measure the perceived price level of the store/website and its price offers. Although the SEM literature indicates that it is preferable to measure each construct with at least three items (Hair et al. 1998), it is not uncommon to use just two items[12] (cf. Baker et al. 2002; Chen et al. 2003). The two items have been adapted from prior studies (Baker et al. 2002; Sirohi et al. 1998). The questionnaire explicitly addressed that consumers were expected to give their perceptions of the end price; thus, including delivery costs. Although the list prices may be the same online versus offline, delivery costs may cause perceptual differences in the price level between channels.

[12] From the pilot study, it became clear that respondents felt uncomfortable when being confronted with multiple items that appeared very similar. To avoid annoyance, it was decided to select two items for measuring price and merchandise quality.

Perceived risk

In this study, perceived risk refers to the overall amount of uncertainty perceived by a consumer in shopping through an online and offline retailer (cf. Cox and Rich 1964). Five items were used to measure perceived risk (see Table 5.1). The items were rather abstract to ensure comparability; the items should be relevant to both contexts and not be specific to one context only. Most of the items were adapted from Wolfinbarger and Gilly (2003) and from Sweeney et al. (1999). Although the literature identifies a number of risk dimensions (Kaplan, Szybillo and Jacoby 1974; Peter and Tarpey 1975), this study uses one overall risk construct to account for the perceived prepurchase uncertainty. The items included the following types of risk: financial/monetary, product/performance, time/convenience, psychological (privacy concerns), and overall risk. Social risk and physical risk were excluded, as they were expected to play a minor role (cf. Forsythe and Shi 2003).

Time and effort costs

Time and effort costs relate to the nonmonetary costs to shop for a particular item through either channel (e.g. Zeithaml 1988). These costs clearly refer to the utilitarian aspects of shopping. Most of the items in this study referred to the opposite of the channel's time and effort costs, that is, the efficiency of the shopping channel. To ensure that most aspects of utilitarian shopping value were included, one item relating to perceived control was added based on the work of Babin and Darden (1995) and Hui and Bateson (1991). Next, the results of the pilot study showed that a distinction between the cognitive and physical effort would lead to extreme answers with little variation in the online context (i.e. hardly any physical effort is required to shop online). As SEM assumes normally distributed items, it was decided to use a more appropriate overall term implicitly measuring both cognitive and physical effort. In total, four items were used to measure the time and effort required.

Enjoyment

This study uses the construct of enjoyment to capture the hedonic aspects of shopping. Environmental research frequently distinguished between pleasure and arousal (Mehrabian and Russell 1974; Eroglu et al. 2003; Wakefield and Baker 1998) or other types of intrinsic value (e.g. Mathwick et al. 2002). In most TAM studies (e.g. Childers et al. 2001; Monsuwé et al. 2003), however, perceived enjoyment is treated as a single construct. In this respect, Monsuwé et al. (2004) argued that escapism, pleasure and arousal are fully mediated

through enjoyment. In conformance with these TAM studies, this study uses a single construct to capture the hedonic value derived from the shopping activity. Childers et al (2001) initially used eight items to measure the construct; four items were used for this study.

Perceived value: Value for money

Despite perceived value –when defined as the tradeoff between all perceived benefits and costs– entails more than just quality divided by its monetary costs (Dodds et al. 1991), this study uses *value for money* as indicator of perceived value. It refers to what consumers receive for what they pay (Sirohi et al 1998). Apart from this, this study also takes into account the nonmonetary costs and benefits, which are treated as separate components. Perceived value was measured with three items that were modified from Sirohi et al. (1998) and Sweeney et al. (1999).

Purchase intentions

Purchase intentions here refer to the intentions to purchase books through a particular channel (i.e. online or offline retail outlet). Three items were used to operationalize channel purchase intentions. Similar to previous studies (Baker et al. 2002; Sirohi et al. 1998; Sweeney et al. 1999), purchase intentions were measured through the following items: (1) probability of making the next purchase through a particular channel, (2) recommending the store/website to others, and (3) probability to predominantly use a particular channel for future purchases.

Reputation

Reputation here refers to the trustworthiness and reputation of the store and the website. This study does not make a distinction between trust and reputation, although other studies found that they were separate constructs (cf. Einwiller 2003; Pavlou 2003). Reputation generally engenders trust (Einwiller 2003; Jarvenpaa and Tractinsky 1999) and the consequences of reputation and trust on other constructs are quite similar (e.g. reducing risk, increasing purchase intentions) (cf. Doney and Cannon 1997). The four items that were used to measure reputation were adapted from prior studies (Chen and Dubinsky 2003; Doney and Cannon 1997; Einwiller 2003; Teas and Agarwal 2000).

Informativeness

As Chen and Dubinsky (2003) clearly explained, consumers perceive only relevant information to be useful and valuable; they do not consider the sheer amount of information that they can derive from a channel, but rather whether they can find relevant information to make a well-informed decision. Three items were used to measure informativeness, based on prior scales from Mishra, Umesh and Stem (1993), Chen and Dubinsky (2003) and Wolfinbarger and Gilly (2003).

Ease of use

Ease of use refers to the ease or convenience of shopping through either channel. The five items were selected based on TAM literature (e.g. Childers et al. 2001), Internet literature (Szymanski and Hise 2000; Wolfinbarger and Gilly 2003) and convenience literature (Seiders et al. 2000). In particular, these items measured access convenience (2 items), search convenience, transaction convenience and overall convenience.

Table 5.1: Scale items

Scale	Item num-ber	Items	Source of Measure
Service quality	SQ1	This store/website provides high-quality service	Baker et al. (2002); Dabholkar et al. (1996); Wolfinbarger and Gilly (2003)
	SQ2	The additional services delivered by this store/website are of high quality	
	SQ3	This store/website treats its customers well	
	SQ4	This bookstore/website is always willing to help its customers	
	SQ5	This store/website keeps its promises	
Merchandise quality	MQ1	This store/website provides me a good selection	Sirohi et al. (1998); Szymanski and Hise (2000); Wolfinbarger and Gilly (2003)
	MQ2	This store/website offers a wide variety of books that interest me	

Table 5.1: Scale items (continued)

Price level	Price1	This store/website offers low prices (r)	Baker et al. (2002); Sirohi et al. (1998)
	Price2	This store/website has attractive offers (r)	
Time and effort costs	Time1	I spend my time efficiently, when I shop through this bookstore/website (r)	Babin and Darden (1995); Baker et al. (2002)
	Time2	It costs me little time and effort to shop for books through this bookstore/website (r)	
	Time3	Buying books through this bookstore/website gives me great control (r)	
	Time4	Buying books through this bookstore/website is a good way to quickly get what I want (r)	
Perceived risk	Risk1	I do not feel safe in my transactions with this bookstore/website	Jacoby and Kaplan (1972); Sweeney et al. (1999); Wolfinbarger and Gilly (2003)
	Risk2	There is a considerable chance that the book will be less than expected, when I buy through this bookstore/website	
	Risk3	Purchasing through this bookstore/website leads to uncertainties	
	Risk4	Things can easily go wrong when I purchase through this bookstore/website	
	Risk5	I feel like my privacy is not protected at this bookstore/website	
Enjoyment	Enjoy1	Buying books through this bookstore/website is fun for its own sake	Childers et al. (2001)
	Enjoy2	It makes me feel good, when I buy books through this bookstore/website	
	Enjoy3	Buying books through this bookstore/website is enjoyable	
	Enjoy4	It is interesting to buy books through this bookstore/website	
Perceived value: Value for money	PV1	This bookstore/website offers me good value for money	Sirohi et al. (1998); Sweeney et al. (1999)
	PV2	This bookstore/website offers books with an attractive price/quality ratio	
	PV3	The prices at this bookstore/website are economical, compared to what I receive	

Table 5.1: Scale items (continued)

Purchase intentions	Int1	There is a considerable chance that I will purchase my next book through this bookstore/website	Sirohi et al. (1998); Deveraj et al. (2002)
	Int2	I recommend others to buy their books through this bookstore/website	
	Int3	In the near future, I will predominantly shop through this bookstore/website	
Reputation/ trust	Rep1	I can trust this store/website	Chen and Dubinsky (2003); Einwiller (2003); Teas and Agarwal (2000)
	Rep2	This store/website has a good reputation	
	Rep3	This store/website has a reputable standing	
	Rep4	I trust this store/website not to sell my personal data to others	
Informative-ness	Inf1	This bookstore/website provides in-depth information about books	Chen and Dubinsky (2003); Mishra et al. (1993); Wolfinbarger and Gilly (2003)
	Inf2	I can exactly find the information I need.	
	Inf3	I can find the information I need to make a well-informed decision.	
Ease of use	Ease1	I can easily visit this bookstore/website	Childers et al. (2001); Seiders et al. (2000); Szymanski and Hise (2000); Wolfinbarger and Gilly (2003)
	Ease2	I can visit the bookstore/website whenever it suits me	
	Ease3	I can quickly find interesting books in the bookstore/on the website	
	Ease4	Payments are easy, when I buy books through the bookstore/website	
	Ease5	The process of buying books through the bookstore/website runs smoothly	

5.3 Two empirical studies

This research performs a main study and a replication study. The first study is performed for a well-known Dutch multichannel bookseller, which exists for over a century. The bookseller is known for its wide variety of books, customer service, and professional personnel. In a way, the bookseller resembles Barnes and Noble. This generalist bookseller

has its roots in selling books through physical stores located in city centers, but has recently decided to sell books online too. The first study elicits offline and online buyers' perceptions of buying leisure books through the stores and website of this bookseller. Offline buyers refer to customers who have not bought through the website, whereas online shoppers refer to customers who have at least shopped once through the website.

The second study acts as a replication study and deals with the perceptions of online buyers of a pure e-tailer. This pure e-tailer is specialized in selling management-related books. The company originally sold these books through catalogs, but decided more than five years ago to sell them online. The online channel has superseded the catalog, and most of the sales are conducted online. The company successfully created awareness and gained a substantial market position. As this specialized bookseller does not have an offline counterpart, respondents are asked to give their offline perceptions of the well-known bookseller used in study 1. The second study is predominantly used to replicate the findings in the first study. However, this study also investigates whether consumers are motivated to shop online by the wider selection of this specialized store (this will be explained in detail in Chapter 7). While in the first study the online and offline assortments are very similar, as it deals with the same retailer, in the second study the assortments are not. The comparison of a specialist retailer versus a generalist retailer makes it possible to render the motivations to shop online for superior selections (found in Chapter 2). Specialist bookstores are more frequently found on the Internet, as they can more cost-effectively serve a wider public.

5.4 Research procedure

Table 5.2 provides the procedure of analyzing the data, which is largely based on the work of Arnold and Reynolds (2003) and Duman (2002). Next, this section explains how a distinction is made between online and offline buyers and why this study decides to pool the data collected from online and offline buyers for each context.

Table 5.2: Research procedure

Stage	Analysis	Purpose
1	Item analysis	Investigation of sample characteristics Investigation of item means Investigation of item-to-total correlations
2	Exploratory factor analysis	Exploration of loadings; removal of items with low loadings and high cross-loadings Assessment of number of latent factors Assessment of reliability (Cronbach's alpha)
3	Confirmatory factor analysis	Assessment of convergent validity Assessment of discriminant validity Assessment of construct reliability Assessment of correlations and multicollinearity
4	Multiple Group Confirmatory Factor Analysis for base model	Assessment of structural relationships (baseline models): H1-H8 Assessment of measurement invariance
		A. Across contexts: testing the relative importance of criteria in the offline and online context: H12-H15
		B. Across groups of buyers: testing the moderating effect of prior online shopping experience on relationships in the online context: H17-H19
5	Multiple Group Confirmatory Factor Analysis for extended model	Assessment of structural relationships (baseline models): H9-H11 Assessment of measurement invariance
		B. Across contexts: testing the relative importance of reputation on risk in the offline and online context: H16
		C. Across groups of buyers: testing the moderating effect of prior online shopping experience on relationship between reputation and risk in the online context: H20
6	Presentation of results	Discussion of findings

First, item analysis is performed to describe the sample characteristics, to investigate the item means, and to assess item-to-total correlations. Second, exploratory factor analysis is

performed to explore whether the items load highly on their intended latent construct, and have low cross-loadings. After the exploratory factor analysis, the reliability of the underlying factors is discussed in terms of Cronbach's alphas. Third, confirmatory analysis (CFA) is performed to ensure that the constructs are valid and reliable; this refers to the measurement part of the model. Many SEM researchers argue that the measurement model should be established, before one can assess structural relationships (Anderson and Gerbing 1988; Steenkamp and Baumgartner 2000). Consequently, CFAs (without any structural relationships) are performed with AMOS 5.0 to check whether the items meet the criteria for convergent and discriminant validity, as well as construct reliability. In this phase, the presence of multicollinearity is also investigated through regression and correlation analysis. The regression analyses are performed by using SPSS 11.0, whereas correlations are derived through AMOS 5.0. Fourth, prior to testing measurement invariance, it is customary to first establish the baseline models separately, for each group under study (Byrne 2001). These baseline models are also used to test the Hypotheses 1-8. Multiple group confirmatory analysis is then performed to check whether the items used are equivalent (invariant) across contexts. SEM researchers argued that analyses of the differences between the structural relationships can only be meaningful, when the items measure the same thing and to the same degree in each context (Byrne 2001; Steenkamp and Baumgartner 2000); therefore the establishment of measurement invariance across contexts is a logical prerequisite for testing the invariance of structural parameter estimates, that is structural invariance (Vandenberg and Lance 2000). This study conducts invariance tests in order to investigate whether the relative importance of the antecedents varies between *contexts*, and between *groups of buyers*. It is first tested whether certain factors have a more (less) pronounced effect in either context (Hypotheses 12-15). Then, it is investigated whether there are differences between experienced online buyers and less experienced online buyers in the construction of online purchase intentions (Hypotheses 17-19). In doing so, it is investigated indicate whether the level of prior online shopping experience has a moderating effect on the relationships in the online context (see Chapter 4). In the fifth stage, the same procedure outlined for the base model is followed for the extended model. Baseline models test the hypotheses regarding reputation, ease of use and information (Hypotheses 9-11). Then, after the establishment of measurement invariance, it is investigated whether reputation more strongly reduces risk in the online context compared to the offline context (Hypothesis 16). Next, it is tested whether the level of

prior online shopping experience attenuates the relationship between reputation and risk in the online context (Hypothesis 20). Finally, an overview is presented to highlight the main findings.

The research procedure for the second study is somewhat shorter, as it limits itself to the base model. The aim is on testing the relationships within the perceived value framework rather than to replicate the rather complex extended model. Thus, the second study tests whether the relationships found in the first study are replicated in the second study (Hypotheses 1-8). Then, structural invariance tests are performed to check whether certain factors play a more profound role in either context (Hypotheses 12-15). Finally, Study 2 investigates the moderating influence of prior level of online shopping experience in the online context (Hypotheses 17-19).

Distinction between online and offline buyers. The distinction between experienced and less experienced online shoppers is an important issue. Offline buyers refer to those with little online experience, whereas online buyers refer to experienced online buyers. Study 1 discriminates between less experienced and more experienced online buyers based on whether the respondents had prior shopping experience with the multi-channel bookseller's website. The reason for assigning respondents according to their prior direct experience (rather than the number of prior purchases) is that the respondents who have shopped through the website have experienced the online shopping process for this particular bookseller. Personal experience with an e-tailer has a strong influence on the customer's perceptions and behavior (Einwiller 2003; Gefen 2000). Those with personal experience are likely to differ from those that have to rely on indirect experiences (e.g. personal experience with *other* e-tailers, experiences from friends and relatives). In Study 2, it is not possible to assign respondents according to their prior direct shopping experience, as all respondents have shopped through the corresponding website. To account for the level of online experience, Study 2 makes a distinction between online and offline buyers based on the number of prior purchases, as this also acts as an indicator of the level of experience with online shopping.

Pooling of data. Another important issue that needs to be addressed relates to the pooling of data. As mentioned before, Study 1 involves online and offline perceptions from online

and offline buyers. Therefore, it seems plausible to treat online and offline shoppers as heterogeneous groups. On the other hand, it seems justifiable to pool the data of online and offline shoppers regarding each channel and then look for differences in the strength of relationships in the online and offline context. This study aims to pool the data, because of two related advantages. First, by pooling the data more variation exists within each context. Variation is needed to have more robust estimates of the relationships in each context. Second, after pooling the data, the factors found in the factor analyses will represent those factors that are more homogeneous across the entire sample (Hair et al. 1998), facilitating comparisons between the two contexts. A possible downside of this method is that it assumes that the strengths of the relationships of the groups are similar. Therefore, this study will check whether the relationships for online and offline buyers are similar for the offline context and for the online context (i.e. moderating effects) (see section 6.6.2).

6 Results and Discussion Study 1

This chapter presents the results of the first study according to the data analysis procedure outlined in the previous chapter. This study analyzes the consumers' motivations to shop online or offline at a specific multichannel bookseller (see section 5.3). First, the data collection is discussed, followed by a description of the characteristics of the online and offline buyers. Next, the stages identified in the former chapter are followed, ending in a discussion of the major findings.

6.1 Data collection

To ensure enough variation in channel purchase intentions, both consumers who are more likely to shop online and those who are more likely to shop offline were considered. As such, this study dealt with online and offline consumers of books. A well-known Dutch multichannel bookseller provided a sample of consumers who had recently purchased at least one book through their websites (online buyers). Next, a sample of offline consumers (offline buyers) was selected that only shopped through the offline stores of this multichannel bookseller.

Students collected the data for the offline sample. Three outlets of the multichannel bookseller were visited to increase the representativeness of the sample. Each outlet was visited twice (once during the week, once in the weekend) to reduce the effects of the days of the week. Based on interviews with managers, it became clear that weekend shoppers differed from those that shopped on weekdays in terms of socio-demographics. The people that visited the stores during the week tended to be older, and were more willing to spend additional time to shop than those in the weekend. To increase the likelihood that respondents had a real option to choose between channels, offline respondents were only

selected when they had access to the Internet, had not shopped through the website of the bookseller, but were familiar with the presence of the website. In three physical stores across the Netherlands 415 offline shoppers filled in the questionnaire of which 412 were usable. The data were collected during June 2004.

The data collection for the online sample (i.e. sample of customers who bought something via the website) was performed through an online survey. Online surveys were mainly chosen because of lower costs, faster response, and convenient collection (e.g. Ilieva, Baron and Healy 2002). Due to their experience with the Internet, online buyers were expected to fill in the online questionnaire without any trouble. However, one of the main concerns with online questionnaires is whether the data collected from online surveys are equivalent to (or comparable with) data collected from traditional mail surveys. Online surveys generally have a lower response rate than traditional mail surveys (Ilieva et al. 2002). To increase the response rate, a pocketbook was sent as an incentive to each respondent who filled in his/her address. Next, respondents may –probably due to their anonymity– respond with more extreme answers (Schaefer and Dillman 1998). Deutskens, De Ruyter and Wetzels (2004) tested the equivalence of online and offline surveys through a series of measurement invariance tests and concluded that both data methods were equivalent. This study also assesses the degree to which the instrument is invariant across contexts.

An email was sent to invite 1,019 shoppers who had bought a book through the website of a multichannel bookseller. The email address of the multichannel bookseller was used as sending address to evoke feelings of familiarity and reduce privacy concerns. The e-mail addressed the purpose of the questionnaire, the length of the questionnaire, the incentive, and guaranteed that the data would be treated confidentially. A link to a URL address was provided with instructions to start the questionnaire. In order to ensure that respondents answered the questionnaire only once, they had to log in with their email address and a generated password, which was provided in the email; it was not possible to log in twice with the same email address. A total of 241 (23.7%) questionnaires were filled in of which 239 were usable. The data were collected during June and July 2004. The response in both samples was deemed sufficient for subsequent analyses.

6.2 Respondent characteristics

Table 6.1 summarizes the respondent characteristics of the offline and online sample. As mentioned before, the online sample refers to the online buyers that shopped at least once through the website, whereas the offline sample refers to the offline buyers that did not shop through the website of this particular bookseller.

Table 6.1: Profile of the respondents for the online and offline sample

Socio-demographic variables		**Offline sample**		**Online sample**	
Gender	Male	218	52.9%	115	48.5%
	Female	194	47.1%	122	51.5%
Age	<19 years	34	8.4%	5	2.1%
	19-25 years	150	37.1%	51	21.5%
	26-40 years	119	29.5%	94	39.7%
	> 40 years	101	25.0%	87	36.7%
Income p.a.	Less than € 20,000	125	33.0%	42	18.9%
	€ 20,000 – €29,000	75	19.8%	60	27.0%
	€ 29,000 – €43,500	67	17.7%	54	24.3%
	€43,500 – €58,000	46	12.1%	31	14.0%
	€58,000 – € 72,500	28	7.7%	14	6.3%
	€72,500 or more	37	9.8%	21	9.5%
Education	Primary education	9	2.2%	2	0.8%
	Secondary education	25	7.1%	13	5.5%
	College	68	16.5%	34	14.4%
	Graduate	300	72.6%	171	72.1%
	Other	11	2.6%	17	7.2%

Both samples were composed of well-educated respondents with a relatively high income[13]. The majority of the respondents had a graduate background. The genders were equally distributed and were similar across contexts ($\chi^2(1)=1.16$ $p>.10$). The average age of the respondents for the online sample was slightly higher than that of the offline sample ($X_{online}=35.07$ years versus $X_{offline}=31.82$ years, $p<.05$). The income levels were not similar across the two samples ($\chi^2(5)=16.90$ $p<.01$), but no clear pattern could be found. Finally, the education levels appeared similar across contexts ($\chi^2(4)=9.21$ $p>.10$). The typical online shopper –male, high income, well educated, between 30 and 40 years old– does not clearly stand out[14].

The online questionnaire entailed fewer background-related questions. As such, the use of multiple channels could only be investigated for the offline sample. A total of 353 respondents indicated that their last purchase was made in the offline context. From these respondents, 15.4% indicated that they used the Internet prior to their *offline* purchase. This percentage is somewhat less than the 22% found in a large multichannel study for department, apparel and leisure stores (Bizrate.com 2001). The multichannel respondents used the Internet to search for specific book content (56%), price (42%), book availability (36%), background information (30%), and to get inspiration (16%). These respondents engaged in rather goal-oriented online search behavior, as inspiration was mentioned less frequently than specific search actions (book content, price). The Internet played a reasonable –but not substantial– role in their shopping process; an average of 3.93 was found on a scale from 1 (a marginal role) to 7 (a substantial role). In sum, the results suggest that consumers purposively decide to use the Internet for search activities prior to purchasing, and that this search activity is distinct from the decision to purchase through either channel. In this case, multichannel behavior is not expected to lead to blurred perceptions of shopping through either channel. The results also showed that online book purchases tended to be more goal-directed than offline book purchases. From the respondents who bought their last book online, 73.5% exactly knew what book to buy

[13] Based on a comparison with internal reports, it was found that the sample represented the bookseller's customer base. Generally, these high levels of education result in even higher income levels, but this moderate association can be explained as this bookseller has a relatively large student base.

[14] Although the typical online shopper did not clearly stand out, the results showed that younger men (age 26-40 years) were most positive towards the website.

prior to purchase, whereas only 49.4% of the people that bought their last book offline had a predetermined book in mind.

Some background information questions were asked to define the respondents' prior online shopping experience. In both samples, the majority of the respondents had experience in buying and/or ordering products or services online. From the offline sample, 61.5% indicated that they had shopped online for products or services *different* than books, whereas for the online sample, 72.4% had shopped online for products other than books (see Table 6.2). As expected, the online sample bought more frequently online than the offline sample based on a chi-square test ($\chi^2(5)=93.5$, $p<.001$). Yet, the majority of the respondents from the offline sample had at least shopped online once, indicating familiarity with the procedures involved with online shopping. Therefore, offline buyers were expected to be capable of conceiving the picture of shopping through the website of the multichannel bookseller.

Table 6.2: Prior online shopping experience (books excluded)

Total number of online purchases made	Offline sample N=408	Online sample N=239
0	38.5%	27.6%
1	17.6%	2.1%
2-3	20.3%	13.0%
4-6	12.3%	25.5%
7-10	7.1%	14.2%
> 10	4.2%	17.6%

6.3 Stage 1: Item analysis

Individual item analysis was performed to investigate the means and standard deviations of the items pertaining to the constructs in both the online and offline context for the base model. As respondents were asked to evaluate both channels, the results for online and offline buyers are shown separately here. Thus, the results are discussed for online buyers and offline buyers evaluating both the store and website. In stage 2 the scores of online buyers and offline buyers will be pooled for each context to investigate the

interrelationships between constructs (see section 5.4 for a discussion). Table 6.3 summarizes the main findings.

The initial pool of 28 pairs of scale items (see Table 5.1) was refined following generally accepted purification guidelines (e.g. Anderson and Gerbing 1982; 1988; Arnold and Reynolds 2003; Churchill 1979; Hair et al. 1998). As the goal was to have reliable and valid scales that apply to both contexts, the online and offline scales were examined simultaneously. When items performed poorly, they were removed simultaneously. First, corrected item-to-total subscale correlations were examined for each set of items representing a construct in the online and offline context. Items with corrected item-to-total subscale correlations below .50 were considered for deletion (Arnold and Reynolds 2003; Nunnally 1978). After investigation, four items (Risk2, Risk5, Time3, and Time4) were deleted from the online and offline sample. Second, correlations among items measuring the same dimension were examined. Items with inter-item correlations smaller than .40 with similar traits were considered for deletion. No additional items were removed in this phase. After these two item analyses, the remaining 24 pairs of items were used for further purification and refinement (see Table 6.3).

Table 6.3: Means, standard deviations, and mean differences

	Offline sample			**Online sample**		
Items[a,b]	Store[c,d]	Website[c,d]	Store-website[e]	Store[c,d]	Website[c,d]	Store-website[e]
SQ1	5.82 (1.02)	4.09 (1.13)	**1.73*** **	5.73 (1.14)	5.36 (1.33)	**.36*** **
SQ2	5.37 (1.12)	3.95 (.93)	**1.42*** **	5.31 (1.26)	4.93 (1.30)	**.37*** **
SQ3	6.08 (.97)	4.43 (1.13)	**1.65*** **	6.09 (.87)	5.85 (1.05)	**.24*** **
SQ4	5.97 (.97)	3.98 (1.06)	**1.99*** **	5.92 (1.14)	5.27 (1.38)	**.65*** **
SQ5	5.29 (1.23)	4.28 (1.04)	**1.01*** **	5.70 (1.24)	5.51 (1.32)	**.19***
Enjoy1	5.88 (1.26)	3.72 (1.41)	**2.15*** **	5.55 (1.50)	4.67 (1.58)	**.88*** **
Enjoy2	5.90 (1.14)	4.02 (1.26)	**1.88*** **	5.75 (1.22)	5.18 (1.42)	**.57*** **

Table 6.3: Means, standard deviations, and mean differences (continued)

Enjoy3	6.04 (1.15)	3.96 (1.37)	**2.09*** **	5.57 (1.21)	4.90 (1.42)	**.67*** **
Enjoy4	5.76 (1.27)	3.86 (1.40)	**1.89*** **	5.40 (1.51)	4.76 (1.67)	**.64*** **
Risk1	1.54 (1.20)	4.29 (1.79)	**-2.75*** **	1.71 (1.50)	3.16 (2.02)	**-1.46*** **
Risk3	1.88 (1.15)	3.87 (1.62)	**-2.00*** **	1.89 (1.01)	3.24 (1.27)	**-1.35*** **
Risk4	1.61 (.88)	3.93 (1.57)	**-2.31*** **	1.72 (1.12)	3.02 (1.65)	**-1.31*** **
Time1	3.73 (1.62)	3.05 (1.44)	**.67*** **	4.07 (1.70)	2.09 (1.19)	**1.71*** **
Time2	3.25 (1.56)	3.27 (1.46)	-.02	3.85 (1.74)	2.14 (1.20)	**1.98*** **
MQ1	5.95 (1.05)	4.85 (1.30)	**1.10*** **	5.92 (1.16)	5.99 (1.06)	-.07
MQ2	5.91 (1.08)	4.85 (1.32)	**1.06*** **	5.89 (1.15)	5.95 (1.09)	-.06
Price1[f]	3.75 (1.35)	3.77 (1.18)	-.03	3.18 (1.26)	3.31 (1.30)	-.13
Price2[f]	3.25 (1.20)	3.62 (1.09)	**-.37*** **	3.11 (1.29)	3.41 (1.32)	**-.30*** **
PV1	5.50 (1.25)	4.82 (1.20)	**.67*** **	5.79 (1.03)	5.71 (1.06)	.08
PV2	4.88 (1.31)	4.62 (1.13)	**.27*** **	5.24 (1.24)	5.21 (1.28)	.03
PV3	4.58 (1.35)	4.44 (1.17)	**.14***	4.90 (1.28)	4.87 (1.33)	.03
Int1	5.73 (1.33)	3.21 (1.70)	**2.52*** **	5.04 (1.65)	5.69 (1.34)	**-.64*** **
Int2	5.51 (1.32)	3.67 (1.46)	**1.84*** **	5.22 (1.49)	5.43 (1.51)	-.21
Int3	5.15 (1.50)	3.03 (1.50)	**2.11*** **	4.54 (1.73)	5.04 (1.66)	**-.49*** **

* p < .05; ** p < .01; *** p < .001

Notes:

a. SQ=Service quality; Enjoy=Enjoyment; Risk=Perceived risk; Time=Time/effort costs; MQ=Merchandise quality; Price=Monetary price; PV=Perceived value; Int=Purchase intentions.

b. Each item (e.g. SQ1) is measured in the offline and online context; a total of 24 pairs of items are represented. Reverse-scaled items (Price1, Price2, Time1 and Time2, see section 5.3) were recoded during data entry for consistency.
c. Item means are based on 7-point Likert scale (1=totally disagree, 7=totally agree).
d. Standard deviations are displayed between brackets.
e. Figures in bold represent significant mean differences measured through paired-sample *t*-tests. Sample sizes for the paired *t*-tests ranged from 399 to 405 for offline buyers, and from 209 to 231 for online buyers, because of missing data.
f. Price level refers to the end price consumers have to pay. Respondents were instructed to take into account the delivery costs.

All items in Table 6.3 indicate positive outcomes, except for items of price, time/effort, and risk. High scores on the latter items indicate that consumers endure higher prices, higher time and effort expenditures and more risk.

To investigate the tradeoffs consumers make, the differences between the online and offline perceptions were analyzed for offline and online buyers. Offline buyers generally find offline shopping to outperform online shopping. On two items (Time2, Price1) the mean differences are not significant, whereas on one item they indicate that online shopping requires less time and effort. Thus, although offline shopping requires somewhat more time and effort, offline buyers strongly prefer to shop offline. Online buyers are more positive towards shopping through the website of the bookseller; they, for example, find the online channel to strongly outperform the offline channel in terms of time/effort required. They tradeoff these time/effort savings against lower service levels, less enjoyment and more risk. The following results stand out. The perceptual differences between shopping online and offline are much smaller for online buyers relative to offline buyers. Although both groups agree that offline shopping offers better service, more enjoyment and less risk, the perceptual differences between online and offline shopping are much smaller for online buyers. This can be partly explained through a gain in experience. For instance, there was evidence that online risk perceptions reduce with increasing online experience (cf. Montoya-Weiss et al. 2003); the average of the three risk items decreased significantly ($F(5,617)=15.56$, $p<.001$) from 4.20 (zero purchases), 4.07 (1 purchase), 3.63 (2-3 purchases), 3.21 (4-6 purchase), 3.09 (6-10 purchases) to 2.89 (more than 10 purchases).

Offline buyers also indicate to receive more value for money[15] in the store, whereas online buyers are indifferent towards the value received online and offline. Finally, online buyers incline to shop through the website, whereas offline shoppers intend to remain loyal to the store. Although these scores provide useful insights into the relative performance of channels and the tradeoffs the groups of buyers make, they cannot be used to infer the relative importance of these factors in each channel.

6.4 Stage 2: Exploratory factor analysis

After the item analyses, the items were subjected to exploratory factor analysis with principal axis factoring and oblique rotation, with the scree test criterion to identify the number of factors to extract (Arnold and Reynolds 2003; Hair et al. 1998; Nunnally 1978). Oblique rotation was performed rather than using Varimax rotation. Varimax rotation would imply uncorrelated factors (Rossiter 2002), which was unlikely to be the case. In an iterative manner, a series of factor analyses was performed to eliminate items with low loadings (<.50), low communalities (<.30), and/or high cross-loadings (>.40) (cf. Churchill 1979; Hair et al. 1998; Rossiter 2002).

For the exploratory factor analysis, the datasets were pooled to infer the underlying structure of factors for each context (see section 5.4). In other words, online buyers and offline buyers were pooled with respect to their evaluations of a given channel. Due to the model complexity, it was decided that for each context two separate exploratory analyses were performed regarding the base model, namely: (1) antecedents of perceived value and intentions, and (2) perceived value and intentions.

6.4.1 Antecedents of perceived value and purchase intentions

For the exploratory factor analysis regarding the antecedents of perceived value, the pooled sample regarding the offline context consisted of 573 respondents (395 offline buyers, 178 online buyers). The online context consisted of 537 respondents (384 offline buyers, 153 online buyers).

[15] In Chapter 6 and 7 the terms "perceived value" and "value for money" are used interchangeably to indicate the *construct* of perceived value.

In the online context, price and assortment items loaded on the same factor. Based on the scree test criterion, a six-factor solution was found in both contexts. The factor solutions accounted for approximately 73.6% and 67.4% of the total variance for the offline and online context, respectively. The KMO measures of sampling adequacy were .852 for the offline context and .894 for the online context, supporting the use of factor analysis[16]. Table 6.3 shows the results for the offline and online context, respectively.

Table 6.3: Exploratory factor analysis for antecedents of perceived value and intentions

Offline context/ Online context N=573/N=537	1	2	3	4	5	6
SQ1	**.73/.75**					
SQ2	**.74/.86**					
SQ3	**.77/.70**					
SQ4	**.83/.78**					
SQ5	**.52/.64**					
Enjoy1		**.78/.80**				
Enjoy2		**.90/.78**				
Enjoy3		**.86/.94**				
Enjoy4		**.75/.78**				
Risk1			**.47/.62**			
Risk3			**.85/.86**			
Risk4			**.81/.84**			
Time1				**.85/.84**		
Time2				**.76/.94**		
MQ1					**.94/.93**	
MQ2					**.78/.60**	
Price1						**.79/.83**
Price2						**.54/.53**

[16] Hair et al. (1998) indicate that a KMO of .80 or above is meritorious; between .80 and .70 is middling; between .70 and .60 is mediocre; between .60 and .50 is miserable; below .50 is unacceptable.

Table 6.3: Exploratory factor analysis for antecedents of perceived value and intentions (continued)

Offline context/ Online context N=573/N=537	1	2	3	4	5	6
Cronbach's alpha	.86/.89	.90/.90	.71/.83	.79/.88	.88/.84	.65/.67
Eigenvalues	6.16/7.38	1.78/1.81	1.64/1.52	1.41/1.37	1.24/1.02	1.01/.86
Variance extracted	73.6% / 67.4%					
KMO measure	.852 / .894					

Pattern Matrix shown, Principal Axis Factoring, Oblique Rotation.
Note: The first figure refers to the offline context, the second figure to the online context. Loadings <.30 are not shown.

6.4.2 Perceived value and purchase intentions

For the exploratory factor analysis regarding the perceived value and purchase intentions, the pooled sample regarding the offline context consisted of 618 respondents (405 offline buyers, 213 online buyers). The online context consisted of 611 respondents (393 offline buyers, 218 online buyers).

In both the online and offline context a two-factor solution was found regarding offline and online perceived value and intentions, whereas three constructs (i.e. perceived value, perceived value competing channel, and purchase intentions) were anticipated. In both contexts, the items of offline and online perceived value loaded on the same factor. This unexpected finding can be explained as both online and offline perceived value are derived from the same bookseller; therefore, they are highly correlated. Moreover, consumers consider the value derived from competing alternatives, as perceived value is judged relativistically (Holbrook 1996). Based on the results, it was decided to perform subsequent confirmatory factor analyses without the value from the competing channel. The two-factor solutions clearly distinguished value perceptions from channel purchase intentions; the solutions accounted for approximately 76.2% and 80.4% of total variance for the offline and online context, respectively. The KMO measures of sampling adequacy supported the use of factor analysis (see Table 6.4).

Table 6.4: Exploratory factor analysis for perceived value and intentions

Offline context/ Online context N=618/N=611	**1**	**2**
PV1	**.63/.52**	
PV2	**.95/.96**	
PV3	**.85/.85**	
Int1		**.84/.91**
Int2		**.72/.86**
Int3		**.83/.87**
Cronbach's alpha	.85/.83	.83/.91
Eigenvalues	2.99/1.15	1.58/3.16
Variance extracted	76.2% / 80.4%	
KMO measure	.734 / .785	

Pattern Matrix shown, Principal Axis Factoring, Oblique Rotation.
Note: The first figure refers to the offline context, the second figure to the online context. Loadings <.30 are not shown.

After performing the exploratory factor analyses, 24 items were retained, which measured 8 constructs in each context. Cronbach alpha coefficients were used to assess scale reliabilities. The reliability coefficients ranged from .65 to .91 (see Table 6.3 and 6.4). Except for the two price constructs, all scales met the suggested minimum level for internal consistency of .70 (Nunnally 1978). These values suggested that the scales were reliable and could be used for further analysis.

6.5 Stage 3: Confirmatory factor analysis

After performing exploratory factor analyses, confirmatory factor analyses (CFAs) were conducted with AMOS 5.0 (Arbuckle and Wothke 1999). Following Anderson and Gerbing (1988), the measurement model (relationships between observed items and latent constructs) was analyzed before the structural model (relationships between latent constructs). The logic of this argument is that it is essential to understand *what* one is measuring prior to testing relationships (Vandenberg and Lance 2000). The CFAs were run including both the exogenous (antecedents of perceived value) and endogenous (perceived value and intentions) part without any structural relationships.

6.5.1 Model-fitting procedure

Before analyzing the measurement model, it is necessary to determine how to treat missing data. The most commonly used method for dealing with missing data is listwise deletion (Hair et al. 1998). This study also adopts this method for the offline context. For the online context, however, it was chosen to minimize the number of omitted online buyers by replacing missing values using an expectation-maximization (EM) procedure. Research has shown that the EM method introduces the least bias into the estimated models (Hair et al. 1998). After performing listwise deletion, 143 online buyers would be retained but by replacing the missing values of respondents who had only 1 missing value, 197 online buyers were retained[17]. Subsequently, the effect of replacing the missing values on the measurement model (i.e. online buyers regarding online context) was assessed by investigating the standardized loadings in the dataset with and without replaced missing values (Arbuckle and Wothke 1999). The standardized loadings appeared very similar, and it was decided that the influence of replacing missing data for online buyers regarding the online context was negligible.

As the proposed estimation technique, maximum likelihood (ML), assumes multivariate normality, skewness and kurtosis were investigated. The distributions of the pooled datasets (N=564 and N=579) showed no strong skewness and kurtosis in both datasets, and no adaptations were required.

The fit of the CFA models were assessed on a number of fit indices, including chi-square, relative chi-square, goodness-of-fit (GFI), adjusted goodness of fit index (AGFI), non-normed fit index (NNFI) (Hu and Bentler 1995), relative fit index (RFI) (Bollen 1986), comparative fit index (CFI) (Bentler 1990), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA) (Bollen 1989). For a detailed discussion of these fit indices, see Bollen (1989) and Hair et al. (1998).

[17] The decision to impute missing values was made to enable CFAs for each group within each context with substantial sample sizes. This facilitates the test of the moderating effect of the degree of prior online experience in the online context, as the subsample sizes are close to or exceed the commonly required sample size of 200 (Hair et al. 1998).

The initial ML estimation test of the 24 items produced fit indices slightly below acceptable thresholds for both contexts (χ^2/df= 2.78/3.21, GFI=.89/.87, RMSEA=.058/.077). The model was consequently refined by eliminating items contributing most to lack of fit, as indicated by the standardized residuals and modification indices (Steenkamp and Van Trijp 1991). After this iterative process, four items (Risk1, SQ1, SQ3, and Enjoy4) were excluded to improve fit. The final model showed reasonable fit indices (see Table 6.5).

Table 6.5: Fit indices for the online and offline context

	Recommended level	Offline context N=564	Online context N=579
χ^2	-	328.56	390.77
df	-	142	142
χ^2/df	<3.00	2.31	2.75
GFI	>.90	.94	.94
AGFI	>.90	.92	.91
NNFI	>.90 (>.95)	.95	.95
CFI	>.90 (>.95)	.97	.96
RFI	>.90 (>.95)	.92	.93
SRMR	<.05	.045	.055
RMSEA	<.08 (<.05)	.048	.055

Note: GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index; PGFI=Parsimony Goodness of Fit Index; NNFI=Non-Normed Fit Index; CFI=Comparative Fit Index; RFI=Relative Fit Index; SRMR=Standardized Root Mean Residual; RMSEA=Root Mean Square Error of Approximation.

The chi-square statistic showed that the models were significant (p<.0001), indicating that the specification of the factor loadings, factor variances/covariances, and error variances for the models under study are not valid. However, this is not uncommon, as the chi-square statistic is sensitive to departures from multivariate normality and large sample sizes (Diamantopoulos and Siguaw 2000; Hair et al. 1998). Due to the sensitivity of the chi-square statistic, other overall measures have been proposed, such as the normed chi square (Byrne 2001); the ratios of the chi-square to the degrees of freedom were beneath the recommended level of 3.00 (Carmines and McIver 1981; Byrne 2001). The GFI and AGFI

exceeded the recommended level of .90 in both contexts (Byrne 2001; Hair et al. 1998). The CFI measures the relative improvement of fit of the hypothesized models compared with the independence model. Although a value of >.90 was initially considered representative of a well-fitting model (Bentler 1992), more recently a revised cutoff value close to .95 is recommended (Hu and Bentler 1999). Both models met this revised cutoff. For the SRMR, values below .05 are indicative of good fit, indicating that the online context just falls outside the recommended level (Byrne 2001; Diamantopoulos and Siguaw 2000). The RMSEA values of both models also showed acceptable fit (Diamantopoulos and Siguaw 2000; Hair et al. 1998). Based on this, it can be concluded that the hypothesized models fit the data well.

6.5.2 Assessment of convergent validity, discriminant validity and reliability

CFA tests were run to test the convergent and discriminant validity of the constructs in the base model; these two types of validity are often used to assess construct validity. Convergent validity assesses the degree to which two measures of the same construct are correlated (Hair et al. 1998). Convergent validity can be assessed from the measurement model by determining whether each item's estimated maximum likelihood loading on its assigned construct factor is significant (Anderson and Gerbing 1988). The assessment of the measurement properties of the scales indicated that the factor loadings were high and significant ($p < 0.001$) in both contexts, which satisfies the criteria for convergent validity (Hair et al. 1998). Additionally, the average variance extracted (AVE) exceeded the recommended level of .50 for all constructs except price, showing that the variance captured by constructs was larger than variance due to error (Fornell and Larcker 1981). Although the second price item (Price2) scored poorly in both contexts, it was decided to maintain the item to ensure content validity (Peter and Churchill 1986), and to account for measurement error by having at least two items per construct.

Although the constructs in this study are conceptually related, they should also possess discriminant validity. Discriminant validity assesses the extent to which a measure does not correlate with other constructs from which it is supposed to differ (Malhotra 1996). Discriminant validity was first assessed by checking whether the confidence interval (± two standard errors) for each pairwise correlation estimate did not include the value of 1.0

(Anderson and Gerbing 1988). Each of constructs satisfied this first criterion in both contexts (see Table 6.7). The second test of discriminant validity was performed by assessing whether fit was improved when any pair of constructs was collapsed into a single factor (De Haes et al. 2004). The results of χ^2 difference tests indicated that discriminant validity was upheld in all pairwise tests. The third test involved whether the squared correlation between two constructs exceeded the AVE for each of the two constructs. Only the two price constructs did not meet this criterion, when it was correlated with value for money.

The construct reliabilities demonstrated that the scales were reliable, as they met the minimum construct reliability of .60 (Bagozzi and Yi 1988). In sum, the measurement model showed evidence for convergent and discriminant validity, as well as reliability. As such, the structural analyses could be performed with some confidence. Table 6.6 shows the standardized loadings, average variance extracted, and construct reliabilities for each construct.

Table 6.6: Item loadings, construct reliabilities and average variance extracted

	Offline context N=564		**Online context N=579**	
	Standardized loading[a,b,c]	**AVE[d]**	**Standardized loading[a,b,c]**	**AVE[d]**
Service quality	**.76**	*.52*	**.81**	*.59*
SQ2: high-quality services[e]	.76		.78	
SQ4: willingness to respond	.73 (15.20)		.76 (17.37)	
SQ5: reliability/fulfillment	.67 (14.16)		.76 (17.32)	
Merchandise quality	**.89**	*.79*	**.89**	*.81*
MQ1: good selection	.89		.90	
MQ2: wide selection of interesting books	.90 (20.01)		.90 (23.12)	

Table 6.6 Item loadings, construct reliabilities and average variance extracted (continued)

Monetary price	**.66**	*.50*	**.66**	*.49*
Price1: low price level (r)	.81		.77	
Price2: attractive offers (r)	.58 (11.14)		.63 (11.60)	
Perceived risk	**.73**	*.58*	**.84**	*.73*
Risk3: purchasing uncertainty	.66		.76	
Risk4: things can easily go wrong	.85 (7.07)		.94 (13.15)	
Time/effort costs	**.79**	*.65*	**.84**	*.73*
Time1: shopping efficiency (r)	.77		.79	
Time2: requires not lot of time/effort (r)	.83 (8.22)		.91 (17.00)	
Enjoyment	**.89**	*.73*	**.89**	*.74*
Enjoy1: shopping is fun	.84		.82	
Enjoy2: shopping is enjoyable	.87 (24.21)		.86 (23.76)	
Enjoy3: shopping is interesting	.86 (23.79)		.90 (24.83)	
Value for money	**.86**	*.67*	**.84**	*.65*
PV1: value for money	.67		.66	
PV2: price/quality ratio	.90 (17.78)		.88 (17.03)	
PV3: get versus give	.88 (17.61)		.85 (16.80)	
Purchase intentions	**.84**	*.64*	**.91**	*.78*
Int1: shopping likelihood	.83		.90	
Int2: willing to recommend	.76 (18.41)		.87 (29.07)	
Int3: future purchase intent	.82 (19.73)		.87 (29.37)	

Notes:

a. Figures in bold represent construct reliabilities, which were calculated based on the formula provided by Hair et al. (1998, p. 624).

b. Figures between brackets represent *t*-values of the factor loadings. The first item of each construct was used as a reference item.
c. Based on one-tailed tests, *t*-values greater than 1.65 are significant at $p<.05$; *t*-values greater than 2.33 are significant at $p<.01$ (cf. Parasuraman et al. 2005).
d. The average variance extracted (AVE) was calculated based on the formula provided by Fornell and Larcker (1981).
e. For the exact wording of the items, see Table 5.1.

6.5.3 Assessment of correlations and multicollinearity

Table 6.7 shows the correlations among the latent variables to indicate the interrelationships for the online and offline context. Overall, the correlations are somewhat stronger in the online context, which seem to be the result of a greater dispersion of the scores; most respondents have favorable perceptions towards offline shopping, whereas the perceptions towards online shopping are more scattered. Apart from this, most correlations are moderately high (i.e. .40-.60 range). A number of correlations between the constructs are high (above .60). The highest correlations are between price and value for money (i.e. $\varrho_{offline}$= -.75 and ϱ_{online}= -.71). This is not surprisingly, as the value for money consumers receive from the bookseller is naturally strongly correlated with its price level[18]. The investigation of the correlations between the shopping experience costs and benefits showed that enjoyment was negatively correlated with perceived risk ($\varrho_{offline}$= -.28 and ϱ_{online}= -.45), time/effort costs were negatively correlated with enjoyment ($\varrho_{offline}$= -.26 and ϱ_{online}= -.45), and perceived risk and time/effort costs were moderately positively correlated in the online context (ϱ_{online}= .31), but not significantly correlated in the offline context ($\varrho_{offline}$= .09). The moderate correlations between the three types of shopping experience costs and benefits support the distinctiveness of these factors.

To check for multicollinearity, regression –with unweighted summated scores– and correlation analyses were performed (see Table 6.7). No multicollinearity problems were encountered since the largest variance inflation (VIF) value was 2.10, which was lower than the commonly suggested cut-off value of 10 (Hair et al. 1998), and the more restricted level of 2.5 (Allison 1999). Next, the highest pairwise correlation among the *independent* factors was highest for service quality and perceived value in the offline context (ϱ=.60).

[18] Baker et al. (2002) found a correlation of .64 between price and value perceptions.

According to Hair et al. (1998), correlations between independent variables of .90 and above indicate multicollinearity problems.

Table 6.7: Correlations between latent factors after CFA

	SQ[a,b,c]	MQ	Price	Risk	Time	Enjoy	PV	Int
Service quality		.54 (.05)	-.58 (.06)	-.45 (.05)	-.45 (.05)	.57 (.05)	.55 (.05)	.62 (.04)
Merchandise quality	.54 (.06)		-.48 (.05)	-.38 (.05)	-.56 (.04)	.47 (.04)	.46 (.05)	.55 (.04)
Monetary price	-.51 (.07)	-.45 (.06)		.28 (.05)	.38 (.06)	-.38 (.06)	-.71 (.05)	-.42 (.05)
Perceived risk	-.34 (.07)	-.28 (.06)	.30 (.06)		.31 (.05)	-.42 (.05)	-.32 (.05)	-.45 (.04)
Time/effort costs	-.30 (.06)	-.23 (.06)	.15 (.07)	.09 (.06)		-.45 (.05)	-.47 (.05)	-.54 (.04)
Enjoyment	.56 (.05)	.50 (.05)	-.25 (.07)	-.28 (.06)	-.26 (.06)		.38 (.05)	.66 (.04)
Perceived value	.60 (.04)	.41 (.06)	-.75 (.05)	-.21 (.05)	-.18 (.06)	.33 (.06)		.45 (.05)
Purchase intentions	.47 (.06)	.43 (.05)	-.33 (.07)	-.29 (.06)	-.35 (.06)	.53 (.06)	.34 (.07)	

Notes:

a. SQ=Service quality; MQ=Merchandise quality; Price=Monetary price; Risk=Perceived risk; Time=Time/effort costs; Enjoy=Enjoyment; PV=Perceived value; Int=Purchase intentions.

b. Correlations offline context below diagonal, correlations online context above diagonal.

c. Standard errors are displayed between brackets and were derived by bootstrapping with 500 replications.

6.6 Stage 4: Multiple group CFA for base model

As a prerequisite to testing for differences in the strength of structural relationships, it is customary to first establish a baseline model for each context separately (Byrne 2001, p. 175). The baseline models are also used to test the first hypotheses based on the significance of the structural relationships.

6.6.1 Assessment of structural relationships for base model

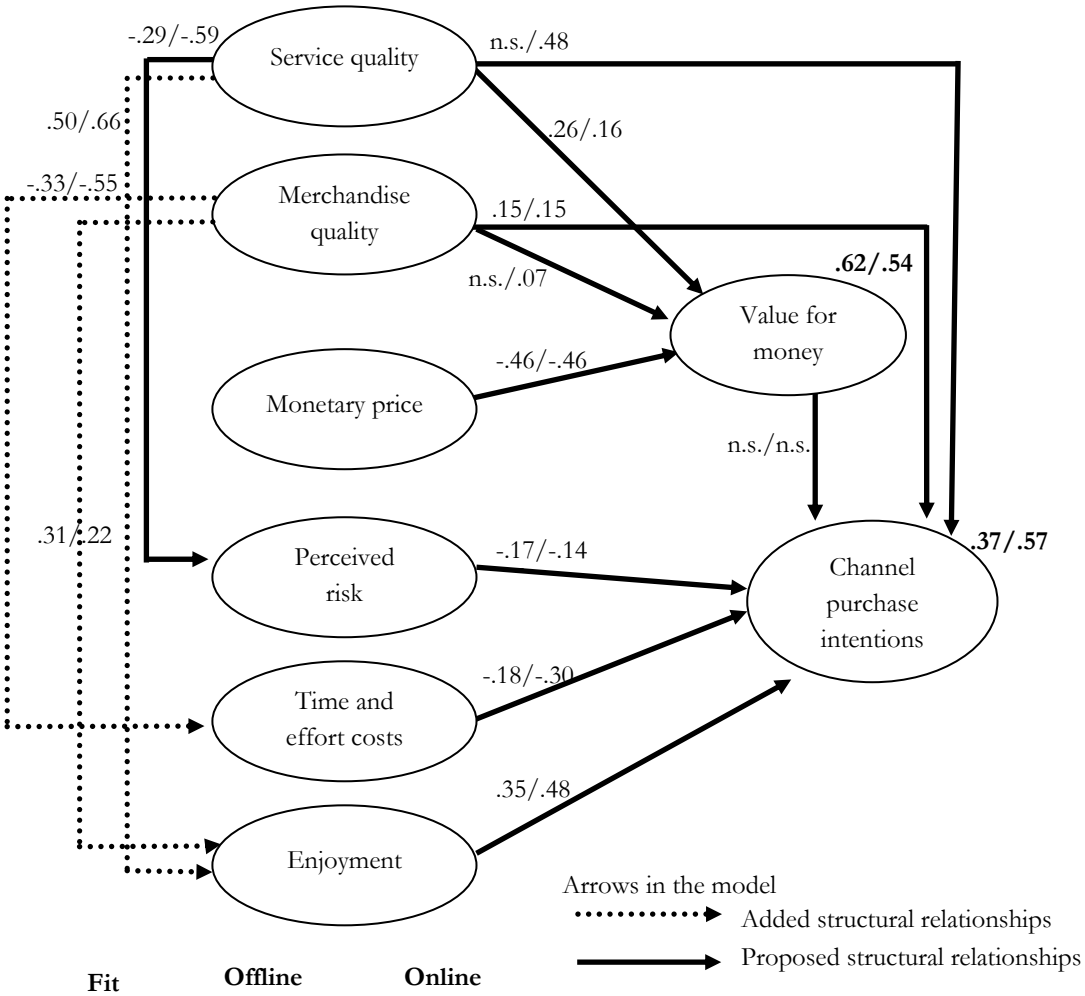
The proposed structural model (see conceptual model in Chapter 4) showed less than acceptable fit indices for the offline/online context (χ^2/df= 3.67/5.41, GFI=.91/.90, SRMR=.15/.20, RMSEA=.069/.087). Model respecifications were considered to improve fit, based on the examination of the normalized residuals and the modification indices (Hair et al. 1998). The purpose of these respecifications is to achieve the most parsimonious model that provides the best fit among the alternatives (Byrne 2001). In this study, modifications were only performed by adding new relationships to the model that were suggested by modification indices[19]. None of the insignificant relationships were removed, as they might slightly alter the other relationships, making a side-by-side evaluation less amenable. Particularly, in the case that one relationship turns out to be significant in one context and insignificant in the other, the researcher needs to allow for different path diagrams for different contexts. Although AMOS 5.0 enables this option (Byrne 2001), the strength of each relationship can be best compared when the models are identical[20]. The influence of maintaining insignificant paths was, however, marginal, as subsequent analyses showed no virtual differences in the strength of the other (significant) relationships, when the insignificant relationships were maintained.

The number of model modifications should be kept low, and only those that correct for relatively severe problems of model fit should be introduced (MacCullum et al. 1992; Steenkamp and Baumgartner 1998). The analyses showed that three additional relationships were required to reach acceptable fit indices. These three relationships were added in each context based on statistical and theoretical arguments (Byrne 2001). Merchandise quality had a significant relationship with both enjoyment and time/effort costs. When perceptions of merchandise quality increase, it is likely that consumers find the process more enjoyable as they can browse through store/website to find their desired books. Consumers, particularly those who approach retail environments to browse (Bloch, Sherrel and Ridgway 1986), often have a desire for the experiential aspects of shopping (Mathwick

[19] To avoid triviality, no correlations between error terms were allowed. As noted by Jöreskog (1993, p. 297) "every correlation between error terms must be justified and interpreted substantively." The justification for these correlations is often arbitrary.
[20] This suggestion was provided by Dr. Boomsma (University of Groningen, Department of Sociology).

et al. 2002). For them, better assortments will yield more enjoyable shopping experiences. Simultaneously, improvements in merchandise quality lead to time and effort savings, as consumers can find their book(s) of interest more quickly (cf. Szymanski and Hise 2000). Assortments of low quality, which can be the result of unstructured displays and routings or out-of-stock situations, will require more time and effort from consumers to find their desired book. Finally, an additional relationship was needed between service quality and enjoyment. Apart from the functional benefits, service quality also leads to emotional/affective benefits. In this respect, empathy, courtesy, problem solving and showing sincere interest in fulfilling the individual consumer needs are elements of (retail) service quality (cf. Dabholkar et al. 1996; Parasuraman et al. 1985; Wolfinbarger and Gilly 2003) that generally result in more enjoyment. Additional services are often aimed at facilitating the shopping process and taking away frustration (i.e. reducing the cognitive efforts), which makes it more amenable that consumers find the shopping process enjoyable. The robustness of the additional relationships will be tested in the replication study (see Chapter 7).

The final model is graphically displayed in Figure 6.1.



Fit indices	Offline context	Online context
χ^2	365.10	466.58
Df	154	154
χ^2/df	2.37	3.03
GFI	.94	.92
AGFI	.92	.91
NNFI	.95	.94
CFI	.96	.95
RFI	.92	.92
SRMR	.055	.074
RMSEA	.049	.059

Figure 6.1: Coefficients for the offline/online context for base model

Notes: The unstandardized structural coefficients are displayed for the offline/online context. Figures in bold represent the percentage of explained variance in the endogenous variables. N.s. represents coefficients that are not significant from zero at a .05 significance level based on one-tailed tests.

After the modifications, the models showed good fit indices for the offline/online context (see above). Moreover, the results generally support the hypothesized model. A considerable part of the variance of the endogenous factors were explained by their predictors –based on the squared multiple correlations (SMCs) (Byrne 2001; Hair et al 1998). For the offline context, the predictors account for 37.4% of the variance associated with purchase intentions, whereas in the online context 56.5% is explained. Next, the predictors to a large extent explained variations in offline perceived value (62.1%) and online perceived value (53.9%). Table 6.8 and 6.9 show the unstandardized and standardized structural relationships and their *t*-values. The unstandardized structural coefficients (also known as unstandardized structural weights) are similar to the regression weights in regression and are comparable across samples, as they are measured in their original metric (Diamantopoulos and Siguaw 2000; Hair et al. 1998). Standardized structural coefficients lose their natural meaning as they are cast in correlation rather than in covariance terms, but they help identifying the relative contribution of independent latent factors in influencing the endogenous latent factors (Diamantopoulos and Siguaw 2000). Standardized structural coefficients cannot easily be compared across samples. Bagozzi (1980, p. 187) warns, "standardized parameters are appropriate only when one desires to compare the relative contribution of a number of independent variables on the same dependent variable and for the same sample of observations. They are not appropriate and can lead to erroneous inferences when one wishes to make comparisons across populations of samples." For example, an inspection of the standardized structural coefficients of the determinants of offline purchase intentions (see Table 6.8) shows that enjoyment (.32) has the strongest direct effect on purchase intentions, followed by time/effort costs (-.20), merchandise quality (.12), and perceived risk (-.10). The effect of enjoyment on offline purchase intentions is three times as large as the effect of perceived risk. However, it is not meaningful to compare the standardized structural coefficients across contexts (.32 versus .35) (see Table 6.8 and 6.9).

Table 6.8: Structural coefficients for the offline context for base model

Structural relationships offline context N=564	Unstandardized structural coefficient	Standardized structural coefficient	*t*-value	Hypothesis testing
Antecedents of Perceived value (R^2=.621)				
H2a: Service quality → Perceived value	.26	.29	4.71	Supported
H3a: Merchandise quality → Perceived value	-.02	-.03	-.53	Not supported
H4: Price → Perceived value	-.46	-.61	-7.56	Supported
Antecedents of Purchase intentions (R^2=.374)				
H1: Perceived value → Intentions	.11	.07	1.33	Not supported
H5: Perceived risk → Intentions	-.17	-.10	-2.07	Supported
H6: Time/effort costs → Intentions	-.18	-.20	-4.25	Supported
H7: Enjoyment → Intentions	.35	.32	5.76	Supported
H2b: Service quality → Intentions	.13	.10	1.26	Not supported
H3b: Merchandise quality → Intentions	.15	.12	2.14	Supported
Antecedent of Perceived risk (R^2=.133)				
H2c: Service quality → Perceived risk	-.29	-.37	-5.18	Supported
Antecedents of Enjoyment (R^2=.366)				
Service quality → Enjoyment	.50	.41	6.98	-
Merchandise quality → Enjoyment	.31	.28	5.24	-
Antecedent of Time/effort costs (R^2=.058)				
Merchandise quality → Time/effort costs	-.33	-.24	-4.55	-

Note: Based on one-tailed tests, *t*-values greater than 1.65 are significant at $p<.05$; *t*-values greater than 2.33 are significant at $p<.01$.

Table 6.9: Structural coefficients for the online context for base model

Structural relationships online context N=573	Unstandardized structural coefficient	Standardized structural coefficient	*t*-value	Hypothesis testing
Antecedents of Perceived value (R^2=.539)				
H2a: Service quality → Perceived value	.16	.18	2.86	Supported
H3a: Merchandise quality → Perceived value	.07	.10	1.96	Supported
H4: Price → Perceived value	-.46	-.55	-6.76	Supported
Antecedents of Purchase intentions (R^2=.565)				
H1: Perceived value → Intentions	.07	.03	.72	Not supported
H5: Perceived risk → Intentions	-.14	-.09	-2.33	Supported
H6: Time/effort costs → Intentions	-.30	-.19	-4.38	Supported
H7: Enjoyment → Intentions	.48	.35	7.49	Supported
H2b: Service quality → Intentions	.48	.24	3.83	Supported
H3b: Merchandise quality → Intentions	.15	.10	1.89	Supported
Antecedent of Perceived risk (R^2=.225)				
H2c: Service quality → Perceived risk	-.59	-.48	-7.83	Supported
Antecedents of Enjoyment (R^2=.381)				
Service quality → Enjoyment	.66	.47	8.22	-
Merchandise quality → Enjoyment	.22	.21	4.06	-
Antecedent of Time/effort costs (R^2=.341)				
Merchandise quality → Time/effort costs	-.55	-.58	-11.28	-

Note: Based on one-tailed tests, *t*-values greater than 1.65 are significant at $p<.05$; *t*-values greater than 2.33 are significant at $p<.01$.

The hypotheses were tested through analyzing the *t*-values at a significance level of .05. Of the ten proposed hypotheses, three were not supported by the data in the offline context, whereas only one hypothesis was not supported in the online context. In both contexts, perceived value did not influence purchase intentions. In the offline context, merchandise quality did not affect perceived value, and service quality did not affect purchase intentions. Furthermore, evidence was found for three additional relationships in each context.

Offline perceived value (i.e. value for money) was determined by price (-.46) and service quality (.26), but not by merchandise quality. Online perceived value was determined by

price (-.46), service quality (.16), and merchandise quality (.07). The small effect of merchandise quality on perceived value can be explained as consumers often consider what they receive in exchange for the price they pay. In their eyes, a well-composed assortment may not add value, as the only tangible aspect they have after spending money is the book of interest. Another explanation is that prior studies (e.g. Baker et al. 2002) found a significant relationship between merchandise quality and perceived value, because they investigated retailers that offered more differentiated products and assortments. In these studies, retailers can increase perceived value by offering high-quality workmanship and/or well-composed assortments (Baker et al. 2002). In both contexts, price was the strongest predictor of value for money, followed by service quality and merchandise quality. As such, the construction of offline perceived value appeared to be very similar to that of online perceived value.

In both contexts merchandise quality and the shopping experience costs and benefits (time/effort costs, risk and enjoyment) directly impacted purchase intentions. In the online context, service quality also predicted purchase intentions. Surprisingly, in both contexts, value for money did not alter consumers' purchase intentions to buy through a particular channel[21]. It seems that the value for money consumers receive in the online and offline context does not alter their intentions to use a channel for purchasing[22]. The shopping experience costs and benefits, on the other hand, strongly affected the intentions to shop through the website or store. Shopping enjoyment ($\beta_{offline}$=.35/β_{online}=.48) and time and effort costs ($\beta_{offline}$=-.18/β_{online}=-.30) had a major influence on whether someone intends to buy online or offline. Risk perceptions, being part of the shopping experience, also had a

[21] Mediation tests were performed according to the procedure outlined by Baron and Kenny (1986). The results showed that perceived value considerably mediated the relationships of merchandise quality, service quality and price with intentions in each context. The effect of price on offline purchase intentions was *fully* mediated by perceived value. These results confirmed that perceived value is an important mediator of service quality, merchandise quality and price with purchase intentions.

[22] The models were also tested without the direct relationships of merchandise quality and service quality on purchase intentions. When omitting these relationships, the relationship between perceived value and purchase intentions became significant in both contexts. Still perceived value –based on the standardized total effects– had the weakest impact on intentions. Next, as the models stand in a nested sequence, the χ^2 difference was tested in each context. The addition of the two relationships resulted in a significant decrease in chi square with 2 *df* ($p<.05$). Hence, the current model is preferred.

significant direct effect on purchase intentions in both contexts. However, the effect of it was not as substantial as time/effort and enjoyment. In fact, when looking at the standardized structural coefficients, risk had half the effect of time/effort costs (-.10 versus -.20 in the offline context, -.09 versus -.19 in the online context) and less than a third of the effect of enjoyment (-.10 versus .32 in the offline context, -.09 versus .35 in the online context). The limited role of risk can be explained due to the relative low risk involved in buying books (cf. Chen and Dubinsky 2003).

In order to better understand the total influence of the exogenous factors on the endogenous factor purchase intentions, both direct and indirect effects were investigated. Indirect effects represent the influence of the exogenous factors on an endogenous factor as mediated by one or more intervening factors; they are derived by multiplying the unstandardized parameter estimates of the intervening factors[23] (Diamantopoulos and Siguaw 2000). Table 6.10 shows the total effects (direct and indirect effects) of the predictors of online and offline purchase intentions.

A comparison of the total unstandardized effects for the online and offline context shows that the weights of most coefficients are rather similar –except for service quality, time/effort costs, and enjoyment– indicating that corresponding criteria were used in explaining online and offline intentions. Based on the unstandardized effects, service quality[24] appeared to have a stronger impact on intentions in the online context (.89) than in the offline context (.38). Time and effort costs have a stronger unstandardized effect in the online context (-.30) relative to the offline context (-.18). Finally, it appeared that enjoyment played a somewhat stronger role in the online context (.48) than in the offline context (.35). Thus, in contrary to the expectations, enjoyment seemed to more strongly impact consumers' intentions to shop online. In both contexts, service quality had a strong

[23] Indirect effects that are based on the multiplicative computation of at least one insignificant path need to be interpreted with caution because they can be misleading, as the confidence intervals include zero and possibly estimates of the opposite sign (Howell 1987). The indirect effects that were mediated through perceived value therefore need to be interpreted with caution in both contexts.

[24] The very strong effect of service quality on purchase intentions in the online context can be explained as one of the items refers to the aspect of reliability/fulfillment (i.e. keeping promises), which plays a dominant role in the online context (Parasuraman and Grewal 2000; Parasuraman et al. 2005; Wolfinbarger and Gilly 2003).

indirect effect on purchase intentions by altering perceptions of enjoyment and risk. For the offline context, the indirect effect of service quality on purchase intentions (.25) was even greater than its direct effect (.13). Merchandise quality also demonstrated a strong indirect effect in each context, albeit it was less strong than that of service quality.

Table 6.10: Total (standardized) effects on purchase intentions for base model

	Offline context N=564				Online context N=573			
Total effects on purchase intentions	Total effects	Direct effect[a]	Indirect effect	Total standar-dized effect[b]	Total effects	Direct effect[a]	Indirect effect	Total standar-dized effect[b]
Service quality	.38	.13[n.s.]	.25	.29 (2)	.89	.48	.41	.46 (1)
Merchandise quality	.31	.15	.17	.26 (3)	.43	.15	.28	.29 (3)
Monetary price	-.05	-	-.05	-.05 (7)	-.03	-	-.03	-.02 (7)
Perceived risk	-.17	-.17	-	-.10 (5)	-.14	-.14	-	-.09 (5)
Time/effort costs	-.18	-.18	-	-.20 (4)	-.30	-.30	-	-.19 (4)
Enjoyment	.35	.35	-	.32 (1)	.48	.48	-	.35 (2)
Perceived value	.11	.11[n.s.]	-	.07 (6)	.07	.07[n.s.]	-	.03 (6)

Notes:

a. N.s. represents coefficients of direct effects that are not significant from zero at .05 based on one-tailed tests. Figures in bold represent construct reliabilities, which were calculated based on the formula provided by Hair et al. (1998, p. 624).

b. Figures between brackets indicate the ranking of each factor in explaining the endogenous latent variable.

Compared with the unstandardized effects, standardized effects are better capable of representing the relative contribution of the predictors in explaining purchase intentions within each context. Offline purchase intentions were most strongly affected by enjoyment (.32), service quality (.29), merchandise quality (.26), and time/effort costs (-.20). Similar results show up for the online context; online purchase intentions were most strongly influenced by service quality (.46), enjoyment (.35), merchandise quality (.29), and time/effort costs (-.19).

A central finding is that service quality, merchandise quality and the shopping experience costs and benefits largely explain intentions to use a channel for buying books. It seems that consumers take into account the same variables but attribute different scores to their channels. Most noteworthy is the strong impact of enjoyment on purchase intentions in both contexts. Although past literature indicates that shopping costs (e.g. time/effort costs, perceived risk) more strongly impact consumers (Babin and Darden 1996; Baker et al. 2002; Sweeney et al. 1999), this study finds evidence that shopping enjoyment at least equally affects consumers' purchase intentions. This finding underlines the importance of the hedonic aspects of shopping (Arnold and Reynolds 2003; Duman 2002; Hirschman and Holbrook 1982; Wakefield and Baker 1985).

6.6.2 Assessment of measurement invariance

The prior section provided insights into the effects of the exogenous factors on the endogenous factors. This section addresses the preparations to formally test the relative strength of specific relationships, namely the assessment of measurement invariance.

Childers et al. (2001) argued that disagreement exists among structural equation modeling experts on the necessity of assessing measurement invariance as a prerequisite to the comparison of structural parameters across samples (cf. Bollen 1989; Byrne, Shavelson and Muthén. 1989; Hayduk 1996; Horn and McArdle 1992; Jöreskog and Sörbom 1971; Little 1997). Contrastingly, Vandenberg and Lance (2000) are very clear that the establishment of measurement invariance across groups is a logical prerequisite to conducting substantive cross-group or cross-context comparisons, such as tests of the invariance of structural parameter estimates. Following their line of reasoning, analyses of the differences between the structural relationships can only be meaningful, when the items measure the same thing and to the same degree in both contexts. As Vandenberg and Lance (2000, p. 40) elegantly put it "Comparisons of apples to apples are meaningful. Comparisons of sandwiches to sand wedges are not." Although the items in this study are visually measuring the same, respondents may attribute other values or respond differently for the online versus offline context. For instance, respondents could relate other service elements to service quality online versus offline, or may answer with more extreme answers. In effect, this may cause that comparisons are not justifiable. Next, it can be true that online buyers use different

conceptual frames of reference and attach different meanings to constructs than offline buyers (cf. Cheung and Rensvold 2000; Riordan and Vandenberg 1994). The essential question therefore is "to what extent are manifest variables' (i.e. Xs') measurement properties transportable or generalizable across populations [or contexts]?" (Vandenberg and Lance 2000, p.8).

According to Steenkamp and Baumgartner (1998) multiple group confirmatory factor analysis represents the most powerful and versatile approach to testing for measurement invariance. If tested, measurement invariance generally proceeds through testing multiple increasingly restrictive stages. After an extensive review of the measurement invariance literature, Vandenberg and Lance (2000) proposed a guideline with a more detailed list of increasingly restrictive stages (see Table 6.11). The required level of measurement invariance is dependent on the goal of the study. For example, if researchers want to compare latent means across contexts, configural, metric and scalar invariance should be established before comparisons can be meaningful (Hong, Malik and Lee 2003; Meredith 1993; Steenkamp and Baumgartner 1998). Childers et al. (2001) argued that the invariance of structural relationships is generally tested through analyzing the (1) invariance of the hypothetical pattern (configural invariance), (2) invariance of factor loadings (metric invariance), and (3) invariance of disturbance variances and perhaps, covariances. Next they argued, along with many authors, that the third assessment is too restrictive (Byrne 2001; Byrne et al. 1989; Childers et al. 2001; Horn and McArdle 1992; MacCullum et al. 1994; Widaman and Reise 1997). This study complies with the argument that configural and metric invariance should be established for assessing the invariance of structural relationships. Accordingly, this study first tests whether the measurement model is equivalent for the offline and online context.

Table 6.11: Measurement invariance tests (Vandenberg and Lance 2000)

	Null hypothesis	Explanation
1. Omnibus test	$\Sigma^g = \Sigma^{g'}$	A test of the null hypothesis of invariant covariance matrices
2. Configural invariance test		Test of the null hypothesis that the a priori pattern of free and fixed factor loadings imposed on the measures components (e.g. items) is equivalent across groups.
3. Metric invariance test	$\Lambda_k^g = \Lambda_k^{g'}$	A test of the null hypothesis that the regression slopes linking the manifest items to the underlying constructs are invariant across groups.
4. Scalar invariance test	$\tau_k^g = \tau_k^{g'}$	A test of the null hypothesis that intercepts of like items' regressions on the latent variable(s) are invariant across groups
5. Uniqueness invariance test	$\Theta^g{}_{\delta k} = \Theta^{g'}{}_{\delta k}$	A test of the null hypothesis that like items' unique variances are invariant across groups
6. Factor-variance invariance test	$\Phi_j^g = \Phi_j^{g'}$	A test of the null hypothesis that factor variances are invariant across groups
7. Factor-covariance invariance test	**e.g.** $\Phi^g{}_{21} = \Phi^{g'}{}_{21}$	A test of the null hypothesis that factor covariances are invariant across groups.
8. Factor-means invariance test	$\kappa^g = \kappa^{g'}$	A test of the null hypothesis of invariant factor means across groups

Omnibus test. Vandenberg and Lance (2000) propose to first conduct an omnibus test to check whether there is overall measurement invariance across groups. Mostly this is performed by testing the equality of the groups' covariance matrixes. Failure to reject the null hypothesis is commonly interpreted as a demonstration of overall measurement invariance across groups. Then, no further invariance tests are required. If, however, the null hypothesis, stating that the covariance matrices are invariant, is rejected, further analyses are required in order to identify the source of nonequivalence (Byrne 2001, p. 126). The omnibus test showed that the covariance matrices were not equivalent by constraining the factor loadings, variances and covariances to be equal ($\Delta\chi^2$ 497.23 with 68 *df*, $p<.001$).

Configural invariance test. A test of the null hypothesis that the base model structure (i.e. the pattern of fixed and nonfixed parameters) is invariant across groups (Hong et al. 2003). According to Steenkamp and Baumgartner (2000) configural invariance is supported when the specified model with zero loadings on nontarget factors fits the data well in all groups, all salient factor loadings are significantly and substantially different from zero, and the correlations between the latent factors are significantly below unity. This test must be established in order for subsequent tests to be meaningful (Hong et al. 2003; Steenkamp and Baumgartner 2000; Vandenberg and Lance 2000). The stacked model has 308 degrees of freedom (154 degrees of freedom for each baseline model) and showed reasonable fit indices (χ^2/df= 2.70, GFI=.93, CFI=.96, NNFI=.95, RMSEA=.039). The results indicate that full configural invariance was established.

Metric invariance test. A test of the null hypothesis that factor loadings for like items are invariant across groups (Horn and McArdle 1992). This test is needed to ensure that different groups respond to the items in the same way. This test is performed by constraining the factor loading of like items to be equal across groups (Hong et al. 2003; Vandenberg and Lance 2000). This is a stronger test than configural invariance because –in addition to specifying an invariant factor pattern– the loadings of the like items within that pattern are now constrained to be equal. Factor loadings are the regression slopes relating the X_{jk} to their corresponding latent variables, and consequently represent the expected change in the observed score on the item per unit change on the latent variable (Vandenberg and Lance 2000). The metric invariance test showed that the model fitted well with the hypothesized model (χ^2/df= 2.69, GFI=.93, CFI=.96, NNFI=.95, RMSEA=.038). However, the resulting χ^2 difference test with 12 degrees of freedom appeared significant ($p<.002$). Due to the fact that full metric invariance is difficult to establish, some researchers propose relaxing it by establishing partial metric invariance (Byrne 2001; Byrne et al. 1989). They suggest that if the noninvariant items constitute a small proportion of the model, cross-group comparisons can still be made because the noninvariant items will not affect the comparisons to any meaningful degree. In line with this reasoning, it was investigated which factor loadings were not invariant (see Appendix III). Two out of twelve estimated factor loadings (SQ4 and Int3) appeared to be nonequivalent across contexts. Consequently, the invariance tests testing the invariance of the structural

relationships were performed in which two factor loadings were set free (partial metric invariance).

Based on the statistical analyses, it can be concluded that configural and partial metric invariance were established. This was deemed sufficient for testing for differences in structural coefficients between the online and offline context. Additionally, metric invariance was also investigated from a practical approach. Due to chi square's extreme sensitivity to sample size and model complexity other authors also suggest a more practical approach by investigating the worsening of the fit indices by constraining parameters to be equal across contexts (Byrne 2001; Childers et al. 2001; Little 1997; MacCallum et al. 1994). Little (1997) proposed that the equality of factor loadings is upheld when the NNFI decreases less than .05 after imposing equality constraints on all factor loadings. This was the case, as the NNFI did not drop more than .01 after imposing the equality constraints.

A. Testing the relative importance of criteria in the online and offline context

After establishing configural and partial metric invariance[25], the hypotheses regarding the strength of structural relationships were tested (Hypotheses 12-15). To be more precise, it was tested whether time/effort costs, perceived risk and merchandise quality had a stronger effect on purchase intentions, and whether enjoyment had a less pronounced effect in the online context. First, it was tested whether all structural path coefficients were invariant across contexts. The chi-square difference test with 13 degrees of freedom appeared to be significant ($p<.001$), indicating that the structural path coefficients were not invariant across contexts. Next, to identify the source of nonequivalence, each separate relationship was constrained and set to be free (Byrne 2001). The difference in chi square with 1 degree of freedom was used to investigate whether the strength of relationship differed online versus offline (cf. Baker et al. 2002; Childers et al. 2001; Einwiller 2003). None of the four hypotheses were supported (see Table 6.12). The strengths of the relationships between time/effort costs and purchase intentions were not significantly different across contexts ($\beta_{offline}=-.18/\beta_{online}=-.30$, $p=.183$). Next, there was no significant difference between the strength of relationships between enjoyment and purchase intentions

[25] After full configural invariance was established, ten out of twelve items appeared invariant across the online and offline context (see Appendix III). The NNFI dropped less than .01 after imposing the equality constraints on the measurement items.

($\beta_{offline}$=.35/β_{online}=.48, p=.147). Then, the effects of risk on purchase intentions were also invariant across contexts ($\beta_{offline}$=-.17/β_{online}=-.14, p=.766), indicating risk plays an equal role in affecting purchase intentions across contexts. Finally, merchandise quality did not have a stronger direct effect on purchase intentions in the online context ($\beta_{offline}$=.15/β_{online}=.15, p=.975). This latter insignificant finding can be explained as the same bookseller was considered, which had similar assortments online and offline. Consumers were therefore less likely to be motivated to shop online, because of superior online assortments. In sum, it can be concluded that the relationships between the shopping experience costs/benefits and merchandise quality with intentions were similar across contexts. The only structural relationships that significantly differed between contexts were (1) merchandise quality → time/effort costs, and (2) service quality → perceived risk. A closer investigation of the coefficients (see Table 6.12) shows that in the online context, service quality more strongly reduced risk than in the offline context. Additionally, merchandise quality more strongly reduced time/effort costs in the online context. It seems that improvements in merchandise quality in the online context lead to major time/effort savings. Although the difference in the strength of service quality on intentions appeared large ($\beta_{offline}$=.13/β_{online}=.48), the difference was just outside the level of significance (p=.053) (see Appendix III).

Table 6.12: Tests of invariant structural relationships offline context versus online context

	Hypothesis	Structural coefficient offline context[a,b]	Structural coefficient online context[a,b]	P-value	Hypothesis Testing
Time/effort costs → Intentions	H12: Stronger in online context	-.18	-.30	.180	Not supported
Enjoyment → Intentions	H13: Stronger in offline context	.35	.48	.231	Not supported
Perceived risk → Intentions	H14: Stronger in online context	-.17	-.14	.773	Not supported
Merchandise quality → Intentions	H15: Stronger in online context	.15	.15	.975	Not supported
Service quality → Perceived risk	-	-.26	-.59	**.000**	-
Merchandise quality → Time/effort costs	-	-.30	-.56	**.000**	-

Notes:

a. The shown unstandardized structural coefficients marginally differ from those in Table 6.8 and 6.9 due to the equality constraints of the factor loadings.
b. N.s. represents coefficients that are not significant from zero at a .05 significance level based on one-tailed tests.

B. Testing the moderating effect of prior online shopping experience in the online context

It is assumed that the strength of relationships in the online context can be attenuated or strengthened through the level of prior online shopping experience[26]. Based on Chapter 4,

[26] It was also tested whether online and offline buyers differed in terms of their structural relationships regarding the offline context. Of the thirteen structural relationships, only one differed between offline and online buyers; the relationship between service quality and

three hypotheses were related to the moderating effect of prior online shopping experience (H17-H19). To test for the moderating effect of prior experience, this study discerned between offline buyers (those without direct experience with shopping through the website) and online buyers (those with direct experience with shopping through the website).

The two subgroups were evaluated in terms of their unstandardized structural coefficients. The same procedure was used to assess the differences in the strength of the relationships between online and offline buyers. First, the baseline models were established. The two separate models had acceptable fit indices for the offline and online buyers, respectively (χ^2/df= 2.04/1.89, GFI=.93/.89, CFI=.96/.94, RMSEA=.052/.068). Next, the omnibus test showed that the covariance matrices were not equivalent by constraining the factor loadings, variances and covariances to be equal ($\Delta\chi^2$ 423.38 with 68 *df*, p<.001). Subsequently, configural invariance was tested. The stacked model with 308 degrees of freedom showed reasonable fit indices (χ^2/df= 2.09, GFI=.90, CFI=.94, NNFI=.93, RMSEA=.043), indicating that full configural invariance was established. Next, it was investigated whether the factor loadings were invariant across online and offline buyers. The metric invariance test showed that the model fitted well with the hypothesized model (χ^2/df= 2.12, GFI=.90, CFI=.94, NNFI=.92, RMSEA=.044). However, the χ^2 difference test appeared significant ($\Delta\ \chi^2$=35.02 with 12 *df*, p<.001). A subsequent investigation showed that three out of twelve estimated factor loadings (Time2, PV1, and Int1) were nonequivalent across contexts. From a practical perspective, it was found that the factor loadings were equal, based on the criterion that the NNFI should not decrease more than .05 when full equality constraints are imposed (Little 1997). This was the case, as the NNFI marginally dropped (Δ NNFI=.002) after imposing the equality constraints. Consequently, the structural invariance tests were performed after configural and partial metric invariance were established. Table 6.13 shows the results of the hypotheses and two nonhypothesized significant differences.

enjoyment was stronger for offline buyers (.66) than for online buyers (.33). Pooling the data seemed justifiable, as it did not substantially alter the relationships.

Table 6.13: Tests of invariant structural relationships offline buyers versus online buyers

	Hypothesis	Structural coefficient offline buyers	Structural coefficient online buyers	P-value	Hypothesis testing
Perceived risk → Intentions	H17: Attenuated by prior online shopping experience	-.17	.02 n.s.	.136	Not supported
Time/effort costs → Intentions	H18: Strengthened by prior online shopping experience	-.14	-.27	.181	Not supported
Enjoyment → Intentions	H19: Attenuated by prior online shopping experience	.56	.16	**.000**	Supported
Service quality → Enjoyment	-	.83	.43	**.027**	-
Service quality → Intentions	-	.50	-.14 n.s.	**.001**	-

Note: N.s. represents unstandardized coefficients that are not significant from zero at a .05 significance level based on one-tailed tests.

The results suggest that online buyers rely less strongly on risk and more strongly on time/effort savings than offline buyers. However, these differences were not significant. Therefore hypotheses H17-H18 could not be supported, although the differences were in the right direction. Hypothesis 19, stating that online buyers are less affected by enjoyment than offline buyers, was confirmed. Based on the item means (see section 6.3), it appears that offline buyers strongly rely on enjoyment because of the lack of enjoyment in the

online context. A relatively small improvement in enjoyment strongly increases the offline buyers' online purchase intentions[27].

The two nonhypothesized significant differences can be explained as follows: for offline buyers, service quality is very important as it entails the aspect of reliability/fulfillment. As a result, service quality has a stronger impact on enjoyment and intentions for offline buyers than for online buyers. If e-tailers succeed in improving offline buyers' online service quality perceptions, offline buyers will perceive the online shopping process to be more enjoyable, and will have higher online purchase intentions.

6.7 Stage 5: Multiple group CFA for extended model

The effect of reputation, informativeness and ease of use was investigated in the extended model. The goal of this extension was to ensure no important factors were left out for the online context. Next, these additional factors also provide insights into how the predictors of perceived value and purchase intentions are constructed.

Appendix IV shows the item means, standard deviations and mean differences between the online and offline context for the two groups of buyers. Offline buyers found the offline channel easier to use, more informative, and evaluated the store's reputation much higher than the website's reputation. Online buyers generally considered the online channel to be easier to use, but rated the reputation of the store higher than that of the website. They appeared indifferent towards the channels' capability to provide relevant information.

Separate exploratory factor analyses were run and found the three expected underlying factors. The KMO measure was .833 for the offline context, and .886 for the online context, supporting factor analysis of the data (Hair et al. 1998). The three factors explained 60.9% in the offline context and 65.7% in the online context. Then, in each context a CFA was run based on the 11 latent factors. The offline sample consisted of 539 buyers (372 offline buyers, 167 online buyers); the online sample consisted of 502 buyers

[27] This partly explains why enjoyment had a substantial effect (β=.48) on purchase intentions in the online context (see Hypothesis 13).

(330 offline buyers, 172 online buyers). The measurement model fitted the data well for the offline and online context (χ^2/df=2.05/2.22, GFI=.95/.94, CFI=.96/.95, NNFI=.95/, RMSEA=.044/.050). The three constructs appeared reliable and possessed sufficient convergent validity (see Table 6.14). Reliabilities were above the recommended level of .60 (Bagozzi and Yi 1988), and the *t*-values were significant (p<.001). In addition, all constructs –except offline ease of use– met the minimum AVE level of .50. However, the discriminant validity of the constructs was questioned, when analyzing the correlations between the latent factors. Reputation was highly correlated with service quality ($\varrho_{offline}$=.84, ϱ_{online}=.86), and ease of use ($\varrho_{offline}$=.60, ϱ_{online}=.75). Next, ease of use was highly correlated with information relevancy ($\varrho_{offline}$=.62, ϱ_{online}=.74). This high degree of correlation could lead to multicollinearity problems. The VIFs were investigated in subsequent regression analyses with unweighted summated scores. The largest VIF value in the offline context was 2.45 in the offline context and 2.79 in the online context, indicating that there was some –but no severe– degree of multicollinearity (Parasuraman et al. 2005). One of the consequences of multicollinearity is that it makes determining the relative contribution of each independent factor more difficult because the effects of the independent factors are mixed or confounded (Hair et al. 1998). One of the remedies is to present the bivariate correlations between the independent and dependent factor in order to understand its relationship (Hair et al. 1998). Hence, this study tests the relationships, and –in case of insignificant relationships– shows the bivariate correlations to address the association between the two variables in isolation.

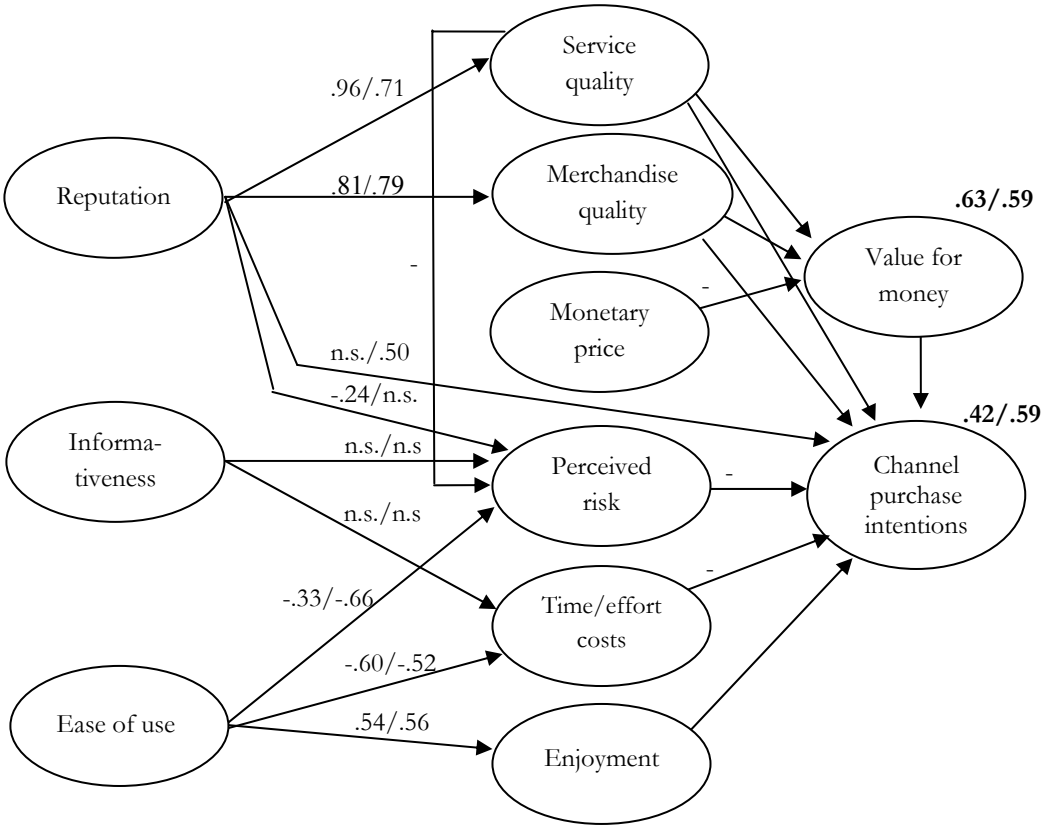
Table 6.14: Item loadings, construct reliabilities and average variance extracted

	Offline context N=539		Online context N=502	
	Standardized loading[a,bc]	**AVE[d]**	**Standardized loading[a,b,c]**	**AVE[d]**
Reputation	**.88**	*.70*	**.89**	*.74*
Rep1: trustworthiness	.78		.83	
Rep2: good reputation	.87 (20.75)		.88 (23.48)	
Rep3: reputable standing	.86 (20.46)		.85 (22.27)	
Informativeness	**.87**	*.68*	**.86**	*.67*
Inf1: in-depth information	.80		.73	
Inf2: relevant information	.92 (18.33)		.85 (18.01)	
Inf3: right information	.75 (21.20)		.87 (18.27)	
Ease of use	**.68**	*.42*	**.75**	*.50*
Ease1: access convenience[e]	.51		.61	
Ease3: search convenience	.65 (9.41)		.73 (12.36)	
Ease5: shopping convenience	.75 (9.84)		.77 (12.68)	

Notes:

a. Figures in bold represent construct reliabilities, which were calculated based on the formula provided by Hair et al. (1998, p. 624).
b. Figures between brackets represent *t*-values of the factor loadings. The first item of each construct was used as a reference item.
c. Based on one-tailed tests, *t*-values greater than 1.65 are significant at $p<.05$; *t*-values greater than 2.33 are significant at $p<.01$.
d. The average variance extracted (AVE) was calculated based on the formula provided by Fornell and Larcker (1981).
e. For the exact wording of the items, see Table 5.1.

Again, the baseline models were first established, prior to testing the invariance of the structural relationships. Figure 6.2 shows the results of the unstandardized coefficients of the three factors.



Fit indices	Offline context	Online context
χ^2	793.62	887.46
df	349	349
χ^2/df	2.27	2.54
GFI	.90	.89
AGFI	.88	.86
NNFI	.94	.93
CFI	.95	.94
RFI	.89	.89
SRMR	.058	.064
RMSEA	.049	.055

Figure 6.2: Coefficients for offline/online context for extended model

Notes: The unstandardized structural coefficients are displayed for the offline/online context. Figures in bold represent the percentage of explained variance in the endogenous variables. N.s. represents coefficients that are not significant from zero at a .05 significance level based on one-tailed tests.

The model fitted the data well in each context, although the fit indices were somewhat lower than in the base model. The modification indices suggested no additional relationships. Table 6.15 shows the unstandardized coefficients with their corresponding *t*-values. The hypotheses were tested through analyzing the *t*-values at a significance level of .05. Of the nine proposed hypotheses, three were not supported by the data in each context.

As expected, reputation strongly altered perceptions of service quality ($\beta_{offline}$=.96, β_{online}=.71) and merchandise quality ($\beta_{offline}$=.81, β_{online}=.79). In the offline context, reputation significantly reduced risk ($\beta_{offline}$=-.24), but it did not have a direct impact on purchase intentions. In the online context the opposite was found, reputation did not reduce risk[28], but it directly affected purchase intentions (β_{online}=.50). The reputation of the website thus had a strong direct influence on intentions, indicating the prominent role reputation plays online. In both contexts, information relevancy neither reduced risk perceptions nor time/effort costs. It seems that ease of use explained most of the variance in the endogenous factors, as the correlations suggest that informativeness is moderately correlated with time/effort costs ($\varrho_{offline}$=.-.27, ϱ_{online}=-.47) and with risk ($\varrho_{offline}$=-.23, ϱ_{online}=-.43). Ease of use had a strong influence on time/effort costs ($\beta_{offline}$=-.60, β_{online}= -.52), risk ($\beta_{offline}$=-.33, β_{online}=-.66), and enjoyment ($\beta_{offline}$=.54, β_{online}=.56), and thus strongly affected both utilitarian and hedonic aspects of shopping.

[28] Although this relationship was insignificant in the online context, the correlation between reputation and risk (-.52) indicated that they were significantly correlated.

Table 6.15: Unstandardized structural coefficients for additional factors

	Offline context N=539			Online context N=502		
Hypothesis	**Structural coefficient**	***t*-value**	**Hypothesis testing**	**Structural coefficient**	***t*-value**	**Hypothesis testing**
H9a: Reputation → Service quality	.96	15.48	Supported	.71	15.61	Supported
H9b: Reputation → Merchandise quality	.81	13.78	Supported	.79	14.41	Supported
H9c: Reputation → Perceived risk	-.24	-1.66	Supported	.04	.21	Not supported
H9d: Reputation → Intentions	.32	1.58	Not supported	.50	2.28	Supported
H10a: Informativeness → Time/effort costs	-.06	-.77	Not supported	.11	1.46	Not supported
H10b: Informativeness → Perceived risk	.05	.91	Not supported	.09	1.07	Not supported
H11a: Ease of use → Time/effort costs	-.60	4.20	Supported	-.52	6.42	Supported
H11b: Ease of use → Perceived risk	-.33	-3.28	Supported	-.66	-5.26	Supported
H11c: Ease of use → Enjoyment	.54	5.60	Supported	.52	6.98	Supported

Note: Based on one-tailed tests, unstandardized coefficients with *t*-values greater than 1.65 are significant at $p<.05$; *t*-values greater than 2.33 are significant at $p<.01$.

The unstandardized direct effects provide useful information, but to better understand the total influence of the additional factors on the endogenous factors, the total (standardized) effects were analyzed (see Table 6.16). The addition of the three factors altered some of the relationships in the base model. For example, the addition of reputation as a predictor of online purchase intentions made the relationships between merchandise and service quality with purchase intentions insignificant. Appendix V shows the differences in the strength of the coefficients due to the addition of the three factors.

Table 6.16: Total (standardized) effects for extended model

	Offline context N=539				Online context N=502			
Total effects on purchase intentions	Total effects	Direct Effects[a]	Indirect effects	Total standar-dized effect[b]	Total effects	Direct effects[a]	Indirect effects	Total standar-dized effect[b]
Service quality	.12	-.05[n.s.]	.17	.08 (6)	.23	.08[n.s.]	.15	.11 (5)
Merchandise quality	.19	.14	.05	.15 (4)	.14	.08[n.s.]	.06	.10 (6)
Monetary price	-.04	-	-.04	-.04 (9)	-.03	-	-.03	-.02 (9)
Enjoyment	.36	.36	-	.33 (2)	.54	.54	-	.37 (2)
Time/effort costs	-.15	-.15	-	-.15 (5)	-.20	-.20	-	-.12 (4)
Perceived risk	-.13	-.13	-	-.08 (7)	-.08	-.08[n.s.]	-	-.05 (7)
Perceived value	.10	.10[n.s.]	-	.07 (8)	.07	.07[n.s.]	-	.03 (8)
Reputation	.62	.32[n.s.]	.30	.39 (1)	.77	.50	.27	.44 (1)
Informativeness	.00	-	.00	.00 (10)	-.03	-	-.03	-.02 (10)
Ease of use	.32	-	.32	.20 (3)	.45	-	.45	.30 (3)
Total effects on perceived value								
Monetary price	-.44	-.44	-	-.62 (1)	-.49	-.49	-	-.56 (1)
Service quality	.31	.31	-	.34 (2)	.31	.31	-	.31 (2)
Merchandise quality	-.03	-.03[n.s.]	-	-.04 (4)	.01	.01[n.s.]	-	.03 (4)
Reputation	.27	-	.27	.26 (3)	.23	-	.23	.29 (3)
Total effects on perceived risk								
Service quality	.04	.04[n.s.]	-	.05 (4)	-.13	-.13[n.s.]	-	-.09 (2)
Reputation	-.20	-.24	.04	-.21 (2)	-.05	.04[n.s.]	-.09	-.05 (4)
Informativeness	.05	.05[n.s.]	-	.06 (3)	.09	.09[n.s.]	-	.08 (3)
Ease of use	-.33	-.33	-	-.33 (1)	-.66	-.66	-	-.66 (1)

Table 6.16: Total (standardized) effects for extended model (continued)

	Offline context N=539				Online context N=502			
Total effects on time/effort costs	Total effects	Direct Effects[a]	Indirect effects	Total standar-dized effect[b]	Total effects	Direct effects[a]	Indirect effects	Total standar-dized effect[b]
Merchandise quality	-.02	-.02[n.s.]	-	-.01 (3)	-.26	-.26	-	-.29 (2)
Reputation	.01	-	.01	.01 (4)	-.21	-	.21	.19 (3)
Informativeness	-.06	-.06[n.s.]	-	-.05 (2)	.11	.11[n.s.]	-	.10 (4)
Ease of use	-.60	-.60	-	-.37 (1)	-.52	-.52	-	-.55 (1)
Total effects on enjoyment								
Service quality	.31	.31	-	.31 (3)	.22	.22	-	.15 (2)
Merchandise quality	.15	.15	-	.13 (4)	.02	.02[n.s.]	-	.02 (4)
Reputation	.50	-	.50	.34 (2)	.17	-	.17	.15 (3)
Ease of use	.54	.54	-	.35 (1)	.56	.56	-	.54 (1)

Notes:

a. N.s. represents coefficients of direct effects that are not significant from zero at .05 based on one-tailed tests. Figures in bold represent construct reliabilities, which were calculated based on the formula provided by Hair et al. (1998, p. 624).

b. Figures between brackets indicate the ranking of each factor in explaining the endogenous latent variable.

Demonstrated by the total standardized effects, the additional factors ease of use and reputation had a strong impact on purchase intentions. Reputation –being highly a strong predictor of both service and merchandise quality– took over the effect of service and merchandise quality and had the most substantial effect on purchase intentions in the online and offline context. Ease of use, which strongly affected the shopping experience costs and benefits, had the third-largest impact on purchase intentions. Informativeness had a marginal effect on purchase intentions[29].

[29] This does not imply that providing relevant information is not important to online and offline booksellers. Informativeness was strongly correlated with ease of use (see above),

When investigating the influencers of perceived value, it appears that reputation did have an impact through altering perceptions of service quality and merchandise quality. However, the impact of reputation was less than the effect of price and service quality on value in each context.

Perceived risk was most strongly reduced by ease of use in both contexts. This effect seems to be particularly pronounced in the online context. Thus, online booksellers can effectively reduce risk by making the shopping process more convenient. Although past literature indicated that online risk is effectively reduced by increasing the reputation of the website (e.g. Einwiller 2003), this study finds evidence that making the shopping process more convenient is more appropriate. In the offline context, reputation did reduce risk, but the effect was not as substantial as that of ease of use.

Not surprisingly, time/effort costs were predominantly explained by ease of use. Customers who find the store/website easy to use can more easily and quickly obtain their desired book and save time and effort. Providing more relevant information to customers, however, did not lead to time/effort savings in either context.

Enjoyment was also largely determined by ease of use in each context. A more convenient shopping process is more likely to evoke positive affect (Childers et al. 2001). In the offline context, reputation had a substantive impact on enjoyment through affecting both service quality and merchandise quality. In the online context, enjoyment only seemed to stem from the ease of use offered by the website; its effect was more than three times as great as the second-strongest predictor.

Overall, the results suggest that ease of use and reputation significantly altered perceptions of perceived value and intentions, whereas informativeness did not. Reputation for a large part affected purchase intentions through altering merchandise and service quality[30],

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and it had high levels of shared variance with ease of use. Informativeness did not explain a significant amount of unique variance in the endogenous variables.

[30] The total indirect effect of reputation on purchase intentions was based on a number of multiplicative computations with insignificant paths. The indirect effects derived from these insignificant paths were, however, relatively small compared to the indirect effects derived from significant paths.

whereas ease of use did this by strongly affecting the shopping experience costs and benefits. Next, based on the examination of the total effects, there is little evidence for major differences in the importance of criteria between channels. The total effect of ease of use appears to be somewhat more pronounced in the online context, but the difference is not substantial. Thus, although some authors argued that ease of use, information relevancy, and reputation play a more profound role in the online context; this study does not find clear evidence for this, as the factors play a similar role in each context. The next sections address the relative strength of the relationship of reputation on risk across contexts (Hypothesis 16) and the moderating effect of prior online shopping experience on the relationship between reputation and risk (Hypothesis 20).

A. Testing the relative importance of reputation on risk in the online and offline context

Hypothesis 16 stated that reputation would more strongly reduce risk in the online context due to the absence of intrinsic product attributes. After configural and partial metric invariance was established[31], the strength of the relationship did not differ between contexts ($p=.224$) (see Table 6.17). Based on this, there was no support for Hypothesis 16. The structural path coefficients of the 22 relationships, however, showed that the relationships were not invariant across the online and offline context ($p<.001$). For the sake of completeness, the relationships with regard to ease of use, information and reputation were investigated. Although it seemed that the relationship between reputation and intentions was stronger in the online context ($\beta_{offline}=.32$, $\beta_{online}=.50$), there was not a significant difference between the two contexts ($p=.627$). Three relationships differed between contexts. Ease of use had a stronger impact on risk and enjoyment in the online context than in the offline context. When consumers find the website easier to use, it strongly reduces their risk perceptions and also drastically increases the shopping enjoyment. The results also show that the store's reputation more strongly influences service quality than the website's reputation. A possible explanation for this is that consumers are more familiar with the store than with the website and that the store's reputation is strongly tied to service quality.

[31] After full configural invariance was established, thirteen out of eighteen items appeared invariant across the online and offline context. The NNFI dropped less than .01 after imposing equality constraints on the measurement items.

Table 6.17: Tests of invariant structural relationships offline versus online context

	Hypothesis	Structural coefficient offline context[a]	Structural coefficient online context[a]	P-value	Hypo-thesis testing
Reputation → Perceived risk	H16: Stronger in online context	-.24	.04[n.s.]	.224	Not supported
Ease of use → Perceived risk	-	-.33	-.66	**.000**	-
Ease of use → Enjoyment	-	.54	.84	**.016**	-
Reputation → Service quality	-	.96	.71	**.000**	-

Notes: N.s. represents unstandardized coefficients that are not significant from zero at .05. Unstandardized structural coefficients may differ from those in Table 6.15 due to the equality constraints of the factor loadings.

B. Testing the moderating effect of prior online experience in the online context

Hypothesis 20 argued that the relationship between reputation and risk would be attenuated by the level of prior online experience. After configural and partial metric invariance was established[32], the structural invariance of this relationship was tested. The results did not lend support for Hypothesis 20 (see Table 6.18). Again the invariance of the structural relationships with regard to ease of use, information and reputation were investigated. Only one relationship significantly differed between the two groups; online buyers relied more heavily on reputation of the website as indicator of service quality. Online buyers are more familiar with shopping through the website, and this may explain why the relationship between reputation and service quality is stronger for them than those that have lower levels of familiarity.

[32] After full configural invariance was established, seventeen out of eighteen items appeared invariant across online and offline buyers (see Appendix III). The NNFI dropped less than .01 after imposing equality constraints on the measurement items.

Table 6.18: Test of invariant structural relationships offline versus online buyers

	Hypothesis	Structural coefficient offline buyers	Structural coefficient online buyers	P-value	Hypo-thesis testing
Reputation → Perceived risk	H20: Attenuated by prior online shopping experience	.10$^{n.s.}$	.07$^{n.s.}$	.960	Not supported
Reputation → Service quality	-	.62	.89	**.010**	-

Note: N.s. represents unstandardized coefficients that are not significant from zero at .05.

6.8 Stage 6: Discussion of findings

Overall, the results supported the proposed conceptual model. Most proposed relationships in the base model were confirmed by the data. In both contexts, purchase intentions were predominantly defined by service quality, merchandise quality, enjoyment and time/effort costs. Service quality and merchandise quality had strong indirect effects in each context. Service quality affected enjoyment and risk, whereas merchandise quality altered perceptions of time/effort costs and enjoyment. The results also demonstrated that enjoyment played a significant role and should be incorporated in perceived value models. Surprisingly, perceived value –defined as the value for money consumers receive– did not alter purchase intentions in either context. It seems that altering the value for money consumers receive hardly stimulate them to use a particular channel. To motivate them to use a particular channel, it is better to focus on improving the four above-mentioned factors.

It was investigated whether the strength of relationships differed between contexts (i.e. channels) by using a multiple group confirmatory factor analysis. None of the proposed hypotheses regarding the differences in the strength of motivations (risk, time/effort costs, enjoyment and merchandise quality) could be confirmed. In search for nonequivalence, two relationships appeared to be different across contexts: in the online context service quality had a stronger impact on risk, and merchandise quality had a stronger effect on

time/effort costs. Service quality seemed to have a somewhat more pronounced effect in the online context, but overall the results suggest that the construction of perceived value and intentions appear very similar. Customers do not significantly differ in the weights they attribute to the factors, but rather attribute different scores to the performance of each channel on these factors.

It was also investigated whether the strength of relationships differed between online buyers and offline buyers, i.e. customers who had prior experience with buying books through the bookseller's website and those who had no prior direct experience with the website. Compared to the offline buyers, online buyers relied less on enjoyment, but the two groups relied equally on time/effort savings and risk. Based on a comparison of the item means pertaining to enjoyment, it appears that the *lack* of enjoyment inhibits offline buyers to shop online; offline buyers therefore are strongly affected by enjoyment.

Next, the extended model was tested. Three additional factors (ease of use, informativeness and reputation) were included to ensure that no important predictors were left out for the online context. The results indicated that ease of use and reputation had strong effects on purchase intentions in the online context, but also in the offline context. Ease of use strongly impacted the shopping experience costs and benefits, whereas reputation largely explained service and merchandise quality.

For the extended model it was hypothesized that reputation would more strongly reduce risk perceptions in the online context. However, no support was found. Finally, it was proposed that online buyers would rely less on reputation than offline buyers in the online context; again no support was found.

7 Results and Discussion Study 2

This chapter examines the robustness of the findings of Study 1. The second study investigates the consumers' motivations to shop for management-related books at a specific pure e-tailer. As it does not have an offline counterpart, the well-known generalist bookseller from Study 1 is chosen to represent the offline store. First, the data collection is discussed, followed by a description of the characteristics of the e-tailer's customers. Next, the stages of the research procedure are followed. Finally, a comparison is made with the first study.

7.1 Data collection

The data were collected through an online questionnaire. A stratified sample was drawn that resembled the e-tailer's customer base in terms of number of purchases. As an incentive, an audio CD expressing the ideas of management guru Stephen Covey was sent to each potential respondent. An email invited 2,369 shoppers who had bought at least once through the website of the pure-play bookseller. A total of 437 (18.4%) questionnaires were filled in of which 434 were usable. The data were collected during June and July 2004.

7.2 Respondent characteristics

Table 7.1 compares the respondent characteristics of this study's sample with the online sample of Study 1. In this way, the *online* buyers from the generalist store are compared with those from the specialist website.

Table 7.1: Profile of the respondents for samples of Study 1 and 2

Socio-demographic variables		Sample Study 2		Online sample Study 1	
Gender	Male	302	70.1%	115	48.5%
	Female	129	29.9%	122	51.5%
Age	<19 years	27	6.2%	5	2.1%
	19-25 years	19	4.3%	51	21.5%
	26-40 years	183	41.9%	94	39.7%
	> 40 years	208	47.6%	87	36.7%
Income p.a.	Less than € 20,000	17	4.1%	42	18.9%
	€ 20,000 – €29,000	42	10.1%	60	27.0%
	€ 29,000 – €43,500	67	16.1%	54	24.3%
	€43,500 – €58,000	118	28.3%	31	14.0%
	€58,000 – € 72,500	63	15.1%	14	6.3%
	€72,500 or more	110	26.4%	21	9.5%
Education	Primary education	1	0.2%	2	0.8%
	Secondary education	8	1.9%	13	5.5%
	College	16	3.8%	34	14.4%
	Graduate	382	89.3%	171	72.1%
	Other	21	4.9%	17	7.2%

Compared with the online respondents in Study 1, the respondents of Study 2 are more likely to be male ($\chi^2(1)=30.8$, $p<.001$), are slightly older ($\chi^2(3)=53.3$, $p<.001$), have a higher income ($\chi^2(5)=108.2$, $p<.001$), and even higher levels of education ($\chi^2(4)=37.1$, $p<.001$). The characteristics of the average respondent in the second study resemble those of the typical online shopper (male, high income, well educated, between 30 and 40 years old). This finding is not surprising, as the target group of the e-tailer consists of managers who are well educated and have a high income.

The use of multiple channels was also investigated. Regarding their last management-related book purchase, 52% of the respondents indicated that they used the Internet prior to their *offline* purchase. This percentage is higher than that found in the first study (15%).

The respondents used the Internet to search for specific book content (47%), price (29%), background information (23%), book availability (22%), and to get inspiration (14%). Again, the respondents engaged in rather goal-oriented online search behavior. For the respondents who made their last purchase offline, the Internet played no substantial role in their decision making; an average of 3.28 was found on a scale from 1 (a marginal role) to 7 (a substantial role). It was also investigated whether online book purchases tended to be more goal-directed than offline book purchases. From the respondents who bought their last book online, 65.2% exactly knew which book to buy prior to purchase, whereas 62.5% of the people that bought their last book offline had a predetermined book in mind. The results indicate that consumers generally engage in goal-directed behavior when shopping for management-related books.

The respondents' prior online shopping experience was assessed. The large majority of the respondents (86.3%) indicated that they shopped online for products or services *different* than books. The sample of the second study had more experience than the online sample of Study 1 ($\chi^2(5)=46.2$, $p<.001$). Table 7.2 shows the total number of online purchase made *other* than books for the respondents of Study 2 and the online sample of Study 1.

Table 7.2: Prior online shopping experience (books excluded)

Total number of online purchases made	Sample Study 2 N=424	Online sample Study 1 N=239
0	13.7%	27.6%
1	1.7%	2.1%
2-3	10.8%	13.0%
4-6	16.5%	25.5%
7-10	19.1%	14.2%
> 10	38.2%	17.6%

7.3 Stage 1: Item analysis

Individual item analysis was performed on the like items of Study 1 (see Table 7.3). The respondents were asked to evaluate buying *management-related* books through the website of the e-tailer and through one of the stores of the generalist bookseller, described in Study 1.

Table 7.3: Means, standard deviations, and mean differences

Items[a,b]	Store[c,d]	Website[c,d]	Website-Store[e]
SQ1	5.32 (1.24)	4.83 (1.17)	**.48*** **
SQ2	4.88 (1.30)	4.41 (1.09)	**.47*** **
SQ3	5.75 (1.08)	5.36 (1.12)	**.39*** **
SQ4	5.42 (1.25)	4.38 (1.10)	**1.04*** **
SQ5	5.13 (1.26)	5.10 (1.16)	.03
Enjoy1	5.42 (1.43)	4.49 (1.30)	**.93*** **
Enjoy2	5.48 (1.30)	4.84 (1.23)	**.64*** **
Enjoy3	5.20 (1.43)	4.93 (1.22)	**.27** **
Enjoy4	4.62 (1.56)	4.58 (1.41)	.04
Risk1	1.57 (1.35)	3.43 (1.76)	**-1.85*** **
Risk3	2.15 (1.00)	3.49 (1.24)	**-1.34*** **
Risk4	2.00 (1.15)	3.22 (1.51)	**-1.23*** **
Time1	4.57 (1.56)	2.35 (1.10)	**2.22*** **
Time2	4.16 (1.44)	3.61 (1.17)	**1.55*** **

Table 7.3: Means, standard deviations, and mean differences (continued)

Items[a,b]	Store[c,d]	Website[c,d]	Website-Store[e]
MQ 1	4.44 (1.53)	5.79 (.99)	**-1.35*** **
MQ2	4.43 (1.51)	5.70 (1.04)	**-1.27*** **
Price1[f]	4.06 (1.32)	3.68 (1.17)	**.38*** **
Price2[f]	3.98 (1.37)	3.43 (1.17)	**.55*** **
PV1	5.17 (1.16)	5.21 (1.10)	-.04
PV2	4.65 (1.27)	4.86 (1.20)	**-.21*** **
PV3	4.40 (1.23)	4.65 (1.20)	**-.25*** **
Int1	4.19 (1.66)	5.26 (1.30)	**-1.07*** **
Int2	4.15 (1.56)	5.16 (1.34)	**-1.00*** **
Int3	3.70 (1.56)	4.97 (1.35)	**-1.28*** **

* p < .05; ** p < .01; *** p < .001

Notes:

a. SQ=Service quality; Enjoy=Enjoyment; Risk=Perceived risk; Time=Time/effort costs; MQ=Merchandise quality; Price=Monetary price; PV=Perceived value; Int=Purchase intentions.

b. Each item (e.g. SQ1) is measured in the offline and online context; a total of 24 pairs of items are represented. Reverse-scaled items (Price1, Price2, Time1 and Time2, see section 5.3) were recoded during data entry for consistency.

c. Item means are based on 7-point Likert scale (1=totally disagree, 7=totally agree).

d. Standard deviations are displayed between brackets.

e. Figures in bold represent significant mean differences measured through paired-sample *t*-tests. Sample sizes for paired *t*-tests ranged from 399 to 430 respondents, because of missing data.

f. Price level refers to the end price consumers have to pay. Respondents were instructed to take into account the delivery costs.

The perceptual differences of the customers of the website are similar to those of the online buyers in Study 1. Customers of the website generally find that the offline store outperforms the website in terms of service quality, enjoyment, and risk, but that they are compensated for by saving much time and effort. Remarkably, the customers also perceive the website to deliver the management books against lower prices[33] and, hence, they expect to receive more value for money through the website. However, the difference is not substantial in absolute terms, showing that the two booksellers are not capable of clearly differentiating their offerings in terms of value for money. As expected, customers perceive the website to deliver a superior assortment, and this may be a strong motivation to shop online. They appear to be loyal towards the website, as their intentions are higher for the website than for the store.

7.4 Stage 2: Exploratory factor analysis

The second step involved exploratory factor analyses with principal axis factoring and oblique rotation, with the scree test criterion to identify the number of factors to extract (Hair et al. 1998). The same items used in the first study were used to examine the exogenous and endogenous part, namely: (1) antecedents of perceived value and intentions, and (2) perceived value and intentions. Relatively clean factor solutions were found (see Appendix VI). In the second study, the same problems arose concerning the number of extracted dimensions regarding perceived value and purchase intentions. In the first study, a two-factor solution was found, as perceived value of the generalist bookseller's store and website loaded on the same factor. In the second study, it was expected that perceived value from the store would be perceived differently from perceived value from the website. However, again a two-factor solution was found in each context, only distinguishing between intentions and perceived value (see Appendix VI). Moreover, the inclusion of both value constructs in the CFA models would lead to mixed and confounding results (e.g. negative error variances, standardized loadings above 1). Perceived value from the store and perceived value from the website were positively correlated (ϱ=.60), suggesting that consumers predominantly base their value perceptions on the product category, i.e.

[33] For newly published books fixed prices are operative for the first two years. Next, these books account for a considerable part of e-tailer's sales. Nevertheless, customers generally believe that the website delivers books against lower prices than the store.

whether they believe the books themselves are worth their money. Based on these results, it was decided to perform subsequent CFAs without the value derived from the competing channel. Overall, the results confirm the same underlying factor structure as found in Study 1. Next, the scales were again found to be reliable with alpha coefficients ranging from .65 to .93. This provided additional support for the research model.

7.5 Stage 3: Confirmatory factor analysis

7.5.1 Model-fitting procedure

After performing listwise deletion, each sample consisted of 406 respondents. The same items found in Study 1 were subjected to CFA. Again, maximum likelihood (ML) was used as estimation method. Multivariate normality was investigated and subsequent analyses showed no severe deviances from multivariate normality. Although the chi-square statistics showed that the models were significant ($p<.001$), the fit indices provided evidence that the hypothesized models fitted the data well (see Table 7.4).

Table 7.4: Fit indices for store and website

Fit indices	Store N=406	Website N=406
χ^2	273.70	251.43
Df	142	142
χ^2/df	1.93	1.77
GFI	.94	.94
AGFI	.91	.92
NNFI	.96	.96
CFI	.97	.97
RFI	.91	.91
SRMR	.047	.042
RMSEA	.048	.044

Note: GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index; PGFI=Parsimony Goodness of Fit Index; NNFI=Non-Normed Fit Index; CFI=Comparative Fit Index; RFI=Relative Fit Index; SRMR=Standardized Root Mean Residual; RMSEA=Root Mean Square Error of Approximation.

7.5.2 Assessment of convergent validity, discriminant validity and reliability

Convergent and discriminant validity were checked in the same manner as in the previous chapter. Convergent validity was established as the factor loadings were high and significant ($p < 0.001$) in both contexts (Anderson and Gerbing 1988). All constructs except service quality for the website exceeded the recommended AVE level of .50 (see Table 7.5). Discriminant validity was established as the confidence intervals (± two standard errors) of each pairwise correlation did include the value of 1.0 (Anderson and Gerbing 1988). Next, collapsing any pair of constructs into a single factor significantly worsened the fit (De Haes et al. 2004). Finally, in most cases the squared correlation between two constructs (see Table 7.6) did not exceed the AVE for each of the two constructs. Only one pairwise correlation (i.e. between service quality and price for website) did not meet this criterion. The construct reliabilities also demonstrated sufficient reliability, as they exceeded the recommended .60 level (Bagozzi and Yi 1988). Again, the measurement model showed evidence for sufficient convergent and discriminant validity, as well as reliability.

Table 7.5: Item loadings, construct reliabilities and AVE

	Store N=406		**Website N=406**	
	Standardized loading[a,b,c]	**AVE[d]**	**Standardized loading[a,b,c]**	**AVE[d]**
Service quality	**.76**	*.52*	**.63**	*.36*
SQ2: high-quality services[e]	.64		.59	
SQ4: willingness to respond	.78 (11.16)		.53 (7.87)	
SQ5: reliability/fulfillment	.73 (10.88)		.67 (9.10)	
Merchandise quality	**.92**	*.86*	**.90**	*.82*
MQ1: good selection	.91		.89	
MQ2: wide selection of interesting books	.94 (20.49)		.92 (17.13)	
Monetary price	**.70**	*.54*	**.67**	*.50*
Price1: low price level (r)	.79		.71	
Price2: attractive offers (r)	.67 (10.36)		.71 (9.55)	

Table 7.5: Item loadings, construct reliabilities and AVE (continued)

	Store N=406		Website N=406	
	Standardized loading[a,b,c]	**AVE[d]**	**Standardized loading[a,b,c]**	**AVE[d]**
Perceived risk	**.78**	*.64*	**.78**	*.64*
Risk3: purchasing uncertainty	.70		.85	
Risk4: things can easily go wrong	.89 (7.38)		.75 (7.74)	
Time/effort costs	**.82**	*.69*	**.75**	*.60*
Time2: shopping efficiency (r)	.72		.85	
Time2: requires not lot of time/effort (r)	.93 (9.51)		.69 (9.34)	
Enjoyment	**.87**	*.69*	**.82**	*.61*
Enjoy1: shopping is fun	.83		.62	
Enjoy2: shopping is enjoyable	.84 (18.31)		.82 (12.50)	
Enjoy3: shopping is interesting	.82 (17.79)		.88 (12.63)	
Value for money	**.86**	*.68*	**.87**	*.69*
PV1: value for money	.70		.69	
PV2: price/quality ratio	.89 (15.77)		.93 (15.99)	
PV3: get versus give	.87 (15.58)		.86 (15.61)	
Purchase intentions	**.89**	*.72*	**.86**	*.68*
Int1: shopping likelihood	.90		.83	
Int2: willing to recommend	.81 (20.34)		.78 (16.64)	
Int3: future purchase intent	.84 (21.59)		.86 (18.00)	

Notes:

a. Figures in bold represent construct reliabilities, which were calculated based on the formula provided by Hair et al. (1998, p. 624).
b. Figures between brackets represent *t*-values of the factor loadings. The first item of each construct was used as a reference item.
c. Based on one-tailed test, *t*-values greater than 1.65 are significant at $p<.05$; *t*-values greater than 2.33 are significant at $p<.01$.
d. The average variance extracted (AVE) was calculated based on the formula provided by Fornell and Larcker (1981).
e. For the exact wording of the items, see Table 5.1.

7.5.3 Assessment of correlations and multicollinearity

Table 7.6 shows the correlations between the latent factors for the offline and online context. The correlations in this study are somewhat lower than in the first study. Most pairwise correlations ranged from .20 to .50. Again, the highest correlations were between price and value for money (i.e. ϱ_{store}= -.66 and $\varrho_{website}$= -.60). The relatively low correlations between the latent constructs of the shopping experience costs and benefits support the idea that these are distinct constructs.

Table 7.6: Correlations between latent factors after CFA

	SQ[a,b,c]	MQ	Price	Risk	Time	Enjoy	PV	Int
Service quality		.51 (.06)	-.60 (.07)	-.39 (.07)	-.50 (.08)	.37 (.07)	.45 (.07)	.48 (.06)
Merchandise quality	.43 (.06)		-.37 (.07)	-.27 (.06)	-.46 (.08)	.47 (.07)	.30 (.06)	.38 (.07)
Monetary price	-.49 (.07)	-.39 (.06)		.12 (.07)	.25 (.08)	-.27 (.07)	-.60 (.06)	-.24 (.08)
Perceived risk	-.30 (.07)	-.18 (.06)	.03 (.07)		.22 (.07)	-.24 (.07)	-.28 (.06)	-.29 (.05)
Time/effort costs	-.21 (.06)	-.33 (.05)	.26 (.07)	.07 (.07)		-.42 (.07)	-.28 (.06)	-.40 (.08)
Enjoyment	.49 (.06)	.39 (.06)	-.28 (.07)	-.31 (.07)	-.23 (.06)		.22 (.08)	.46 (.06)
Perceived value	.42 (.06)	.28 (.05)	-.66 (.06)	-.24 (.06)	-.22 (.06)	.29 (.06)		.21 (.06)
Purchase intentions	.46 (.05)	.53 (.05)	-.27 (.07)	-.14 (.06)	-.46 (.06)	.51 (.05)	.26 (.06)	

Notes:

a. Correlations offline context below diagonal, correlations online context above diagonal.

b. Standard errors are displayed between brackets and were derived by bootstrapping with 500 replications.

Multicollinearity was checked both through regression with unweighted scales and through correlation analyses. No severe problems were encountered as the highest correlation between the independent factors was ϱ=.60 (i.e. between service quality and price for the website), and the highest VIF value was 1.50.

7.6 Stage 4: Multiple group CFA

Before addressing the structural invariance tests, the baseline models were established (Hypotheses 1-8). The revised model (three added relationships, see Chapter 6) was tested in the online (website) and offline (store) context. Figure 7.1 displays the final model.

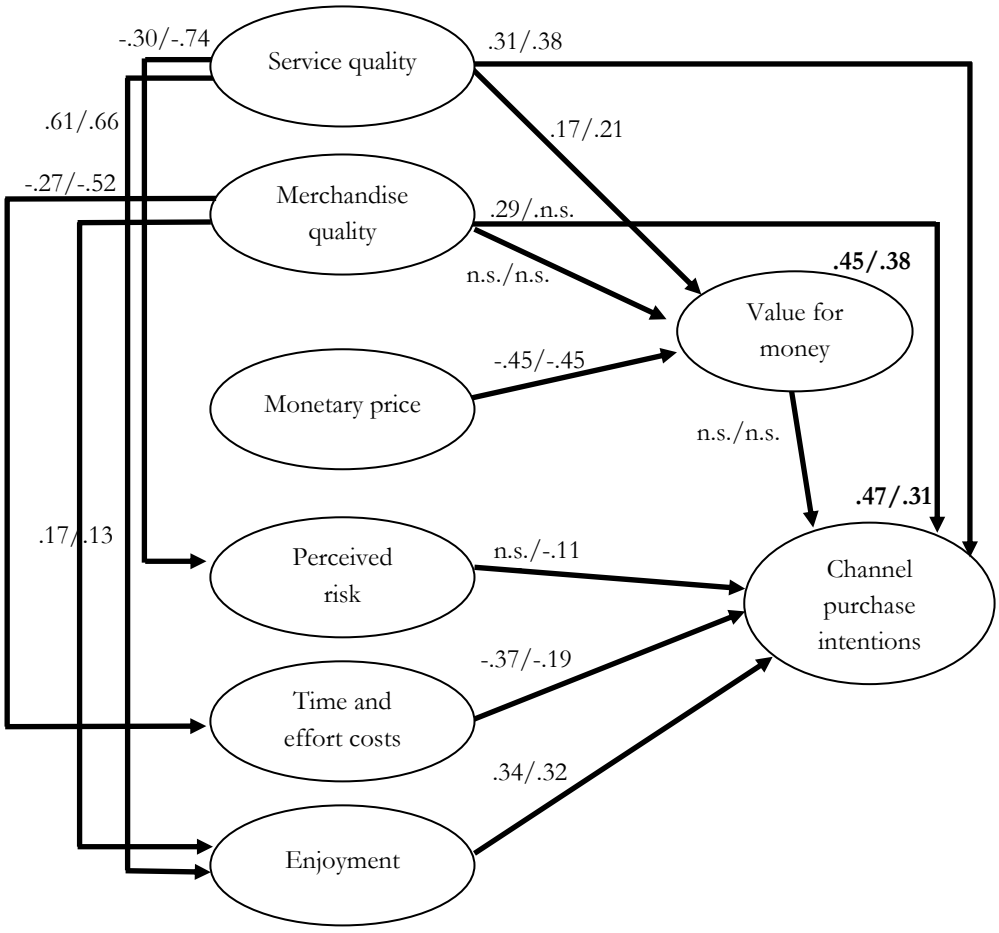

Figure 7.1: Coefficients for the online/offline context for base model

Notes: The unstandardized structural coefficients are displayed for the store/website. Figures in bold represent the percentage of explained variance in the endogenous variables. N.s. represents coefficients that are not significant from zero at a .05 significance level based on one-tailed tests.

Table 7.7: Fit indices for offline and online context

Fit indices	Store N=406	Website N=406
χ^2	322.51	301.40
Df	155	154
χ^2/df	2.08	1.96
GFI	.93	.93
AGFI	.90	.91
NNFI	.95	.95
CFI	.96	.96
RFI	.91	.90
SRMR	.061	.060
RMSEA	.052	.049

In the structural model, the error variance of one item (Time2) appeared negative in the offline context. This is known as a Heywood case and can be solved by fixing the error variance to a positive value (Hair et al. 1998). In this case, the error variance was set equal to the error variance in the measurement model of the confirmatory factor analysis in which it was positive. By fixing the error variance, one degree of freedom is saved.

The models showed acceptable fit indices for the store and website (see Table 7.7). Table 7.8 and 7.9 show the unstandardized and standardized structural relationships and their *t*-values. For the offline context, the predictors account for 47.3% and 30.8% of the variance associated with offline and online purchase intentions, respectively. Next, the results also indicated that the predictors explained a reasonable amount of variation in offline perceived value (R^2=.448) and online perceived value (R^2=.378).

Table 7.8: Structural coefficients for the offline context for base model

Structural relationships offline context N=406	Unstandardized structural coefficient	Standardized structural coefficient	*t*-value	Hypothesis testing
Antecedents of Perceived value (R^2=.448)				
H2a: Service Quality → Perceived value	.17	.17	2.52	Supported
H3a: Merchandise Quality → Perceived value	-.01	-.02	-.35	Not supported
H4: Price → Perceived value	-.45	-.58	-6.57	Supported
Antecedents of Purchase intentions (R^2=.473)				
H1: Perceived value → Intentions	-.04	-.02	-.42	Not supported
H5: Perceived risk → Intentions	.06	.03	.62	Not supported
H6: Time/effort costs → Intentions	-.37	-.28	-5.75	Supported
H7: Enjoyment → Intentions	.34	.28	4.87	Supported
H2b: Service quality → Intentions	.31	.17	2.36	Supported
H3b: Merchandise quality → Intentions	.29	.27	5.03	Supported
Antecedent of Risk (R^2=.116)				
H2c: Service quality → Perceived risk	-.30	-.34	-4.57	Supported
Antecedents of Enjoyment (R^2=.297)				
Service quality → Enjoyment	.61	.42	6.07	-
Merchandise quality → Enjoyment	.17	.21	3.56	-
Antecedent of Time/effort costs (R^2=.112)				
Merchandise quality → Time/effort costs	-.27	-.33	-6.03	-

Note: Based on one-tailed tests, *t*-values greater than 1.65 are significant at $p<.05$; *t*-values greater than 2.33 are significant at $p<.01$.

The hypotheses were tested through one-tailed *t*-tests at a significance level of .05. In both contexts, three out of ten proposed relationships appeared insignificant. In both contexts, merchandise quality was not a predictor of perceived value, and perceived value did not predict purchase intentions. For the offline context, perceived risk did not affect purchase intentions, whereas in the online context merchandise quality did not have a direct impact on intentions. Of particular interest was the robustness of the three added relationships that were required to reach acceptable fit indices in the first study. The three relationships were found to be significant again for the online and offline context. Thus, support was found for the robustness of the added relationships.

Table 7.9: Structural coefficients for the online context for base model

Structural relationships online context N=406	Unstandardized structural coefficient	Standardized structural coefficient	*t*-value	Hypothesis testing
Antecedents of Perceived value (R^2=.378)				
H2a: Service quality → Perceived value	.21	.16	1.80	Supported
H3a: Merchandise quality → Perceived value	.03	.03	.48	Not supported
H4: Price → Perceived value	-.45	-.50	-5.45	Supported
Antecedents of Purchase intentions (R^2=.308)				
H1: Perceived value → Intentions	-.06	-.04	-.65	Not supported
H5: Perceived risk → Intentions	-.11	-.11	-1.72	Supported
H6: Time/effort costs → Intentions	-.19	-.17	-2.63	Supported
H7: Enjoyment → Intentions	.32	.24	3.52	Supported
H2b: Service quality → Intentions	.38	.20	1.92	Supported
H3b: Merchandise quality → Intentions	.11	.09	1.20	Not supported
Antecedent of Risk (R^2=.167)				
H2c: Service quality → Perceived risk	-.74	-.41	-5.46	Supported
Antecedents of Enjoyment (R^2=.306)				
Service quality → Enjoyment	.66	.47	5.06	-
Merchandise quality → Enjoyment	.13	.14	1.97	-
Antecedent of Time/effort costs (R^2=.226)				
Merchandise quality → Time/effort costs	-.52	-.48	-8.40	-

Note: Based on one-tailed tests, *t*-values greater than 1.65 are significant at $p<.05$; *t*-values greater than 2.33 are significant at $p<.01$.

In both contexts, perceived value was determined by price (β_{store}=-.45/$\beta_{website}$=-.45) and service quality (β_{store}=.17/$\beta_{website}$=.21), but not by merchandise quality. Customers do not consider merchandise quality in their evaluation of value for money. Again, the constructions of online and offline perceived value appeared similar.

Merchandise quality, service quality, time/effort costs, and enjoyment directly impacted offline purchase intentions. Service quality, time/effort costs, enjoyment and risk affected online purchase intentions. Remarkably, merchandise quality did not impact the intentions to shop through the website. Most of the respondents agreed that the website offers a

good assortment (i.e. there is little variation in merchandise quality)[34]. However, not all of the respondents have strong intentions towards buying through the website. Hence, for the customers an increase in merchandise quality does not lead to an increase in purchase intentions.

Like in Study 1, the value for money consumers receive did not alter consumers' purchase intentions to buy through a particular channel[35]. The shopping experience costs and benefits, on the other hand, substantially impacted the intentions to shop through the website and store. Enjoyment (β_{store}=.34/$\beta_{website}$=.32) and time/effort costs (β_{store}=-.37/$\beta_{website}$=-.19) had a strong direct influence on the online and offline purchasing intentions. Risk only appeared to be a predictor of purchase intentions in the online context ($\beta_{website}$=-.11); compared with Study 1, risk played a less significant role in the second study. An explanation for this finding is that the respondents in the second study all had prior online shopping experience and may be less affected by risk, as they possess a stronger internal locus of control (cf. Hoffman et al. 2002).

Table 7.10 shows the total effects of the predictors on the online and offline purchase intentions. The total effects were similar to those of the first study. Again, service quality, merchandise quality, time/effort costs and enjoyment were the dominant predictors of purchase intentions in each context. A comparison of the unstandardized coefficients indicates that customers use corresponding criteria to determine online and offline purchase intentions. The standardized effects showed that offline purchase intentions were most strongly affected by merchandise quality (.42), service quality (.29), time/effort costs (-.28), and enjoyment (.28). Online purchase intentions were most strongly influenced by service quality (.46), enjoyment (.24), merchandise quality (.20), and time/effort costs (-.17). Like in Study 1, service quality had the strongest impact on purchase intentions, underlining the pivotal role it plays after a website presence has been established (cf.

[34] An investigation of the items pertaining to merchandise quality shows that approximately 70% of the respondents attribute a score of 6 or higher on each item.

[35] The models were again tested without the direct relationships of merchandise quality and service quality on purchase intentions. In the second study, the relationships between perceived value and purchase intentions remained insignificant in each context, confirming the weak influence of perceived value on purchase intentions.

Parasuraman et al. 2005). In the online context, it is thus essential to keep your promises, to provide high-quality additional services and to respond quickly to customer inquiries.

Table 7.10: Total (standardized) effects on purchase intentions for base model

	Store N=406				Website N=406			
Total effects on purchase intentions	Total effects	Direct effect[a]	Indirect effect	Total standar-dized effect[b]	Total effects	Direct effect[a]	Indirect effect	Total standar-dized effect[b]
Service quality	.49	.31	.18	.29 (2)	.66	.38	.23	.36 (1)
Merchandise quality	.45	.29	.16	.42 (1)	.25	.11[n.s.]	.14	.20 (3)
Price	.02	-	.02	.01 (7)	.03	-	.03	.02 (7)
Enjoyment	.34	.34	-	.28 (4)	.32	.32	-	.24 (2)
Time/effort costs	-.37	-.37	-	-.28 (3)	-.19	-.19	-	-.17 (4)
Risk	.07	.07[n.s.]	-	.03 (5)	-.11	-.11	-	-.11 (5)
Perceived value	-.04	-.04[n.s.]	-	-.02 (6)	-.06	-.06[n.s.]	-	-.04 (6)

Notes:

a. N.s. represents coefficients of direct effects that are not significant from zero at .05 based on one-tailed tests.

b. Figures between brackets indicate the ranking of each factor in explaining the endogenous latent variable.

Similar to the findings of Study 1, service quality had strong indirect effects on online and offline purchase intentions by altering perceptions of enjoyment and risk. Merchandise quality also demonstrated strong indirect effects, albeit they were less strong than the indirect effects of service quality. The results confirm that service quality and merchandise quality impact intentions beyond their direct impact.

Finally, the strong impact of enjoyment on purchase intentions in each context was replicated in the second study, although its effects were a bit less strong than in the first study. This decrease in importance can be explained as the act of buying management books tends to be less hedonic than the act of buying leisure books. An alternative

explanation relates to the type of respondents; in the first study offline buyers (i.e. those with no direct online shopping experience) were strongly affected by enjoyment in the online context, because of the lack of enjoyment. Those with direct online shopping experience, on the other hand, were not strongly affected by enjoyment. The respondents in the second study all shopped through the website once, and this might explain why they are less affected by enjoyment in the online context compared to those in Study 1. After addressing the total effects, the following section provides the formal tests regarding the relative strength of specific relationships that are expected to differ across contexts.

A. Testing the relative importance of criteria in the online and offline context

As outlined in the previous chapter, configural and metric invariance need to be established prior to testing structural relationships. After the omnibus test showed that the covariance matrices were not invariant, subsequent analyses were necessary to find the source of nonequivalence. The results indicated that full configural invariance was established, as the same pattern of salient and nonsalient lambdas was found. Moreover, the stacked model with 309 degrees of freedom (155 *df* for offline context, 154 *df* for online context) showed reasonable fit indices (χ^2/df= 2.02, GFI=.93, CFI=.96, NNFI=.95, RMSEA=.035). Then, the metric invariance test showed that the model fitted well with the hypothesized model, after imposing the measurement items to be equal (χ^2/df= 2.05, GFI=.93, CFI=.96, NNFI=.95, RMSEA=.036). In addition, the NNFI did not drop more than .01. However, the χ^2 difference test with 12 degrees of freedom appeared significant ($p<.001$). Nine out of twelve items appeared invariant (see Appendix III) and were set to be equal across contexts. Next, the hypotheses regarding the strength of structural relationships were tested (Hypotheses 12-15). More specifically, it was tested whether time/effort costs, perceived risk and merchandise quality had a stronger effect on purchase intentions, and whether enjoyment had a less pronounced effect in the online context. As a start, it was tested whether all structural coefficients were invariant across contexts. The chi-square difference test with 13 degrees of freedom appeared to be significant ($p<.001$), indicating that not all structural path coefficients were invariant. Next, to identify the source of nonequivalence, each separate relationship was constrained and set to be free (Byrne 2001). The difference in chi square with 1 degree of freedom was used to investigate whether the strength of relationship differed online versus offline (cf. Childers et al. 2001; Einwiller 2003). Just as in the first study, none of the four hypotheses were supported (see Table 7.11). The

strength of the relationship between time/effort costs and purchase intentions was not significantly different across contexts (β_{store}=-.36/$\beta_{website}$=-.20, p=.121). Next, there was no significant difference between the strength of relationships between enjoyment and purchase intentions (β_{store}=.37/$\beta_{website}$=.28, p=.366). Although risk played a stronger role online, the difference was not significant (β_{store}=.09/$\beta_{website}$=-.11, p=.106). Finally, merchandise quality did not have a stronger direct effect on purchase intentions in the online context (β_{storee}=.29/$\beta_{website}$=.11, p=.077). In contrary, merchandise quality seemed to more strongly impact intentions in the offline context, although this difference was just not significant. This unanticipated finding can be explained through the asymmetric impact of negative and positive attribute-level performance on purchase intentions (Mittal, Ross and Baldasare 1998). The asymmetric impact implies that a negative performance on an attribute has a greater impact on purchase intentions than a positive performance on that same attribute. Thus, customers are more strongly affected by negative performance than positive performance. For the respondents (i.e. the customers of the website) the store lacks a good assortment (see section 7.3), and this strongly reduces their offline purchase intentions. Hence, an increase in the merchandise quality of the store would strongly increase their offline purchase intentions.

The only structural relationships that significantly differed between contexts were (1) merchandise quality → time/effort costs, and (2) service quality → perceived risk. These two findings were also found in Study 1, giving additional support for these differences in the strength of these relationships. An examination of the coefficients (see Table 7.11) shows that in the online context service quality more strongly reduced risk than in the offline context. In addition, merchandise quality more strongly reduced time/effort costs in the online context, implying that improvements in merchandise quality in the online context lead to major time/effort savings.

Table 7.11: Tests of invariant structural relationships offline versus online context

	Hypothesis	Structural coefficient offline context[a,b]	Structural coefficient online context[a,b]	P-value	Hypothesis Testing
Time/effort costs → Intentions	H12: Stronger in online context	-.36	-.20	.121	Not supported
Enjoyment → Intentions	H13: Stronger in offline context	.37	.28	.366	Not supported
Perceived risk → Intentions	H14: Stronger in online context	.09[n.s.]	-.11	.106	Not supported
Merchandise quality → Intentions	H15: Stronger in online context	.29	.11[n.s.]	.077	Not supported
Service quality → Perceived risk	-	-.31	-.67	**.002**	-
Merchandise quality → Time/effort costs	-	-.27	-.52	**.001**	-

Notes:

a. Unstandardized structural coefficients marginally differ from those in Table 7.8 and 7.9 due to the equality constraints of the factor loadings.
b. N.s. represents coefficients that are not significant different from zero at .05.

B. Testing the moderating effect of prior online shopping experience in the online context

As discussed in Chapter 5, the second study is not possible to distinguish between those with direct experience and those who have not shopped through the website. To test for the moderating effect of prior experience, this study discerned between less experienced online buyers (offline buyers) and more experienced online buyers (online buyers) based on the number of online purchases other than books; less experienced online buyers had shopped online 6 times or less, whereas experienced online buyers had shopped more than 6 times. The samples included 168 less experienced buyers and 226 experienced online shoppers.

To evaluate the moderating influence, the two subgroups were evaluated in terms of their unstandardized structural coefficients. The two separate baseline models had acceptable fit indices for the less experienced and experienced online buyers, respectively (χ^2/df= 1.44/1.59, GFI=.89/.91, CFI=.95/.95, RMSEA=.051/.051). After the omnibus test showed that the covariance matrices were not equivalent, configural invariance was examined. The stacked model with 308 degrees of freedom showed reasonable fit indices (χ^2/df= 1.51, GFI=.90, CFI=.95, NNFI=.94, RMSEA=.036), indicating that full configural invariance was established. Next, the metric invariance test showed that the model still fitted the data well after constraining the lambdas to be equal (χ^2/df= 1.52, GFI=.89, CFI=.95, NNFI=.94, RMSEA=.036). Moreover, the χ^2 difference test appeared insignificant ($\Delta\ \chi^2$=18.80 with 12 *df*, p>.05). From a practical perspective, it was also found that the factor loadings were equal, as the NNFI did not decrease more than .01 when the equality constraints were imposed (Little 1997). Consequently, the structural invariance tests were performed after configural and metric invariance were established. Table 7.12 displays the results of the hypotheses and two nonhypothesized significant differences.

In this study, experienced online shoppers unexpectedly appeared to be more strongly –but not significantly– affected by risk than those with less experience; hence, there was not support for Hypothesis 17. Statistical support was found that experienced online buyers rely more strongly on time/effort savings than those who have lesser experience. Therefore, H18 was supported. Similar to the findings of the first study, those with less online experience were more concerned with the level of enjoyment than those with more experience; this time, however, the difference was not statistically significant. Consequently, Hypothesis 19 could not be confirmed.

One nonhypothesized significant difference appeared that was also significant in the first study: service quality is more important to less experienced buyers than to more experienced online buyers. This is likely due to the strong reliance on the aspect of reliability/fulfillment. Experienced online shoppers can more easily rely on their prior experiences, and they are less likely to question whether e-tailers keep their promises. If e-tailers succeed in improving online service quality perceptions, it will strongly stimulate online purchase intentions for less experienced online buyers.

Table 7.12: Tests of invariant structural relationships offline versus online buyers

	Hypothesis	Structural coefficient offline buyers	Structural coefficient online buyers	P-value	Hypothesis testing
Perceived risk → Intentions	H17: Attenuated by prior online shopping experience	-.08 n.s.	-.19	.136	Not supported
Time/effort costs → Intentions	H18: Strengthened by prior online shopping experience	.05 n.s.	-.34	**.009**	Supported
Enjoyment → Intentions	H19: Attenuated by prior online shopping experience	.46	.21	.150	Not Supported
Service quality → Intentions	-	.72	-.06 n.s.	**.048**	-

Note: N.s. represents unstandardized coefficients that are not significant from zero at a .05 significance level based on one-tailed tests.

7.7 Stage 5: Discussion of findings

The second study provided support for the validity of the base model. A significant proportion of variance in channel purchase intentions was explained and most relationships that were found to be significant in the first study were confirmed by the data in the second study (see Appendix VII for an overview of the hypotheses). Of the 10 paths that were statistically significant in the *offline context* in Study 1, 9 were also significant in Study 2. The relationship between risk and intentions was significant in the first study, but not in the second. In addition to this, service quality had a direct impact in the offline context in the second study, whereas it did not in the first. Of the 12 paths that were significant in the *online context* in Study 1, 10 were significant in Study 2. Two paths

regarding merchandise quality (i.e. merchandise quality → perceived value and merchandise quality → intentions) were significant in Study 1, but became insignificant in Study 2, probably due to the reasons discussed in section 7.6.

Similar to the first study, purchase intentions were predominantly defined by service quality, merchandise quality, enjoyment and time/effort costs. The results confirmed that enjoyment plays a significant role in shaping purchase intentions. Service quality and merchandise quality again had strong indirect effects in each context. Again, price and perceived value did not directly or indirectly alter purchase intentions in either context. It seems that altering the value for money through price reductions hardly stimulates consumers to use a particular channel. Financial incentives are less suited as a means to motivate them to use a particular channel.

Similar to the findings of the first study, customers did not appear to differ in their strength of motivations (i.e. risk, time/effort costs, enjoyment and merchandise quality) regarding the online and offline context. However, the same two significant differences regarding the strength of relationships in the first study appeared to be significant in the second study. In the online context service quality stronger reduced risk, and merchandise quality stronger affected time/effort costs. Overall, the results confirmed the similarity in the construction of online and offline perceived value and purchase intentions across contexts. Customers do not significantly differ in the weights they attribute to the factors, but rather attribute different scores to the performance of each channel on these factors.

The second study used a different approach to measure the moderating influence of prior online experience; the second study used a split sample based on the number of online purchases, whereas the first study based it on whether or not customers had prior shopping experience with the bookseller's website. To the extent that the results are comparable, the findings of the second study confirm that the influence of prior experience is relatively small. Again, the lack of enjoyment seems to harm those with less experience to a greater extent than those with more experience. The result was, however, not significant. Next, in line with the expectations, the second study showed that the more experienced shoppers rely more heavily on the time/effort costs than those with less experience. Finally, experienced and less experienced online buyers were equally affected by the level of risk.

8 Discussion and Implications

8.1 Introduction

The purpose of this study is to develop and test a model that enhances our understanding of how consumers evaluate online and offline channels for their purchasing. The literature was reviewed to reveal the determinants of channel choice from a consumer perspective. E-Commerce literature largely neglected the issue of channel choice, and merely focused on explaining online channel adoption and online purchasing. Hence, it predominantly investigated the online channel in isolation of the offline channel, and thereby did not make explicit the choices consumers have and the tradeoffs they make. There is, however, a stream of research that focuses on channel choice by investigating the determinants of channel preference. This stream argues that channel choice is rather complex and is influenced by an interplay of consumer, retailer, product, channel and situational factors (cf. Black et al. 2002). A downside of this type of research is that it often uses rather abstract factors and treats channels as such; neglecting the fact that retailers' offerings within a channel may differ. This study prolongs this type of research by investigating the motivations to use specific online and offline retail outlets in a side-by-side evaluation. It identified the criteria consumers consider when forming their online and offline purchase intentions at a *store* level rather than at a *channel* level. Channel factors influence the decision to buy online or offline, but consumers buy their products from retailers not from channels. As a consequence, this study focuses on the retailer and channel factors based on the notion that *what* and *how* the product is delivered largely explains consumer purchasing behavior (cf. Grönroos 1982; Parasuraman et al. 1985; 1988). To control for the influence of product-channel interactions, one product was chosen: books. For this product, consumers have a real option to choose between offline and online booksellers. The influence of consumer factors was expected to be captured by changes in the perceptions consumers have towards the channels. Consumers are expected to evaluate channels in

terms of their benefits and costs (Verhoef et al. 2005). The concept of perceived value is chosen, as it represents a tradeoff between all perceived costs and benefits, and therefore enables comparisons between the two seemingly different shopping experiences. Moreover, it has been shown that perceived value is capable of predicting purchase intentions for offline and online stores (e.g. Baker et al. 2002; Chen and Dubinsky 2003). The relative importance of the predictors of online and offline perceived value and purchase intentions are used to infer the main motivations to shop online or offline. Differences in the strength of relationships indicate whether certain factors play a more dominant role in either context. In addition to this, it is also investigated whether there are differences in the strength of online shopping motivations between experienced and less experienced online shoppers, as past research suggested that consumers' value construction changes with increasing experience (Parasuraman 1997) and that online shoppers differ from offline shoppers in their evaluative processes (Parasuraman et al. 2005).

The research questions are:

1. What are the antecedents of online and offline perceived value and purchase intentions?
2. Do the effects of the antecedents of perceived value and purchase intentions differ between channels?
3. Do the effects of the antecedents of perceived value and purchase intentions differ between experienced and less experienced online shoppers?

To answer the first research question, the well-known predictors of value and intentions are investigated. In contrast to past literature addressing the uniqueness of the Internet and online shopping (e.g. Chen and Dubinsky 2003; Lim and Dubinsky 2004), the current study claims that online and offline shopping are evaluated by the same criteria –when they are measured at the consequence level (see section 2.6). In other words, the criteria used in traditional value models are applicable to the online context. Based on a synopsis of the marketing, innovation/adoption (Chapter 2), and perceived value literature (Chapter 3), six purchase-related costs and benefits are identified that are likely to affect channel purchase intentions: service quality, merchandise quality, monetary price, psychological costs (perceived risk), time/effort costs and enjoyment. The conceptual framework (Chapter 4) models these factors and adds the construct value for money, which is hypothesized to be

determined by service quality, merchandise quality and price. The model is empirically tested in a main study and a replication study.

The results of the two studies show that in both contexts four factors play a dominant role in explaining online and offline purchase intentions: service quality, merchandise quality, enjoyment and time/effort costs. Perceived risk, price and value for money are of lesser importance in explaining channel purchase intentions. In both contexts, the construct of value for money, is largely determined by price and service quality but not by merchandise quality. Service quality and merchandise quality also have strong indirect effects through altering the shopping experience costs and benefits. Consumers associate higher service quality with lower risk perceptions and more enjoyment, whereas they associate higher merchandise quality with time/effort savings and more enjoyment.

The second research question addresses whether particular factors play a more profound role in either context. It is hypothesized that in the online context time/effort costs, perceived risk and merchandise quality have stronger direct effects on purchase intentions, and that enjoyment has a less pronounced direct effect on intentions relative to the effects in the offline context (see section 4.2.1). In both studies, the strengths of the tested relationships appear similar across contexts. For example, the construction of value is equal across contexts, and consumers consider the same criteria to form their online and offline value perceptions. Only two nonhypothesized relationships differ in strength across the online and offline context: in the online context, service quality more strongly reduces risk, and merchandise quality more strongly reduces time and effort costs. Apart from testing the invariance of structural relationships, this study also investigates the total (standardized) effects of the exogenous factors on the endogenous factors, incorporating both direct and indirect effects. There appear no clear differences in the factors' total effects between the online and offline context. The only exception is service quality, which has a slightly more pronounced effect in the online context; in both studies, service quality is the strongest influencer of online purchase intentions, whereas it is the second-strongest influencer of offline purchase intentions.

Overall the results indicate that consumers consider the same factors to the same extent to determine their online and offline perceived value and purchase intentions, but they differ

in the scores they attribute to the channels. From the item analyses in Study 1, it became clear that *online buyers* perceive the online channel to outperform the offline channel mainly in terms of time/effort expenditures[36]. When they shop online, they trade off the time/effort savings against lower service quality, less enjoyment, more risk, and higher prices. Next, the perceptual difference between the performance of the online and offline channel appeared much smaller for online buyers than for offline buyers. The reason why online buyers attribute higher scores to the website than offline buyers may originate from the direct experience itself (e.g. from prior positive experiences that enhance self-confidence and illustrate the rewards, through learning effects, by reducing cognitive dissonance) or arise from differences in customers' needs and capabilities (e.g. information processing, technology readiness). For example, with respect to information processing, some have a high need for personal interaction, whereas others prefer nonsocial information (cf. Alba et al. 1997; Meuter et al. 2005). Moreover, some are better capable of using the Internet as they are more technology ready (cf. Parasuraman 2000; Meuter et al. 2005). These needs and capabilities also affect customers' perceptions of using channels.

To answer the third research question, it is investigated whether there are differences between the strength of motivations of experienced and less experienced shoppers (i.e. between offline and online buyers). Parasuraman (1997) argued that value is a dynamic construct and that customers may differ in their evaluative criteria as they gain experience. Next, Parasuraman et al. (2005) suggested that online buyers may use different evaluative criteria to form perceptions of quality than offline buyers. Specific relationships are expected to differ in their strength between online and offline buyers for the online context (see section 4.2.2). Overall, the results suggest that the moderating influence of prior online experience on these relationships is limited. In the first study, buyers who had experience with shopping through the website rely less strongly on enjoyment, but they do not rely less on risk and more on time/effort costs compared with those that had no experience[37]. For these less experienced online buyers, perceptions of the enjoyment in the online context are more dispersed, and a lack of enjoyment strongly attenuates their online

[36] In Study 2, the respondents indicated that the website, in addition, outperformed the store in terms of merchandise quality, price, and perceived value.
[37] The results indicate that online buyers are less affected by risk and more strongly rely on time/effort expenditures than offline buyers do. However, the differences in the strength of relationships are not significant (see section 6.6.2).

shopping intentions. The second study finds that those with more prior online shopping experience tend to rely less strongly on enjoyment; however, this difference was not statistically significant. On the other hand, the second study shows that more experienced online shoppers are more concerned with the time and effort costs in the online context than those with less online shopping experience. In addition to this, one relationship, which is not a priori hypothesized, differs between experienced and less experienced online buyers in both studies: compared with experienced online buyers, less experienced buyers are more strongly influenced by the level service quality in determining their intentions (see Appendix VII).

The base model is extended with three factors (ease of use, informativeness and reputation) which the E-Commerce literature identified as dominant predictors of online shopping. Ease of use and reputation clearly impact intentions in the online context, but also play a substantial role in explaining offline purchase intentions. When customers find the shopping process to be more convenient, it significantly reduces their risk perceptions (particularly in the online context) and time/effort costs, but also increases enjoyment. Reputation has strong effects on perceptions of merchandise and service quality in each context. In the online context, the website's reputation also has a strong direct impact on purchase intentions, confirming the importance of having a reputable website (Swaminathan et al. 1999). Informativeness does neither reduce risk perceptions, nor does it lead to time/effort savings. Note that although there is sufficient support for the proposed relationships, the results of the added factors remain tentative, as they are simply added to the existent perceived value model. It is desirable to test the effect of the three factors in less complex models.

8.2 Theoretical implications

As mentioned in Chapter 1, scholars still address the need to increase our understanding of how consumers evaluate channels for their purchasing. This research aims to enhance our understanding of channel choice by investigating the motivations to use specific online and offline retail outlets in a side-by-side evaluation. Particularly, the following findings of this study are noteworthy.

Study uses side-by-side evaluation to reveal relative importance of criteria.

This is one of the first studies using a side-by-side evaluation of channels from a consumer perspective. Only a few of the most recent advances consider both channels simultaneously (Gehrt and Yan 2004; Keen et al. 2004; Montoya-Weiss et al. 2003; Shankar et al. 2003), as opposed to the adoption paradigm which treats the online channel in isolation of other channels. This side-by-side comparison contributes to a better understanding of channel choice, as it makes explicit the choices consumers have and the tradeoffs they make. Next, to the author's best knowledge, this is the first study that takes into account the *construction* of online and offline perceived value and purchase intentions in a side-by-side approach. In doing so, this study does not only determine the importance of the antecedents of perceived value and purchase intentions *within* each channel, but also *across* channels. As a result, it is possible to define which criteria play a more profound role in either channel. In sum, this approach provides researchers valuable information about the relative strengths of each channel and the (relative) importance of criteria.

Study measures customers' perceptions at store level to account for differences in retailers' offerings.

This research contributes to the marketing literature by examining the issue of channel choice at a *store* level rather than at a *channel* level. Several studies investigated the issue of channel choice by treating channels in its entirety without accounting for differences in retail performance (Girard et al. 2003; Keen et al. 2004; Spence et al. 1970). The present study overcomes this limitation by investigating the consumers' perceptions of specific websites and stores. Next, this study uses actual customers; a number of studies focusing on perceived value used students in experimental settings (e.g. Baker et al. 2002; Dodds et al. 1991). Consequently, more realistic and natural settings are created, which are critical for understanding consumers behavior (cf. Sweeney et al. 1999).

Study includes the moderating effect of prior online shopping experience.

This study extends current E-Commerce studies by investigating the moderating influence of prior online shopping experience. As such, it investigates the differences in the strength of motivations to shop online between experienced and less experienced online buyers. Drawing upon insights from prior perceived value research (Parasuraman 1997; Woodruff 1997) and E-Commerce studies (Einwiller 2003; Hoffman et al. 2000; Lohse et al. 2000; Wolfinbarger and Gilly 2001), the importance of several criteria are hypothesized to

change with increasing experience. Only a few studies (e.g. Anderson and Srinivasan 2003; Einwiller 2003) empirically tested the moderating effect of prior online experience. Although this study finds a moderate influence of the level of prior online on the strength of relationships in the online context, it provides meaningful insights for researchers and practitioners.

The concept of perceived value can be successfully applied to explain channel purchase intentions.

This study also demonstrates that the *concept of perceived value* (i.e. tradeoff between all salient purchase-related costs and benefits) can be used to explain channel purchase intentions. The effect of the *construct value for money* on channel purchase intentions is, however, very limited. The research model explained a substantial part of the variance in channel purchase intentions. Additionally, this study confirms that consumers evaluate retailers on more aspects than just price and quality (e.g. Bolton and Drew 1991; Kerin et al. 1992). The perceived benefits and costs consumers consider include both cognitive and affective elements (Sweeney and Soutar 2001), and process and outcome elements (Grönroos 1982; Parasuraman et al. 1985; 1988). In conformance with earlier findings (Baker et al. 2002; Dodds et al. 1991; Sirohi et al. 1998), price appears to be the strongest predictor of the construct of value for money. As expected, service quality also proves to be a consistent predictor of value for money (Bolton and Drew 1991; Sweeney et al. 1999). Contrary to what the extant perceived value literature finds (e.g. Baker et al. 2002; Kerin et al. 1992; Sirohi et al. 1998), this study does not find a consistent relationship between merchandise quality and perceived value. Possible explanations for this finding are (1) that customers rely heavily on the tangible aspects of what they receive for the price they pay when making these value-for-money judgments and (2) that the retailer's merchandise in this study consists of undifferentiated products (i.e. the quality of books differ marginally across booksellers). For retailers that offer differentiated products, merchandise quality is more likely to be a predictor of the value for money customers receive from retailers. Retailers offering differentiated products have more opportunities to differentiate their assortment from competitors, and, consequently, are more likely to create additional value for customers through altering the assortment. Another somewhat surprising result is that consumers are not strongly concerned with the value for money they receive; in determining their online and offline purchase intentions, consumers tend to be

predominantly affected by service quality, merchandise quality, time/effort costs and enjoyment, but not by value for money.

Apart from the above findings, three empirical results stand out that provide new insights and/or contribute to a better understanding of how channel purchase intentions are constructed in each context.

- *Enjoyment is a distinct and important antecedent of purchase intentions.* The results show that enjoyment plays an important role in explaining intentions to buy books offline and online. Enjoyment is distinct from the shopping experience costs (time/effort and psychological costs), and has a genuine effect on purchase intentions in the online and offline context. Even though a majority of the perceived value studies has ignored enjoyment as important antecedent of intentions, the findings clearly show that it plays a prominent role for customers in their channel evaluation. This finding is consistent with recent research showing that the emotional aspects of the consumption play an important role in defining the value perceptions of consumers (Sweeney and Soutar 2001).
- *Merchandise quality and service quality have strong indirect effects.* An important finding is that service quality and merchandise quality have strong indirect effects in each context. Similar to prior studies (Baker 1987; Mitchell and McGoldrick 1996; Sweeney et al. 1999), service quality persistently and strongly reduces risk perceptions. In the offline context, seeking advice from salespersons is often found to be a risk reduction strategy (Sirdeshmukh et al. 2002; Sweeney et al. 1999), whereas in the online context service quality may reduce risk as the result of more favorable perceptions towards a retailer's reliability, return handling and problem solving (Wolfinbarger and Gilly 2003). The findings of this study confirm that service quality is an effective means to reduce customers' risk perceptions in the online and offline context. Next, the results offer new insights that service quality also indirectly impacts online and offline purchase intentions through altering perceptions of enjoyment. Although the relationship is not a priori hypothesized, strong empirical support is found for the positive effect of service quality on enjoyment. It is likely that customers find the shopping process more enjoyable when a retailer treats them well/courteously, keeps its promises and shows sincere interest in fulfilling their individual needs (cf. Parasuraman et al. 1985; Wolfinbarger and Gilly 2003). Even in the online context, where customers have

limited opportunities to interact with service personnel, it appears that an increase in service quality leads to more enjoyment. The results also provide additional insights about the indirect effects of merchandise quality. Merchandise quality indirectly impacts online and offline purchase intentions through altering perceptions of time/effort costs and enjoyment. Customers will save time and effort when retailers offer a better assortment of books. This effect is particularly pronounced in the online context. Merchandise quality is also positively associated with enjoyment in each context; the strength of this relationship is somewhat more articulated in the offline context (Study 1 β=.31/Study 2 β=.22) than in the online context (Study 1 β=.22/Study 2 β=.13), but the differences are not statistically significant. The former results suggest that offering the right assortment in the offline context particularly leads to hedonic benefits (fun browsing, inspiration, diversion), whereas in the online context it predominantly leads to utilitarian benefits (time/effort savings).

- *Information relevancy plays a minor role in explaining purchase intentions.* Much has been written about the importance of providing relevant information to customers, especially in the field of E-Commerce (Chen and Dubinsky 2003; Szymanski and Hise 2000; Wolfinbarger and Gilly 2001; Zeithaml et al. 2000). Montoya-Weiss et al. (2003) found that information content reduced security risk perceptions. This study does not find clear evidence that providing information that is more relevant has a profound impact on online or offline purchase intentions through risk reductions and time/effort savings. However, it is important to note that informativeness is highly correlated with ease of use ($\varrho_{offline}$=.62, ϱ_{online}=.74); it appears that ease of use explained most of the variance in the endogenous factors, but that the shared variance between the constructs of informativeness and ease of use is relatively high (in the range of 38%-55%). Thus, it seems that informativeness overlaps with search convenience (Seiders et al. 2000) and variations are captured by ease of use. Another reason for the limited role of informativeness in this study is the context-specific nature of information relevancy (Montoya-Weiss et al. 2003). In low-risk situations, customers are more likely to use simple heuristics, for example genre or author's reputation, to simplify their choice (cf. Gigerenzer et al. 1999; Simon 1976), and, hence, they do not rely heavily on the quality of information provided by either channel.

8.3 Comparison with other E-Commerce studies

As the online context is relatively new, it is interesting to compare the results of this study with other E-Commerce studies. The seminal papers of Parasuraman et al. (2005), and Wolfinbarger and Gilly (2003) will be predominantly used to compare the relative importance of the factors in explaining online purchase intentions. Parasuraman et al. (2005) developed a multiple-item scale for measuring the service quality delivered by transaction websites. The core scale consists of four dimensions: efficiency, fulfillment, system availability, and privacy. The authors related these four dimensions to quality, perceived value and loyalty intentions[38] and found that efficiency and fulfillment were the two dominant predictors for each endogenous construct. System availability and privacy played an insignificant role in explaining the endogenous constructs. Wolfinbarger and Gilly (2003) also found four factors that define online service quality, including website design (i.e. in-depth information, efficiency, personalization and selection), fulfillment/reliability, privacy/security, and customer service. They also related these dimensions to the well-known endogenous factors and found similar results. Website design and fulfillment/reliability had the strongest effects on overall quality, satisfaction and loyalty intentions, whereas customer service and privacy/security had less strong effects. The authors suggested that customer service was mildly related with the endogenous factors, as customers do not need customer service in each online transaction. To the extent that the concepts used overlap with this study[39], the results about the relative importance of dimensions of the two studies are similar to this study's findings. This study also finds evidence that service quality (including the reliability/fulfillment aspect) and time/effort costs[40] play a pivotal role in shaping online purchase intentions. Next, the

[38] The construct of loyalty intentions used in the study of Parasuraman et al. (2005) was similar to this study's construct of purchase intentions.

[39] This study, for instance, does not distinguish between reliability/fulfillment and customer service like in the study of Wolfinbarger and Gilly (2003), but –based on the exploratory factor analyses– treats them as one construct: service quality. Moreover, sometimes, different items are used to measure the same constructs; for example, in the study of Parasuraman et al. (2005) perceived value also included perceived control and perceived convenience, whereas this study more strictly uses the items of prior perceived value studies (cf. Sirohi et al. 1998; Sweeney et al. 1999).

[40] The construct of website design includes items referring to time/effort savings and easy transactions.

limited role of privacy/security is affirmed in this study by the limited effect of perceived risk. This study does find that risk significantly alters purchase intentions (especially for offline buyers), but its effect is not substantial relative to the other factors. In line with other studies, this study finds –to a certain extent– that the limited effect can be explained by the level of experience of the respondents; experience generally mitigates concerns about privacy and security, as customers become familiar with websites and the online shopping process (Montoya-Weiss et al. 2003; Parasuraman et al. 2005; Wolfinbarger and Gilly 2003). Next, the low-risk context may explain the low impact of risk (Montoya-Weiss et al. 2003). An alternative explanation is that retailers have improved their performance, reducing the chances that something might go wrong. For instance, privacy/security and system availability were initially dominant influencers (cf. Forsythe and Shi 2003), as websites in the early phases varied widely in their performance. Now, system availability does not seem to be as important anymore as companies have invested in their websites. The privacy/security and system availability may currently act as *hygiene* factors rather than as *motivators* (cf. Herzberg, Mausner and Snyderman 1959); when websites do not provide a minimum level of system reliability and privacy/security, it leads to dissatisfaction and prevents consumers from visiting and shopping through the website. They do not act as a motivational factors, i.e. an increase above the minimum level does not lead to satisfaction, more visits and higher purchase intentions.

Apart from the similarities, there are several important differences between this study and the two other studies. Most notably, this study focuses on the more generic determinants of online (and offline) purchase intentions, such as merchandise quality, service quality, price, whereas the other two studies focus on the more specific attributes pertaining to the website. This study is interested in the more general and rather enduring attributes that define offline and online shopping intentions. Concrete attributes (e.g. privacy, system availability) provide more specific insights into what constitutes e-quality, but they also tend to be more time-specific and may need to be replaced by new attributes (e.g. personalization). Next, the aim of the other two studies was to investigate the factors that define online service quality. Hence, both studies did not include price, as it was not seen as being part of e-quality. This study considers price and finds that it does not alter customers'

intentions to shop online[41]. Prior research also found mixed findings whether consumers are motivated to shop online for price savings (see section 2.2). Additionally, enjoyment was explicitly excluded in the study of Parasuraman et al. (2005, p. 229), as they argued that experiential aspects do not fall within the conceptual domain of service quality and because these aspects are distinct benefits that may not be relevant in all contexts. Wolfinbarger and Gilly (2003), on the other hand, did include experiential aspects (e.g. shopping fun, website attractiveness), which were subsumed under the broad and influential factor website design. Similar to the findings of Childers et al. (2001), this study finds that while the instrumental aspects are important, the more immersive, hedonic aspects play at least an equal role. Another difference with the study of Parasuraman et al. (2005) is that this study tests for the moderating effect of prior online experience. Wolfinbarger and Gilly (2003) did investigate the importance of criteria for different groups of buyers (e.g. experiential vs. goal-directed buyers, frequent vs. non-frequent buyers); however, they did not propose or formally test any moderating effects.

A final comparison is made with the study of Montoya-Weiss et al. (2003). They examined the determinants of online channel use with a multichannel service provider by addressing the relative channel assessment customers make (i.e. service quality in online channel versus service quality in alternative channel). They demonstrated that multiple channel evaluations can lead to competitive effects (higher service quality offline leads to lower online channel use) and complementary effects (offline and online service quality have positive effects on overall satisfaction). Together with the study of Montoya-Weiss et al. (2003), this study tried to measure customers' evaluations of using the online and offline channel simultaneously. Next, in accordance with the study of Montoya-Weiss et al. (2003), this study does not treat the channels in their entirety, but measures customers' evaluations for specific online and offline retailer outlets. Yet, the current study has some differences with the study of Montoya-Weiss et al. (2003). First, although perceived value from the competing channel is conceptualized to have a negative impact on purchase intentions in the corresponding channel, this study is not capable of modeling the effect (see section 6.4.2 and 7.4.2); therefore, the relative channel assessment was not possible in the current

[41] The respondents in the second study believe that the website delivers the books against lower prices than the store. However, these lower prices (leading to higher perceptions of value) are not associated with higher online purchase intentions.

study. Second, Montoya-Weiss et al. (2003) used a very limited set of explanatory variables (i.e. online/offline service quality, channel risk, and general Internet expertise) to explain channel use. They, for instance, omit the important shopping experience costs and benefits. Third, they only investigated the construction of online service quality, whereas this study investigates the construction of perceived value and purchase intentions in both contexts. As such, this study is able to elicit the relative importance of the predictors of value and intentions across contexts. Fourth, Montoya-Weiss et al. (2003) modeled and found that the level of prior Internet experience, being a distinct factor from the customers' channel evaluations, was a direct influencer of risk perceptions and online channel use. Similar to other studies (e.g. Dabholkar and Bagozzi 2002; Einwiller 2003; Mittal and Kamakura 2001), the current study assumes that the personal trait, level of prior online experience, acts as a moderator variable rather than as an independent predictor.

8.4 Managerial implications

Researchers and marketers have recognized the importance of consumers' value perceptions, and their influence on purchase intentions, actual purchases and the achievement of a sustainable competitive advantage (e.g. Bolton and Drew 1991; Cronin et al. 2000; Dodds et al. 1991; Holbrook 1994; 1996; Woodruff and Gardial 1996; Woodruff 1997; Zeithaml 1988). To better fulfill the consumers' needs to shop offline or online, it is necessary to understand what defines value (i.e. a tradeoff between all salient costs and benefits) and purchase intentions in each context. This study builds upon existent perceived value literature and brought about important findings that can help practitioners to increase customers' purchase intentions in the offline and online context. Marketers can benefit from this research by considering the following practical implications.

Customers consider the same four factors –service quality, merchandise quality, enjoyment and time/effort costs– to form their offline and online purchase intentions. The consistency of the importance of the four factors underscores the need for retailers to place additional emphasis on improving these factors. Retailers logically need to improve upon the more concrete attributes that are linked with these more abstract factors. Enjoyment appears to be a strong predictor of online and offline purchase intentions. The level of enjoyment can in both contexts be increased by increasing service quality and

merchandise quality. Next, ease of use appears to be a strong predictor of enjoyment, especially in the online context. Offline buyers do not find the website easy to use, which seriously harms their expected level of enjoyment in the online context (see Appendix IV). There is still much to improve for the offline buyers, as they experience a considerable lack of enjoyment online. In order to increase enjoyment in the online context, it is not wise to invest in purely entertaining features (e.g. audio, streaming video) (cf. Wolfinbarger and Gilly 2003). Most online transactions are still goal-directed and customers do not want to be distracted from their intended purchase. In addition, Childers et al. (2001) demonstrated that enjoyment in the online context was largely determined by the functional aspects of navigation, ease of use, and the Internet's capability to substitute for the absence of sensory inputs. Customers often require convenient access to the information they need, easy order systems and hassle-free product deliveries in order to experience enjoyable online shopping experiences. Physical stores are still better capable of providing diversion from the routines of everyday life, sensory stimulation, and social experience outside the home (Alba et al. 1997; Moye and Kincade 2002; Rosen and Howard 2000); they have the resources and opportunities to create purely enjoyable shopping experiences (cf. Pine and Gilmore 1999). Merchandise quality and service quality can first be improved in the online and offline context by investing in the reputation of the store and the website. Customers use reputation and other extrinsic cues to infer their perceptions of quality (Teas and Agarwal 2000; Zeithaml 1988); investments in websites to increase usability and professionalism will generally improve the website's reputation and inspire greater trust (Jarvenpaa and Tractinsky 1999), similar to investments in physical buildings and facilities engendering trust in the offline context (Doney and Cannon 1997). In the online context, merchandise quality is strongly tied with time/effort savings; there it is of concern to display the assortment in such a manner that consumers can find their book of interest quickly and comfortably. Search engines, an intuitive design, clear division of types of books (genres), and book recommendations/reviews may all enhance perceptions of merchandise quality leading to time/effort savings. In the offline context, merchandise quality seems to increase enjoyment through the stimulation of browsing behavior; the books need to be displayed so that customers can easily skim through their books of interest. Retailers should also invest in improving service quality –referring to the quality of the additional services, the retailer's willingness to help customers, and keeping promises– as it plays a substantial role in the offline context, and an even greater role in the online context. Evidenced by other

E-Commerce studies (Parasuraman and Grewal 2000; Parasuraman et al. 2005; Wolfinbarger and Gilly 2003), it is of major concern for online retailers to keep their promises. Especially, those with little online experience rely heavily on the retailer's reliability/fulfillment (see Table 6.13). If unexpectedly something goes wrong, retailers need to express their willingness to resolve problems, and customers need quick and easy access to service personnel (cf. Zeithaml et al. 2002). Finally, it is worthwhile to develop strategies to make the shopping process as convenient as possible, as time/effort costs are important predictors of intentions in each context. The results demonstrated that ease of use (i.e. convenience) is the dominant predictor of time/effort costs in each context (particularly in the online context). By delineating overall convenience in access, search, possession and transaction convenience more targeted strategies can be developed (Berry et al. 2002; Seiders et al. 2000).

Price and perceived value weakly influence online and offline purchase intentions. The results indicate that it is not worthwhile to motivate customers to use a particular channel by giving them financial incentives. This study does not want to make this point too strongly. At the point of sale (at the website or in the store), customers may be strongly motivated by a price reduction. This study conceptualized price as the retailer's general price level including sales promotions, but the additional value derived from getting a bargain –i.e. perceived transaction value– may not be fully captured by it. When the difference in price for a particular product exceeds a certain threshold, it is likely to affect customers' perceptions and behavior (Grewal et al. 1998a; Monroe 1990).

The survey can be used as a diagnostic tool to track customers' perceptions. Mono-channel retailers or e-tailers can investigate how well the website or store performs against competitors, while multichannel retailers may also determine how well the store performs vis-à-vis the website. As such, retailers are able to identify the relative strengths and weaknesses of their outlets. Next, retailers can simultaneously determine the relative importance of the criteria, which provide insights into how to effectively increase purchase intentions in each context. The relative strengths and relative importance of criteria together provide valuable information. In the second study, the specialist bookstore identified the relative advantage of having a superior assortment relative to the generalist bookstore. This superior assortment naturally acts as a unique selling proposition for the

specialist bookseller that may attract new buyers and motivate current buyers to shop online. However, based on the relative importance of criteria, merchandise quality was not identified as a key motivating factor to shop online; an improvement in merchandise quality would not lead to higher purchase intentions. To persuade customers with low online purchase intentions to shop online, it was necessary to improve other key influencers of purchase intentions –i.e. service quality, enjoyment, and time/effort costs. Thus, for the specialist bookseller, it seems appropriate to communicate its relative strengths, while improving on the other predictors. By tracking scores over time, it is possible to investigate whether the performance and importance of the criteria change. When performance falls, more specific studies may be necessary to pinpoint the deficiencies. Apart from the benefits of better understanding and addressing the customers' needs, surveying customers can result in additional benefits. The very act of measurement may increase the association between a consumer's intentions and behavior. Chandon, Morwitz and Reinartz (2005) found that, on average, the correlation between (latent) intentions and purchase behavior is 58% greater among surveyed consumers than it is among similar nonsurveyed consumers. In fact, it means that simply surveying customers can increase retailer's profitability over the long term (Dholakia and Morwitz 2002). Dholakia and Morwitz (2002) provide several explanations for the existence of the 'mere measurement' effect. First, surveys may appeal to the customers' desired to be heard or coddled, reinforcing positive feelings towards the retailer that may result in customers reciprocating by buying more products. Second, surveys may also increase the awareness of the retailer (or its distribution channels) thereby enhancing future purchases. Finally, asking customers to give their judgments can induce them to form judgments that otherwise would not occur to them. Especially, when habitual decision making is common, it seems useful to force customers to reflect upon their existent behavior.

The survey can also be used for market segmentation purposes. The first study shows that online and offline buyers significantly differ in their perceptions towards online and offline shopping; offline buyers clearly prefer offline shopping over online shopping, whereas online shoppers have a more balanced view. For e-tailers, it proves worthwhile to treat existent (experienced) online shoppers differently from new (inexperienced) shoppers. Offline buyers find the online shopping less convenient, resulting in higher perceptions of risk, higher time/effort costs, and less enjoyment. Multichannel retailers may take away

some of the mental stress from offline buyers by giving demonstrations; for example, when a book is out of stock in the physical store, employees can show customers how convenient it is to order a book online. Next, e-tailers can dedicate a special part of the website to first-time buyers, including FAQs and an easy to follow step-by-step process. Customers will better understand what is expected from them (role clarity) in the online shopping process, which will stimulate trial (Meuter et al. 2005). For current customers, the perceived benefits of using the online channel need to be reinforced; if they believe the website saves them time and effort and offers a better assortment, then the website should deliver and communicate this to strengthen their beliefs.

In general, it seems worthwhile to offer customers multiple transaction channels[42]. Using multiple channels potentially broadens the customer's exposure and access to the retailer's offering (Montoya-Weiss et al. 2003). Next, it gives customers greater control when they can pick the channel that fits their needs, given their situation (time availability, mood, gift giving versus personal purchase) (Hui and Bateson 1991; Meuter et al. 2000). The context-dependent nature of value indicates that individual customers may value the same thing differently at different times in different ways; the offering of multiple channels will increase the chance that customers find a suitable channel to fulfill their (temporary) needs. For multichannel retailers, it is a strategic decision to stimulate online and/or offline purchasing. For them, the financial costs need to be set off against its financial gains[43]. Understanding how each channel provides value to customers is just a first step to optimize the channel mix. The challenge is to leverage and coordinate the strengths of online and offline channels to increase the overall value for customers (Montoya-Weiss et al. 2003). The creation of value to customers needs to be contrasted against its financial consequences. More sophisticated financial models may incorporate the acquisition and retention costs/revenues of individual customers using channels (cf. Bolton et al. 2004; Verhoef and Donkers 2005). Despite the high acquisition costs (i.e. costs of attracting a

[42] This seems to be true when the type product is frequently sold on the Internet, and when no channel conflicts arise.

[43] Most multichannel retailers are still likely to prefer to generate store traffic over web traffic, as online conversion rates are still very low and unplanned purchases are higher offline (Wolfinbarger and Gilly 2001). Most online conversion rates are less than 2%, and typically vary from 1% to 4% (Cooperstein et al. 1999; Tedeschi 2000). However, when the detrimental effects of crowding prevent customers from purchasing offline, multichannel retailers may want to attract them to visit their website to generate online sales.

customer), the online channel may be preferred as it has been found that it attracts more loyal customers (Shankar et al. 2003; Verhoef and Donkers 2005).

8.5 Research limitations and future research

This study contributes to a better understanding of how consumers evaluate channels for their purchasing. There is a natural need for further research to deepen our understanding of what constitutes online and offline perceived value and intentions. The findings should be viewed as an additional step toward understanding channel choice from a consumer perspective. This study has some important research limitations. First, the empirical studies are only conducted among customers of booksellers. Thus, the generalizability of these findings to other product categories should be made with care. In line with this, the strong effect of enjoyment on online and offline purchase intentions might be explained by the hedonic nature of the product. There is a need to extend this study to other products and services to assess the importance of shopping enjoyment for other –less hedonically oriented– products[44]. In addition, the relative small effect of risk in each context can be explained due to the selected relatively simple, low-risk product. The difference in the importance of risk between the online versus offline context (and between online and offline buyers) may be more pronounced for more complex products and for products that require more physical examination. In sum, future research should investigate the effect of different product categories on the importance of the predictors of value and intentions. Additionally, there is a need to determine whether the model is also applicable to other industries (e.g. pure services). Although the perceived value framework has been useful in explaining purchase intentions in multiple contexts, and seems to hold for a wide variety of products and services (Grewal et al. 1998a; Woodall 2003; Zeithaml 1988), additional factors may need to be incorporated to capture purchase intentions.

[44] In another study dealing with a utilitarian product (i.e. car insurances), enjoyment appeared to be a strong predictor of intentions underlining the importance of having an enjoyable shopping process (Broekhuizen 2005). Moreover, Childers et al. (2001) also found that enjoyment was a significant predictor of attitudes for the utilitarian online grocery-shopping context.

Second, this study does not investigate the *individual* motivations to shop online or offline, but rather measures the *collective* motivations for groups of buyers. For instance, it does not account for heterogeneity across online buyers; although there is evidence that multiple online shopper segments exist (cf. Swinyard et al. 2003). In measuring the collective motivations, retailers gain insights into how to improve intentions effectively for the group as a whole, but little is known about the motivations of smaller segments. It seems a fertile extension to use latent class models (e.g. GLIMMIX, Latent Gold) to accommodate for customer heterogeneity (i.e. discerning shopping motivations for smaller segments).

Third, this study determines the effect of prior online experience based on a two-group analysis. A more precise classification of the degree of direct experience was not possible due the required sample size. Future research can distinguish between first-time buyers, second-time buyers, and so on to see how the construction of value and purchase intentions evolves over time. It seems to be very fruitful to investigate how customers go through the initial stages of the adoption process and use, and why certain customers become regular buyers whereas others may stop using the online channel. More qualitative studies or simulation studies may be used to understand these processes.

Fourth, this study investigates customers' prepurchase evaluations of offline and online shopping rather than postpurchase evaluations. Prior research suggests that consumers may differ in their weights they attribute during the stages of the consumption process (Parasuraman 1997; Wolfinbarger and Gilly 2003). Future research could assess to what degree the relative weights of criteria (e.g. time/effort costs, merchandise quality) differ between customers who give their ratings prior to purchase and those who give them just after their purchase or after receiving the product.

Fifth, certain limitations regarding the measurement of the constructs also need to be addressed. Service quality is only measured as one factor, although past literature has discussed its multidimensional nature. Past literature distinguished between functional and technical service quality (Grönroos 1982; Sweeney et al. 1999), fulfillment/reliability and customer service (Wolfinbarger and Gilly 2003), and core service and recovery service (Parasuraman et al. 2005). These finer-grained constructs may offer better insights into the exact working of service quality elements, and the consequences each dimension may

produce. Next, this study uses the construct of time/effort costs to measure the effort and time required to shop, but this is distinct from the speed of ownership. Past research indicated that the impossibility to have the products immediately is an inhibiting factor for online shopping (Wolfinbarger and Gilly 2001) and that delivery time affect customers' tendency to switch from offline to online channels (Gupta, Su and Walter 2004). Future research could investigate the effect of the speed of ownership on channel purchase intentions. The scales used in this study are unbalanced, as they consist of only positive or negative worded items. This is likely to inflate the correlations between the latent constructs (Baumgartner and Steenkamp 2001). Finally, this study measures four constructs with only two items. Future research could incorporate additional items to ensure that the full domain of the rather complex constructs is captured.

Sixth, the study is based on self-reported purchase intentions, and not on actual purchase data. The predictive validity of this type of data is questioned, as the correlation between intentions and behavior may be low (e.g. Mittal and Kamakura 2001; Chandon et al. 2005). Next, the relationships between the exogenous constructs and channel purchase intentions tend to be overestimated due to the common method bias. Respondents, for example, indicate their channel purchase intentions in line with answers on prior questions in order to avoid cognitive dissonance (Straub, Boudreau and Gefen 2004). Although it might be difficult to link actual purchase behavior of customers with the perceptions of customers over time (Bolton et al. 2004), it is a fruitful extension; it makes it possible to assess the predictive validity of the research model.

Finally, the extended model includes reputation, ease of use and informativeness as additional predictors of channel purchase intentions. This study is one of the first studies that simply add these factors to the well-established perceived value model. Although for most relationships there is substantial support, the approach has a tentative nature; therefore there is a need for studies that retest the study's findings, preferably in less complex models in order to better understand the nature and effects of these variables.

Other future research possibilities are the following. Negative performance on attributes has been shown to have a greater impact on overall satisfaction and purchase intentions than positive performance (Mittal et al. 1998). This study finds evidence that this is also

true for customers evaluating channels (see section 7.6). This issue deserves further investigation.

The increase in multichannel behavior creates many opportunities and challenges for multichannel retailers to build lasting relationships with their customers (Rangaswamy and Van Bruggen 2005). However, the influence of using multiple channels on consumers' (overall) satisfaction, loyalty perceptions and behavior remains largely untested. As a result, there is a need to enhance our understanding of the effects of multichannel behavior before multichannel retailers can effectively manage their customer relationships when customers use different channels (cf. Bolton et al. 2004). In the early days e-tailers focused on acquisition and making transactions (Hoffman and Novak 2000); currently they focus on delivering (superior) service quality to satisfy their customers and differentiate themselves from the competition (Parasuraman et al. 2005); and for the near future –once e-tailers have built a steady customer base– it seems necessary to make the next step and focus on retention.

References

Agarwal, Sanjeev and R. Kenneth Teas (2001), "Perceived Value: Mediating Role of Perceived Risk," *Journal of Marketing Theory & Practice*, 9(4), 1-14.

Ailawadi, Kusum L., Scott A. Neslin, and Karen Gedenk (2001), "Pursuing the Value-Conscious Consumer: Store Brands Versus National Brand Promotions," *Journal of Marketing*, 65(1), 71-89.

Akaah, Ishmael P. and Pradeep K Korgaonkar (1988), "A Conjoint Investigation of the Relative Importance of Risk Relievers in Direct Marketing," *Journal of Advertising Research*, 28(4), 38-44.

Alba, J. W., J.R. Lynch, B. Weitz, C. Janiszewski, R. Lutz, A. Sawyer and S. Wood (1997), "Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Marketplaces," *Journal of Marketing*, 61(3), 38-53.

Allison, Paul D. (1999), Logistic Regression Using the SAS System: Theory and Application. Cary, NC: SAS Institute.

Ancarani, Fabio and Venkatesh Shankar (2002), "Price Levels and Price Dispersion Within and Across Multiple Retailer Types: Further Evidence and Extension," *Journal of the Academy of Marketing Science*, 32(2), 176-187.

Anderson, James C. and David W. Gerbing (1982), "Some Methods for Respecifying Measurement Models to Obtain Unidimensional Construct Measurement," *Journal of Marketing Research*, 19(4), 453-460.

Anderson, James C. and David W. Gerbing (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin*, 103(3), 411-423.

Anderson, James C. and James A. Narus (1998), "Business Marketing: Understand What Customers Value," *Harvard Business Review* , 76(6), 53-65.

Anderson, Rolph E. and Srini S. Srinivasan (2003), "E-Satisfaction and E-Loyalty: A Contingency Framework," *Psychology & Marketing*, 20(2), 123-138.

Anderson Jr., W. Thomas (1972), "Convenience Orientation and Consumption Behavior," *Journal of Retailing*, 48(3), 49-71.

Arbuckle, James L. and Werner Wothke (1999), Amos 4.0 User's Guide. Chicago: Smallwaters.

Arnold, Mark. J. and Kristy E. Reynolds (2003), "Hedonic Shopping Motivations," *Journal of Retailing*, 79(2), 77-95.

Arnold, Stephen J., Tae H. Oum, and Douglas R. Tigert (1983), "Determinant Attributes in Retail Patronage: Seasonal, Temporal, Regional, and International Comparisons," *Journal of Marketing Research*, 20(2), 149-157.

Ba, Sulin and Paul A. Pavlou (2002), "Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior," *MIS Quarterly*, 26(3), 243-268.

Babin, Barry J., William R. Darden, and Mitch Griffin (1994), "Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value," *Journal of Consumer Research*, 20(4), 644-656.

Babin, Barry J. and William R. Darden (1995), "Consumer Self-Regulation in a Retail Environment," *Journal of Retailing*, 71(1), 47-70.

Babin, Barry J. and William R. Darden (1996), "Good and Bad Shopping Vibes: Spending and Patronage Satisfaction," *Journal of Business Research*, 35(3), 201-206.

Bagozzi, Richard P. (1980), Causal Models in Marketing. New York: Wiley.

Bagozzi, Richard P. and Youjae Yi (1989), "On the Use of Structural Equation Models in Experimental Designs," *Journal of Marketing Research*, 26(3), 271-284.

Baker, Julie (1987), "The Role of the Environment in Marketing Services: The Consumer Perspective," in J.A. Czepiel, C.A. Congram, and J. Shanahan (eds), The Service Challenge: Integrating for Competitive Advantage, Chicago: American Marketing Association.

Baker, Julie, Dhruv Grewal, and A. Parasuraman (1994), "The Influence of Store Environment on Quality Inferences and Store Image," *Journal of the Academy of Marketing Science*, 22(4), 328-339.

Baker, Julie, A. Parasuraman, Dhruv Grewal, and Glenn B. Voss (2002), "The Influence of Multiple Store Environment Cues on Perceived Merchandise Value and Patronage Intentions," *Journal of Marketing*, 66(2), 120-141.

Bakos, J. Yannis (1997), "Reducing Buyer Search Costs: Implications for Electronic Marketplaces," *Management Science*, 43(12), 1676-1692.

Balasubramanian, Sridhar, Prabhudev Konana, and Nirup M. Menon (2003), "Customer Satisfaction in Virtual Environments: A Study of Online Investing," *Management Science*, 49(7), 871-889.

Barnes, Stuart I. and Richard Vidgen (2002), "An Evaluation of Cyber-Bookshops: The WebQual Method," *International Journal of Electronic Commerce*, **6**(1), 11-30.

Baron, Rueben M. and David A. Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, 51(6), 1173-1182.

Bauer, Raymond A. (1960), "Consumer Behavior as Risk Taking," in D. F. Cox (ed.), Risk Taking and Information Handling in Consumer Behavior, Cambridge, MA: Harvard University Press.

Baumgartner, Hans and Jan-Benedict E. M. Steenkamp (2001), "Response Styles in Marketing Research: A Cross-National Investigation," *Journal of Marketing Research*, 38(2), 143-156.

Becker, Gary S. (1965), "A Theory of the Allocation of Time," *Economic Journal*, 75(299), 493-517.

Belk, Russell W. (1975), "Situational Variables and Consumer Behavior," *Journal of Consumer Research*, 2(3), 157-164.

Bentler, Peter M. (1992), "On the Fit of Models in Structural Models," *Psychological Bulletin*, 112(3), 400-404.

Berry, Leonard L. (1969), "The Components of Department Store Image: A Theoretical and Empirical Analysis," *Journal of Retailing*, 45(1), 3-20.

Berry, Leonard L. and Manjit S. Yadav (1996), "Capture and Communicate Value in the Pricing of Services," *Sloan Management Review*, 37(4), 41-52.

Berry, Leonard L., Kathleen Seiders, and Dhruv Grewal (2002), "Understanding Service Convenience," *Journal of Marketing*, 66(3), 1-17.

Bhatnagar, Amit, Sanjog Misra, and Raghav H. Rao (2000), "On Risk, Convenience, and Internet Shopping Behavior," *Communications of the ACM*, 43(11), 98-105.

Bitner, Mary Jo (1992), "Servicescapes: The Impact of Physical Surroundings on Customers and Employees," *Journal of Marketing*, 56(2), 57-71.

Black, Nancy Jo, Andy Locket, Christine Ennew, Heidi Winklhofer and Sally McKechnie (2002), "Modelling Consumer Choice of Distribution Channels: An Illustration from Financial Services," *International Journal of Bank Marketing*, 20(4), 161-173.

Blauw Research and Thuiswinkel.org (2005), "Nederlandse online consumentenbestedingen." Report.

Bloch, Peter H., Daniel L. Sherrel, and Nancy M. Ridgway (1986), "Consumer Search: An Extended Framework," *Journal of Consumer Research*, 13(1), 119-126.

Bloemer, José M. M. and Hans D. P. Kasper (1995), "The Complex Relationship between Consumer Satisfaction and Brand Loyalty," *Journal of Economic Psychology*, 16(2), 311-329.

Bobbitt, L. Michelle and Pratibha A. Dabholkar (2001), "Integrating Attitudinal Theories to Understand and Predict Use of Technology-Based Self-Service," *International Journal of Service Industry Management*, 12(5), 423-450.

Bollen, Kenneth A. (1986), "Sample Size and Bentler and Bonett's Nonnormed Fit Index," *Psychometrika*, 51(3), 375-377.

Bollen, Kenneth A. (1989), Structural Equations with Latent Variables. New York: Wiley.

Bolton, Ruth N. and James H. Drew (1991), "A Multistage Model of Customers' Assessments of Service Quality and Value," *Journal of Consumer Research*, 17(4), 375-384.

Bolton, Ruth N. (1998), "A Dynamic Model of the Duration of the Customer's Relationships with a Continuous Service Provider: The Role of Satisfaction," *Marketing Science*, 17(1), 45-65.

Brady, Michael K. and J. Joseph Cronin Jr. (2001), "Customer Orientation: Effects on Customer Service Perceptions and Outcome Behaviors," *Journal of Service Research*, 3(3), 241-251.

Broekhuizen, Thijs L.J. (2005), "Closing car insurances online or offline?," Working Paper. University of Groningen.

Brynjolfsson, Erik and Michael D. Smith (2000), "Frictionless Commerce? A Comparison of Internet and Conventional Retailers," *Management Science*, 46(4), 563-570.

Brynjolfsson, Erik, Yu Hu, and Michael Smith (2003), "Consumer Surplus in the Digital Economy: Estimating the Value of Increased Product Variety at Online Booksellers," *Management Science*, 49(11), 1580-1596.

Butler, Patrick and Joe Peppard (1998), "Consumer Purchasing on the Internet: Processes and Prospects," *European Management Journal*, 16(5), 600-610.

Butz Jr., Howard E. and Leonard D. Goodstein (1996), "Measuring Customer Value: Gaining the Strategic Advantage," *Organizational Dynamics*, 24(3), 63-77.

Byrne, Barbara M., Richard J. Shavelson, and Bengt Muthén (1989), "Testing for the Equivalence of Factor Covariance and Mean Structures: The Issue of Partial Measurement Invariance," *Psychological Bulletin*, 105(3), 456-466.

Byrne, Barbara M. (2001), Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming. Mahwah, NJ: Erlbaum.

Carmines, E. G. and J. P. McIver (1981), "Analyzing Models With Unobserved Variables, Analysis of Covariance Structures," in G. Bohrnstedt and E. Borgatta (eds.), Social Measurement: Current Issues, Beverly Hills: Sage.

Carmon, Ziv, J. George Shantikumar, and Tali F. Carmon (1995), "A psychological perspective on service segmentation models: The Significance of Accounting for Consumers' Perceptions of Waiting and Service," *Management Science*, 41(11), 1806-1815.

Chandon, Pierre, Vicky G. Morwitz, and Werner J. Reinartz (2005), "Do Intentions Really Predict Behavior? Self-Generated Validity Effects in Survey Research," *Journal of Marketing*, 69(2), 1-14.

Chang, Tung-Zong and Albert R. Wildt (1994), "Price, Product Information, and Purchase Intention: An Empirical Study," *Journal of the Academy of Marketing Science*, 22(1), 16-27.

Chaudhuri, Arjun (2000), "A Macro Analysis of the Relationship of Product Involvement and Information Search: The Role of Risk," *Journal of Marketing Theory & Practice*, 8(1), 1-15.

Chen, Zhan and Alan J. Dubinsky (2003), "A Conceptual Model of Perceived Customer Value in E-Commerce: A Preliminary Investigation," *Psychology & Marketing*, 20(4), 323-347.

Chen, Zhan, Sharon A. DeVaney, and Sandra S. Liu (2003), "Consumers' Value Perception of an E-Store and Its Impact on E-Store Loyalty Intention," Proceedings of Seventh Triennial AMS/ACRA Retailing Conference 2003.

Cheung, Gordon W. and Roger B. Rensvold (2000), "Assessing Extreme and Acquiescence Response Sets in Cross-Cultural Research Using Structural Equations Modeling," *Journal of Cross-Cultural Psychology*, 31 187-212.

Cheung, Gordon W. and Roger B. Rensvold (2002), "Evaluating Goodness-of-Fit Indexes for Testing Measurement Invariance," *Structural Equation Modeling*, 9(2), 233-255.

Childers, Terry L., Cristopher L. Carr, Joan Peck, and Stephen Carson (2001), "Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior," *Journal of Retailing*, 77(4), 511-535.

Churchill, Gilbert A. (1979), "A Paradigm for Developing Better Measures of Marketing Constructs," *Journal of Marketing Research*, 16(1), 64-73.

Clemons, Erik K., Il-Horn Hann, and Lorin M. Hitt (2002), "Price Dispersion and Differentiation in Online Travel: An Empirical Investigation," *Management Science*, 48(4), 534-549.

Comrey, Andrew L. and Howard B. Lee (1992), A First Course in Factor Analysis. Hillsdale, NJ: Erlbaum.

Cox, Donald F. and Stuart U. Rich (1964), "Perceived Risk and Consumer Decision-Making: The Case of the Telephone Shopping," *Journal of Marketing Research*, 1(4), 32-39.

Cronin Jr., J. Joseph, Michael K. Brady, R.R. Brand, R. Hightower and D.J. Shemwell (1997), "A Cross-Sectional Test of the Effect and Conceptualization of Service Value," *Journal of Services Marketing*, 11(6), 375-391.

Cronin Jr., Joseph J., Michael K. Brady, and G. Tomas M. Hult (2000), "Assessing the Effects of Quality, Value and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments," *Journal of Retailing*, 76(2), 193-218.

Dabholkar, Pratibha A., Dayle I. Thorpe, and Joseph O. Rentz (1996), "A Measure of Service Quality for Retail Stores: Scale Development and Validation," *Journal of the Academy of Marketing Science*, 24(1), 3-16.

Dabholkar, Pratibha A., C. David Shepherd, and Dayle I. Thorpe (2000), "A Comprehensive Framework for Service Quality: An Investigation of Critical Conceptual and Measurement Issue Through a Longitudinal Study," *Journal of Retailing*, 76(2), 139-172.

Dabholkar, Pratibha A. and Richard P. Bagozzi (2002), "An Attitudinal Model of Technology-Based Self-Service: Moderating Effects of Consumer Traits and Situational Factors," *Journal of the Academy of Marketing Science*, 30(3), 184-201.

Darby, Michael R. and Edi Karni (1973), "Free Competition and the Optimal Amount of Fraud," *Journal of Law and Economics*, 16(April), 66-86.

Davis, Frank D., Richard P. Bagozzi, and Paul R. Warshaw (1989), "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Management Science*, 35(8), 982-1002.

Davis, Frank D. (1989), "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly*, 13(3), 318-340.

Davis, Frank D., Richard P. Bagozzi, and Paul R. Warshaw (1992), "Extrinsic and Intrinsic Motivation to Use Computers in the Workplace," *Journal of Applied Social Psychology*, 22(14), 1111-1132.

De Haes, Joeri, Annouk Lievens, and Walter van Waterschoot (2004), "Online Atmospheric Cues: Conceptualization, Classification, Measurement and Influence on Online Shopping Behavior," Working Paper, University of Antwerp.

De Ruyter, Ko, Martin Wetzels, Jos Lemmink and Jan Mattson (1997), "The Dynamics of the Service Delivery Process: A Value-Based Approach," *International Journal of Research in Marketing*, 14(3), 231-243.

De Ruyter, Ko, Martin Wetzels, and Mirella Kleijnen (2001), "Customer Adoption of E-Service: An Experimental Study," *International Journal of Service Industry Management*, 12(2), 184-207.

Deci, Edward L. and Richard M. Ryan (1985), Intrinsic Motivation and the Self-Determination of Human Behavior. New York: Plenum.

Degeratu, Alexandru M., Arvind Rangaswamy, and Jianan. Wu (2000), "Consumer Choice Behavior in Online and Traditional Supermarkets: The Effects of Brand Name, Price, and other Search Attributes," *International Journal of Research in Marketing*, 17(1), 55-78.

Deutskens, Elisabeth, Ko de Ruyter, and Martin G. M. Wetzels (2004), "An Assessment of Measurement Invariance between Online and Mail Surveys," METEOR Working Paper, Maastricht University

Devaraj, Sarv, Ming Fan, and Rajiv Kohli (2002), "Antecedents of B2C Channel Satisfaction and Preference: Validating e-Commerce Metrics," *Information Systems Research*, 13(3), 316-333.

Dholakia, Paul M. and Vicky G. Morwitz (2002), "How Surveys Influence Customers," *Harvard Business Review*, 80(5), 18-19.

Diamantopoulos, Adamantios and Judy A. Siguaw (2000), Introducing LISREL: A Guide for the Uninitiated. London: Sage.

Diamantopoulos, Adamantios and Heidi M. Winklhofer (2001), "Index Construction with Formative Indicators: An Alternative to Scale Development," *Journal of Marketing Research*, 38(2), 269-277.

Dick, Alan S. and Kunal Basu (1994), "Customer Loyalty: Toward an Integrated Conceptual Framework," *Journal of the Academy of Marketing Science*, 22(2), 99-113.

Dickson, John and Gerald Albaum (1977), "A Method for Developing Tailormade Semantic Differentials for Specific Marketing Content Areas," *Journal of Marketing Research*, 14(1), 87-91.

Dodds, William B. and Kent B. Monroe (1985), "The Effect of Brand and Price Information on Subjective Product Evaluations," *Advances in Consumer Research*, 12(1), 85-90.

Dodds, William B., Kent B. Monroe, and Dhruv Grewal (1991), "Effects of Price, Brand, and Store Information on Buyers' Product Evaluations," *Journal of Marketing Research*, 28(3), 307-319.

Dodds, William B. (1999), "Managing Customer Value," *Mid-American Journal of Business*, 14(1), 13-22.

Doney, Patricia M. and Joseph P. Cannon (1997), "An Examination of the Nature of Trust in Buyer-Seller Relationships," *Journal of Marketing*, 61(2), 35-51.

Donovan, Robert J. and John R. Rossiter (1982), "Store Atmosphere: An Environmental Psychology Approach," *Journal of Retailing*, 58(1), 34-57.

Donovan, Robert J., John R. Rossiter, Gilian Marcoolyn and Andrew Nesdale (1994), "Store Atmosphere and Purchasing Behavior," *Journal of Retailing*, 70(3), 283-294.

Donthu, Naveen and Adriana Garcia (1999), "The Internet Shopper," *Journal of Advertising Research*, 39(3), 52-58.

Dowling, Grahame R. and Richard Staelin (1994), "A Model of Perceived Risk and Intended Risk-Handling Activity," *Journal of Consumer Research*, 21(1), 119-134.

Duman, Teoman (2002), "A Model of Perceived Value fro Leisure Travel Products," Doctoral Dissertation, Pennsylvania State University.

Eastlick, Mary Ann and Sherry Lotz (1999), "Profiling Potential Adopters and Non-Adopters of an Interactive Electronic Shopping Medium," *International Journal of Retail & Distribution Management*, 27(6/7), 209-223.

Einwiller, Sabine (2003), "When Reputation Engenders Trust: An Empirical Investigation in Business-to-Consumer Electronic Commerce," *Electronic Markets*, 13(3), 196-209.

Engel, James F., Roger D. Blackwell, and Paul W. Miniard (1995), Consumer Behavior: International Edition. Orlando: Dryden Press.

Eroglu, Sevgin A., Karen A. Machleit, and Lenita M. Davis (2003), "Empirical Testing of a Model of Online Store Atmospherics and Shopper Responses," *Psychology & Marketing*, 20(2), 139-150.

Evanschitzky, Heiner, Gopalkrishnan R. Iyer, Josef Hesse and Dieter Ahlter (2004), "E-Satisfaction: A Re-Examination," *Journal of Retailing*, 80(3), 239-247.

Fishbein, Martin and Icek Ajzen (1975), Beliefs, Attitude, Intention and Behavior: An Introduction to Theory and Research. Reading, MA: Addison Wesley.

Fornell, Claes and David F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research*, 18(1), 39-50.

Fornell, Claes (1992), "A National Customer Satisfaction Barometer: The Swedish Experience," *Journal of Marketing*, 56(1), 16-20.

Forsythe, Sandra M. and Bo Shi (2003), "Consumer Patronage and Risk Perceptions in Internet Shopping," *Journal of Business Research*, 56(11), 867-875.

Francis, Julie E. and Lesley White (2002), "PIRQUAL: A Scale for Measuring Customer Expectations and Perceptions of Quality in Internet Retailing, " Proceedings of Winter Educator's Conference, Chicago, American Marketing Association.

Francis, Julie E. and Lesley White (2004), "Value Across Fulfillment-Product Categories of Internet Shopping," *Managing Service Quality*, 14(2/3), 226-234.

Frondizi, Risieri (1971), What is Value? Illinois: Open Court Publishing Company.

Gale, Bradley T. (1994), Managing Customer Value: Creating Quality and Service That Customers Can See. New York: Free Press.

Gardial, Sarah Fisher, Scott D. Clemons, Robert B. Woodruff, David W. Schumann, and Mary Jane Burns (1994), "Comparing Consumers' Recall of Prepurchase and Postpurchase Product Evaluation Experiences," *Journal of Consumer Research*, 20(4), 548-560.

Gefen, David and Detmar W. Straub (2000), "The Relative Importance of Perceived Ease of Use in IS Adoption: A Study of E-Commerce Adoption," *Journal of the Association for Information Systems*, 1(8), 1-30.

Gefen, David (2000), "E-Commerce: The Role of Familiarity and Trust," *Omega: The International Journal of Management Science*, 28(6), 725-737.

Gefen, David, Elena Karahanna, and Detmar W. Straub (2003), "Trust and TAM in Online Shopping: An Integrated Model," *MIS Quarterly*, 27(1), 51-90.

Gehrt, Kenneth C. and Ruoh-Nan Yan (2004), "Situational, Consumer, and Retailer Factors affecting Internet, Catalog, and Store Shopping," *International Journal of Retail & Distribution Management*, 32(1), 5-18.

Gigerenzer, Gerd, Peter M. Todd, and the ABC Research Group (1999), Simple Heuristics That Make Us Smart. New York: Oxford University Press.

Gillett, Peter L. (1970), "A Profile of Urban In-Home Shoppers," *Journal of Marketing*, 34(3), 40-45.

Gillett, Peter L. (1976), "In-Home Shoppers - An Overview," *Journal of Marketing*, 40(4), 81-88.

Gilly, Mary C. and Mary Wolfinbarger (2000), "A Comparison of Consumer Experiences with Online and Offline Shopping," *Consumption, Markets and Culture*, 4(2), 187-205.

Girard, Tulay, Pradeep K Korgaonkar, and Ronnie Silverblatt (2003), "Relationship of Type of Product, Shopping Orientations, and Demographics with Preference for Shopping on the Internet," *Journal of Business and Psychology*, 18(1), 101-120.

Grayson, Kent and Tim Ambler (1999), "The Dark Side of Long-Term Relationships in Marketing Services," *Journal of Marketing Research*, 36(1), 132-141.

Grewal, Dhruv, R. Krishnan, Julie Baker, and Norm Borin (1998b), "The Effect of Store Name, Brand Name and Price Discounts on Consumers' Evaluations and Purchase Intentions," *Journal of Retailing*, 74(3), 331-352.

Grewal, Dhruv, Kent B. Monroe, and R. Krishnan (1998a), "The Effects of Price-Comparison Advertising on Buyers' Perceptions of Acquisition Value, Transaction Value, and Behavioral Intentions," *Journal of Marketing*, 62(2), 46-59.

Grewal, Dhruv, Gopalkrishnan R. Iyer, R. Krishnan and Arun Sharma (2003), "The Internet and the Price-Value-Loyalty Chain," *Journal of Business Research*, 56(5), 391-398.

Grönroos, Christian (1982), Strategic Management and Marketing in the Service Sector. Hellingfors: Swedish School of Economics and Business Administration.

Grönroos, Christian (1997), "Value-Driven Relational Marketing: From Products to Resources and Competencies," *Journal of Marketing Management*, 13(5), 407-419.

Grönroos, Christian, Fredrik Heinonen, Kristina Isoniemi and Michael Lindholm (2000), "The NetOffer model: A Case Example from the Virtual Marketspace," *Management Decision* , 38(3/4), 243-252.

Gupta, Alok, Bo-chiuan Su, and Zhiping Walter (2004), "An Empirical Study of Consumer Switching from Traditional to Electronic Channels: A Purchase-Decision Process Perspective," *International Journal of Electronic Commerce*, 8(3), 131-161.

Hair, Joseph F., Ronald L. Tatham,, Rolph E. Anderson and William Black (1998), Multivariate Data Analysis. London: Prentice-Hall International.

Hartline, Michael D. and O. C. Ferrell (1996), "The Management of Customer-Contact Service Employees: An Empirical Investigation," *Journal of Marketing*, 60(4), 52-70.

Hayduk, Leslie A. (1996), LISREL Issues, Debates, and Strategies. Baltimore, MD: John Hopkins University Press.

Häubl, Gerald and Valerie Trifts (2000), "Consumer Decision Making in Online Shopping Environments: The Effects of Interactive Decision Aids," *Marketing Science*, 19(1), 4-21.

Heinonen, Kristina (2004), "Reconceptualizing Customer Perceived Value: The Value of Time and Place," *Managing Service Quality*, 14(2/3), 205-215.

Hellier, Phillip K. Geursen, Gus M., Carrsen, Rodney A., and Rickard, John A. (2003), "Customer Repurchase Intention: A General Structural Equation Model," *European Journal of Marketing*, 37(11), 1762-1800.

Herzberg, Frederick, Bernard Mausner, and Barbara B. Snyderman (1959), The Motivation to Work. New York: John Wiley & Sons.

Heskett, James L. Thomas O. Jones, Gary W. Loveman, W. Earl Sasser Jr., and Leonard A. Schlesinger (1994), "Putting The Service-Profit Chain To Work," *Harvard Business Review*, 72(2), 164-170.

Hirschman, Elizabeth C. and Morris B. Holbrook (1982), "Hedonic Consumption: Emerging Concepts, Methods, and Propositions," *Journal of Marketing*, 46(3), 92-101.

Hoffman, Donna L. and Thomas P. Novak (1996), "Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations," *Journal of Marketing*, 60(7), 50-68.

Hoffman, Donna L. and Thomas P. Novak (2000), "How to Acquire Customers on the Web," *Harvard Business Review*, 78(3), 179-185.

Hoffman, Donna L., Thomas P. Novak, and Ann E. Schlosser (2002), "Locus of Control, Web Use, and Consumer Attitudes Toward Internet Regulation," *Journal of Public Policy & Marketing*, 22(1), 41-57.

Holbrook, Morris B. (1994), "The Nature of Customer Value: An Axiology of Services in the Consumption Experience," in Rust and R. L. Oliver, (eds), Service Quality: New Directions in Theory and Practice, Thousand Oaks, CA: Sage

Holbrook, Morris B. (1996), "Customer Value: A Framework for Analysis and Research," *Advances in Consumer Research*, 23(1), 138-142.

Holbrook, Morris B. (1999), Consumer Value: A Framework for Analysis and Research. New York: Routledge.

Hong, Sehee, Mary L. Malik, and Min-Kye Lee (2003), "Testing Configural, Metric, Scalar and Latent Mean Invariance Across Genders in Sociotropy and Autonomy Using a Non-Western Sample," *Educational and Psychological Measurement*, 63(4), 636-654.

Horn, J. L. and J. J. McArdle (1992), "A Practical and Theoretical Guide to Measurement Invariance in Aging Research," *Experimental Aging Research*, 18(3-4), 387-394.

Howard, John A. (1977), Consumer Behavior: Application of Theory. New York: McGraw-Hill Book Company.

Howell, Roy D. (1987), "Covariance Structure Modeling and Measurement Issues: A Note on 'Interrelations Among a Channel Entity's Power Sources'," *Journal of Marketing Research*, 24(1), 119-126.

Hu, Li-tze and Peter M. Bentler (1999), "Cutoff Criteria for Fit Indexes in Covariance Structural Analysis: Conventional Criteria versus New Alternatives," *Structural Equation Modeling*, 6(1), 1-55.

Huber, Joel, G. John, Kim Corfman, Jack Feldman, Morris B. Holbrook, Donald Lehmann, Bertrand Munier, David Schkade, and Itamar Simonson (1997), "Thinking About Values in Prospect and Retrospect: Maximizing Experienced Utility," *Marketing Letters*, 8(3), 323-334.

Huffman, Cynthia and Barbara E. Kahn (1998), "Variety for Sale: Mass Customization or Mass Confusion?," *Journal of Retailing* , 74(4), 491-513.

Hui, Michael K. and John E. G. Bateson (1991), "Perceived Control and the Effects of Crowding and Consumer Choice on the Service Experience," *Journal of Consumer Research*, 18(2), 174-184.

Ilieva, Janet, Steve Baron, and Nigel M. Healey (2002), "Online Surveys in Marketing Research: Pros and Cons," *International Journal of Market Research*, 44(3), 361-376.

Inman, J. Jeffrey, Venkatesh Shankar, and Rosellina Ferraro (2004), "The Roles of Channel-Category Associations and Geodemographics in Channel Patronage," *Journal of Marketing*, 68(2), 51-71.

Isen, Alice M. (1989), "Some Ways in Which Affect Influences Cognitive Processes: Implications for Advertising and Consumer Behavior," in P. Cafferata and A.M. Tybout (eds), Cognitive and Affective Responses to Advertising, Lexington, MA: Lexington Books.

Jacoby, Jacob and Robert W. Chestnut (1978), Brand Loyalty: Measurement and Management. New York: Wiley.

Jarvenpaa, Sirkka L. and Naom Tractinsky (1999), "Consumer Trust in an Internet Store: A Cross-Cultural Validation," *Journal of Computer-Mediated Communication*, 5(1).

Jarvis, Cheryl Burke, Scott B. MacKenzie, and Philip M. Podsakoff (2003), "A Critical Review of Construct Indicators and Measurement Model Misspecification in Marketing and Consumer Research," *Journal of Consumer Research*, 30(2), 199-218.

Jasper, Cynthia R. and Sara J. Oullette (1994), "Consumers' Perception of Risk and the Purchase of Apparel from Catalogs," *Journal of Direct Marketing*, 8(2), 23-36.

Jöreskog, Karl G. and Dag Sörbom (1971), "Simultaneous Factor Analysis in Several Populations," *Psychometrika*, 36(4), 409-426.

Jöreskog, Karl G. and Dag Sörbom (1982), "Recent Developments in Structural Equation Modeling," *Journal of Marketing Research*, 19(4), 404-416.

Jöreskog, Karl G. (1993), "Testing Structural Equation Models," in K. A. Bollen and J. S. Long (eds), Testing Structural Equation Models, Newbury Park, CA: Sage.

Kaplan, Leon B., George J. Szybillo, and Jacob Jacoby (1974), "Components of Perceived Risk in Product Purchase," *Journal of Applied Psychology*, 59(3), 287-291.

Karahanna, Elena, Detmar W. Straub, and Norman L. Chervany (1999), "Information Technology Adoption across Time: A Cross-Sectional Comparison of Pre-Adoption and Post-Adoption Beliefs," *MIS Quarterly*, 23(2), 183-213.

Karahanna, Elena and Detmar W. Straub (1999), "The Psychological Origins of Perceived Usefulness and Ease-of-Use," *Information & Management*, 35(4), 237-250.

Keen, Cherie, Martin Wetzels, Ko de Ruyter and Richard Feinberg (2004), "E-Tailers versus Retailers: Which Factors Determine Consumer Preferences," *Journal of Business Research*, 57(7), 685-695.

Kelley, Eugene J. (1958), "The Importance of Convenience in Consumer Purchasing," *Journal of Marketing*, 23(1), 32-38.

Kerin, Roger A., Ambuj. Jain, and Daniel J. Howard (1992), "Store Shopping Experience and Consumer Price-Quality-Value Perceptions," *Journal of Retailing*, 68(4), 376-397.

Kim, Sang Yong and Young Jun Lim (2001), "Consumers' Perceived Importance of and Satisfaction with Internet Shopping," *Electronic Markets*, 11(3), 148-154.

Kleijnen, Mirella, Ko de Ruyter, and Martin Wetzels (2004), "Consumer Adoption of Wireless Services: Discovering the Rules, While Playing the Game," *Journal of Interactive Marketing*, 18(2), 51-61.

Kline, Rex B. (1998), Principles and Practice of Structural Equation Modelling. New York: The Guilford Press.

Konana, Prabhudev, Nirup M. Menon, and S. Balasubramanian (2000), "The Implications of Online Investing," *Communications of the ACM*, 43(1), 34-41.

Korgaonkar, Pradeep K. and George P. Moschis (1982), "An Experimental Study of Cognitive Dissonance, Product Involvement, Expectations, Performance and Consumer Judgement of Product Performance," *Journal of Advertising*, 11(3), 32-44.

Korgaonkar, Pradeep K. (1984), "Consumer Shopping Orientations, Non-Store Retailers, and Consumers' Patronage Intentions: A Multivariate Investigation," *Journal of the Academy of Marketing Science*, 12(1), 11-22.

Korgaonkar, Pradeep K. and Lori D. Wolin (1999), "A Multivariate Analysis of Web Usage," *Journal of Advertising Research*, 39(2), 53-68.

Koufaris, Marios, Ajit Kambil, and Priscilla A. LaBarbera (2001), "Consumer Behavior in Web-based Commerce: An Empirical Study," *International Journal of Electronic Commerce*, 6(2), 115-138.

Kwak, Hyokjin, Richard J. Fox, and George M. Zinkhan (2002), "What Products Can Be Successfully Promoted and Sold via the Internet?," *Journal of Advertising Research*, 42(1), 23-38.

Lai, Albert W. (1995), "Consumer Values, Product Benefits and Customer Value: A Consumption Behaviour Approach," in F. R. Kardes and M. Sijan (eds), Advances in Consumer Research, Provo, UT: Association for Consumer Research.

LeBlanc, Gaston and Nha Nguyen (2001), "An Exploratory Study on the Cues that Signal Value to Members in Retail Co-Operatives," *International Journal of Retail & Distribution Management*, 29(1), 49-59.

Lederer, Albert L., Donna J. Maupin., Mark P. Sena, and Youlong Zhuang (2000), "The Technology Acceptance Model and the World Wide Web," *Decision Support Systems*, 29(3), 269-282.

Lee, Dongwon, Jinsoo Park, and Jongho Ahn. (2000), "On the Explanation of Factors Affecting E-Commerce Adoption," Working Paper.

Lee, Matthew K. O. and Efraim Turban (2001), "A Trust Model for Consumer Internet Shopping," *International Journal of Electronic Commerce*, 6(4), 75-91.

Lee, Wei-Na and Se-Jin Lee (2000), "Involvement, Familiarity and Satisfaction in Online Shopping Experience," Proceedings of Direct Marketing Association 12th Annual Educators' Conference.

Lemmink, Jos, Ko de Ruyter, and Martin Wetzels (1998), "The Role of Value in the Delivery Process of Hospitality Services," *Journal of Economic Psychology*, 19(2), 159-178.

Li, Hairong, Cheng Kuo, and Martha G. Russel (1999), "The Impact of Perceived Channel Utilities, Shopping Orientations, and Demographics on the Consumer's Online Buying Behavior," *Journal of Computer-Mediated Communication*, 5(2).

Lim, Heejin and Alan J. Dubinsky (2004), "Consumers' Perceptions of E-Shopping Characteristics: An Expectancy-Value Approach," *Journal of Services Marketing*, 18(7), 500-513.

Lindquist, Jay D. (1974), "Meaning of Image: A Survey of Empirical and Hypothetical Evidence," *Journal of Retailing*, 50(4), 29-39.

Little, T. D. (1997), "Mean and Covariance Structures (MACS) Analyses of Cross-Cultural Data: Practical and Theoretical Issues," *Multivariate Behavioral Research*, 32(1), 53-76.

Lohse, Gerard L. and Peter Spiller (1998), "Electronic Shopping," *Communications of the ACM*, 41(7), 81-88.

Lohse, Gerard L. and Peter Spiller (1999), "Internet Retail Store Design: How the User Interface influences Traffic and Sales," *Journal of Computer-Mediated Communication*, 5(2).

Lohse, Gerard L., Steven Bellman, and Erik J Johnson (2000), "Consumer Buying Behavior on the Internet: Findings from Panel Data," *Journal of Interactive Marketing*, 14(1), 15-29.

Loiacono, Eleanor T., Richard T. Watson, and Dale L. Goodhue (2002), "WEBQUAL: A Measure of Website Quality," Proceedings of Marketing Educators' Conference: Marketing Theory and Applications.

Lynch, John G. and Dan Ariely (2000), "Wine Online: Search Costs Affect Competition on Price, Quality and Distribution," *Marketing Science*, 19(1), 83-103.

MacCallum, Robert C., Mary Roznowski, and Lawrence B. Necowitz (1992), "Model Modifications in Covariance Structure Analysis: The Problem of Capitalization on Chance," *Psychological Bulletin*, 111(3), 490-504.

MacKenzie, Scott B. (2001), "Opportunities for Improving Consumer Research through Latent Variable Structural Equation Modeling," *Journal of Consumer Research*, 28(1), 159-166.

Maher, Jill K., Lawrence J. Marks, and Pamela E. Grimm (1997), "Overload, Pressure, and Convenience: Testing a Conceptual Model of Factors Influencing Women's Attitudes Toward, and Use of, Shopping Channels," *Advances in Consumer Research*, 24(1), 490-498.

Malhotra, Naresh K. (1996), Marketing Research: An Applied Orientation. Upper Saddle River, NJ: Prentice-Hall.

Marmorstein, Howard, Dhruv Grewal, and Raymond P. H. Fishe (1992), "The Value of Time Spent in Price-Comparison Shopping: Survey and Experimental Evidence," *Journal of Consumer Research*, 19(1), 52-61.

Mathieson, Kieran (1991), "Predicting User Intentions: Comparing the Technology Acceptance Model with the Theory of Planned Behavior," *Information Systems Research*, 2(3), 173-191.

Mathwick, Charla, Naresh K. Malhotra, and Edward Rigdon (2002), "The Effect of Dynamic Retail Experiences on Experiential Perceptions of Value: An Internet and Catalog Comparison," *Journal of Retailing*, 78(1), 51-60.

Mayer, Roger C., James H. Davis, and David F. Schoorman (1995), "An Integrative Model of Organizational Trust," *Academy of Management Review*, 20(3), 709-734.

Mazursky, David and Jacob Jacoby (1986), "Exploring the Development of Store Images," *Journal of Retailing*, 62(2), 145-165.

McGuire, William J. (1974), "Psychological Motives and Communication Gratification," in J. F. Blumler and J. Katz (eds), The Uses of Mass Communications: Current Perspectives on Gratification Research, Beverly Hills, CA: Sage.

Mehrabian, Albert and James A. Russell (1974), An Approach to Environmental Psychology. Cambridge, MA: MIT Press.

Meredith, W. (1993), "Measurement Invariance, Factor Analysis, and Factorial Invariance," *Psychometrika*, 58, 525-543.

Meuter, Matthew L., Amy L. Ostrom, Robert I. Roundtree, and Mary Jo Bitner (2000), "Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters," *Journal of Marketing*, 64(3), 50-64.

Meuter, Matthew L., Mary Jo Bitner, Amy L. Ostrom and Stephen W. Brown (2005), "Choosing Among Alternative Service Delivery Modes: An Investigation of Customer Trial of Self-Service Technologies," *Journal of Marketing*, 69(2), 61-83.

Mishra, Sanjay, U. N. Umesh, and Donald E. Stem Jr (1993), "Antecedents of the Attraction Effect: An Information-Processing Approach," *Journal of Marketing Research*, 30(3), 331-349.

Mitchell, Vincent-Wayne and Peter J. McGoldrick (1996), "Consumers' Risk-Reduction Strategies: A Review and Synthesis," *International Review of Retail, Distribution & Consumer Research*, 6(1), 1-33.

Mitchell, Vincent-Wayne (1999), "Consumer Perceived Risk: Conceptualisations and Models," *European Journal of Marketing*, 33(1/2), 163-195.

Mittal, Vikas, William T. Ross Jr. and Patrick M. Baldasare (1998), "The Asymmetric Impact of Negative and Positive Attribute-Level Performance on Overall Satisfaction and Repurchase Intentions," *Journal of Marketing*, 62(1), 33-47.

Mittal, Vikas and Wagner A. Kamakura (2001), "Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics," *Journal of Marketing Research*, 38(1), 131-142.

Monroe, Kent B. (1990), Pricing: Making Profitable Decisions. New York: McGraw-Hill Book Company.

Monsuwé, Toñita Perea Y., Benedict G. C. Dellaert, and Ko de Ruyter (2004), "What Drives Consumers to Shop Online? A Literature Review," *International Journal of Service Industry Management*, 15(1), 102-121.

Montoya-Weiss, Mitzi M., Glenn B. Voss, and Dhruv Grewal (2003), "Determinants of Online Channel Use and Overall Satisfaction with a Relational, Multichannel Service Provider," *Journal of the Academy of Marketing Science*, 31(4), 448-458.

Moorman, Christine, Rohit Deshpandé, and Gerald Zaltman (1993), "Factors Affecting Trust in Marketing Research Relationships," *Journal of Marketing*, 57(1), 81-101.

Morgan, Robert M. and Shelby D. Hunt (1994), "The Commitment-Trust Theory of Relationship Marketing," *Journal of Marketing*, 58(7), 20-38.

Moye, Letecia N. and Doris H. Kincade (2002), "Influence of Usage Situations and Consumer Shopping Orientations on the Importance of the Retail Store Environment," *The International Review of Retail, Distribution and Consumer Research*, 12(1), 59-79.

Muylle, Steve, Rudy Moenaert, and Marc Despontin (2004), "The Conceptualization and Empirical Validation of Web Site User Satisfaction," *Information & Management*, 41(5), 543-560.

Nicholson, Michael, Ian Clarke, and Michael Blakemore (2002), "'One Brand, Three Ways to Shop': Situational Variables and Multichannel Consumer Behaviour," *International Review of Retail, Distribution & Consumer Research*, 12(2), 131-148.

Nunnally, J. C. (1978), Psychometric Theory. New York: McGraw-Hill.

Oh, Haemoon (2000), "Diners' Perceptions of Quality, Value, and Satisfaction," *Cornell Hotel & Restaurant Administration Quarterly*, 41(3), 58-66.

Oliver, Richard L. (1980), "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions," *Journal of Marketing Research*, 17 460-469.

Oliver, Richard L. (1981), "Measurement and Evaluation of Satisfaction Processes in Retail Settings," *Journal of Retailing*, 57(3), 25-48.

Oliver, Richard L. (1993), "Cognitive, Affective and Attribute Bases of the Satisfaction Response," *Journal of Consumer Research*, 20(3), 418-430.

Oliver, Richard L. (1999), "Value as Excellence in the Consumption Experience," in M.B. Holbrook (ed.), Consumer Value: A Framework for Analysis and Research, New York: Routledge.

Ostrom, Amy and Dawn Iacobucci (1995), "Consumer Tradeoffs and the Evaluation of Services," *Journal of Marketing*, 59(1), 17-28.

Overby, Jeffrey W., Sarah Fisher Gardial, and Robert B. Woodruff (2004), "French Versus American Consumers' Attachment of Value to a Product in a Common Consumption Context: A Cross-National Comparison," *Journal of the Academy of Marketing Science*, 32(4), 437-460.

Pan, Xing, Brian T. Ratchford, and Venkatesh Shankar (2002), "Can Price Dispersion in Online Markets Be Explained by Differences in E-Tailer Service Quality?," *Journal of the Academy of Marketing Science*, 30(4), 433-445.

Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research," *Journal of Marketing*, 49(4), 41-50.

Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing*, 64(1), 12-40.

Parasuraman, A. (1997), "Reflections on Gaining Competitive Advantage Through Customer Value," *Journal of the Academy of Marketing Science*, 25(2), 154-161.

Parasuraman, A. (2000), "Technology Readiness Index (TRI): A Multiple-Item Scale to Measure Readiness to Embrace New Technologies," *Journal of Service Research*, 2(4), 307-320.

Parasuraman, A. and Dhruv Grewal (2000), "The Impact of Technology on the Quality-Value-Loyalty Chain: A Research Agenda," *Journal of the Academy of Marketing Science*, 28(1), 168-174.

Parasuraman, A., Valarie A. Zeithaml, and Arvind Malhotra (2005), "E-S-Qual: A Multiple-Item Scale for Assessing Electronic Service Quality," *Journal of Service Research*, 7(3), 213-233.

Payne, John W., James R. Bettman, and Eric J. Johnson (1993), The Adaptive Decision Maker. Cambridge: Cambridge University.

Pavlou, Paul A. (2003), "Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model," *International Journal of Electronic Commerce*, 7(3), 101-134.

Peter, J. Paul and Lawrence X. Tarpey Sr. (1975), "A Comparative Analysis of Three Consumer Decisions Strategies," *Journal of Consumer Research*, 2(1), 29-37.

Peter, Paul J. and Gilbert A. Churchill Jr. (1986), "Relationships Among Research Design Choices and Psychometric Properties of Rating Scales: A Meta-Analysis," *Journal of Marketing Research*, 23(1), 1-10.

Peterson, Robert A., Sridhar Balasubramanian, and Bart J. Bronnenberg (1997), "Exploring the Implications of the Internet for Consumer Marketing," *Journal of the Academy of Marketing Science*, 25(4), 329-346.

Piercy, Nigel F. (1997), Market Led Strategic Change. Oxford: Butterworth-Heinemann.

Ranganathan, C. and Shobha Ganapathy (2002), "Key Dimensions of Business-to-Consumer Web Sites," *Information & Management*, 39(6), 457-465.

Rao, Akshay R. and Kent B. Monroe (1989), "The Effect of Price, Brand Name, and Store Name on Buyers' Perceptions of Product Quality: An Integrative Review," *Journal of Marketing Research*, 26(3), 351-357.

Ratchford, Brian T., Xing Pan, and Venkatesh Shankar (2003), "On the Efficiency of Internet Markets for Consumer Goods," *Journal of Public Policy & Marketing*, 22(1), 4-16.

Reardon, James and Chip E. Miller (1995), "Applied Scale Development: Measurement of Store Image," *Journal of Applied Business Research*, 11(4), 85-93.

Reichheld, Frederick F. (1996), The Loyalty Effect: The Hidden Force Behind Growth, Profits, and Lasting Value. Boston, MA: Harvard Business School Press.

Reichheld, Frederick F. and Phil Schefter (2000), "E-Loyalty," *Harvard Business Review*, 78(4), 105-113.

Riordan, Christine M. and Robert J. Vandenberg (1994), "A Central Question in Cross-Cultural Research: Do Employees of Different Cultures Interpret Work-Related Measures in an Equivalent Manner?," *Journal of Management*, 20(3), 643-671.

Rohm, Andrew J. and Vanita Swaminathan (2004), "A Typology of Online Shoppers Based on Shopping Motivations," *Journal of Business Research*, 57(7), 748-757.

Rokeach, Milton (1973), The Nature of Human Values. New York: Free Press.

Roselius, Ted (1971), "Consumer Rankings of Risk Reduction Methods," *Journal of Marketing*, 35(1), 56-61.

Rosen, Kenneth T. and Amanda L. Howard (2000), "E-Retail: Gold Rush or Fool's Gold?," *California Management Review*, 42(3), 72-100.

Rossiter, John R. (2002), "The C-OAR-SE Procedure for Scale Development in Marketing," *International Journal of Research in Marketing*, 19(4), 305-335.

Rust, Roland T. and Richard L. Oliver (1994), "Service Quality: Insights and Managerial Implications From the Frontier," in R. T. Rust and R. L. Oliver, (eds), Service Quality: New Directions in Theory and Practice, Thousand Oaks, CA: Sage.

Samli, A. Coskun, J. Patrick Kelly, and H. Keith Hunt (1998), "Improving Retail Performance by Contrasting Management- and Customer-Perceived Store Images: A Diagnostic Tool for Corrective Action," *Journal of Business Research*, 43(1), 27-38.

Schaefer, David R. and Don A. Dillman (1998), "Development of a Standard E-Mail Methodology: Results of an Experiment," *Public Opinion Quarterly*, 62(3), 378-397.

Schary, Philip B. (1971), "Consumption and the Problem of Time," *Journal of Marketing*, 35(2), 50-55.

Schoenbachler, Denise D. and Geoffrey L. Gordon (2002), "Multichannel Shopping: Understanding What Drives Channel Choice," *Journal of Consumer Marketing*, 19(1), 42-53.

Segars, Albert H. and Varun Grover (1993), "Re-Examining Perceived Ease of Use and Usefulness: A Confirmatory Factor Analysis," *MIS Quarterly*, 17(4), 517-525.

Seiders, Kathleen, Leonard L. Berry, and Larry G. Gresham (2000), "Attention, Retailers! How Convenient is Your Convenience Strategy?" *Sloan Management Review*, 41(3), 79-89.

Shankar, Venkatesh, Amy K. Smith, and Arvind Rangaswamy (2003), "Customer Satisfaction and Loyalty in Online and Offline Environments," *International Journal of Research in Marketing*, 20(2), 153-175.

Sheth, Jagdish N., Bruce I. Newman, and Barbara L. Gross (1991), "Why We Buy What We Buy: A Theory of Consumption Values," *Journal of Business Research*, 22(2), 159-170.

Shimp, Terence A. and William O. Bearden (1982), "Warranty and Other Extrinsic Cue Effects on Consumers' Risk Perception," *Journal of Consumer Research*, 9(1), 38-46.

Shop.org and Forrester Research (2005), "The State of Retailing Online 8.0," Report.

Shostack, G. Lynn (1977), "Breaking Free from Product Marketing," *Journal of Marketing*, 41(2), 73-80.

Simon, Herbert A. (1976), Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations. New York: Free Press.

Sirdeshmukh, Deepak, Jagdip Singh, and Barry Sabol (2002), "Consumer Trust, Value, and Loyalty in Relational Exchanges," *Journal of Marketing*, 66(1), 15-37.

Sirohi, Niren, Edward W. McLaughlin, and Dick R. Wittink (1998), "A Model of Consumer Perceptions and Store Loyalty Intentions for a Supermarket Retailer," *Journal of Retailing*, 74(2), 223-245.

Slater, Stanley F. and John C. Narver (1994), "Market Orientation, Customer Value, and Superior Performance," *Business Horizons*, 37(2), 22-28.

Spence, Homer E., James F. Engel, and Roger D. Blackwell (1970), "Perceived Risk in Mail-Order and Retail Store Buying," *Journal of Marketing Research*, 7(3), 364-369.

Spreng, Richard A., Andrea L. Dixon, and Richard W. Olshavsky (1993), "The Impact of Perceived Value on Consumer Satisfaction," *Journal of Consumer Satisfaction, Dissatisfaction, and Complaining Behavior*, 6(1), 50-55.

Spreng, Richard A. and Robert D. Mackoy (1996), "An Empirical Examination of a Model of Perceived Service Quality and Satisfaction," *Journal of Retailing*, 72(2), 201-214.

Srinivasan, Srini S., Rolph Anderson, and Kishore Ponnavolu (2002), "Customer Loyalty in E-Commerce: An Exploration of Its Antecedents and Consequences," *Journal of Retailing*, 78(1), 41-50.

Steenkamp, Jan-Benedict E. M. and Hans C. M. van Trijp (1991), "The Use of LISREL in Validating Marketing Constructs," *International Journal of Research in Marketing*, 8(4), 283-299.

Steenkamp, Jan-Benedict E. M. and Hans Baumgartner (2000), "On the Use of Structural Equation Models for Marketing Modeling," *International Journal of Research in Marketing*, 17(2/3), 195-202.

Stone, Robert N. and Kjell Grønhaug (1993), "Perceived Risk: Further Considerations for the Marketing Discipline," *European Journal of Marketing*, 27(3), 39-50.

Supphellen, Magne and Herbjørn Nysveen (2001), "Drivers of Intention to Revisit the Websites of Well-Known Companies," *International Journal of Market Research*, 43(3), 341-352.

Swaminathan, Vanita, Elzbieta Lepkowska-White, and Bharat P. Rao (1999), "Browsers or Buyers in Cyberspace? An Investigation of Factors Influencing Electronic Exchange," *Journal of Computer-Mediated Communication*, 5(2).

Sweeney, Jillian C., Geoffrey N. Soutar, and Lester W. Johnson (1997), "Retail Service Quality and Perceived Value," *Journal of Retailing and Consumer Services*, 4(1), 39-48.

Sweeney, Jillian C., Geoffrey N. Soutar, and Lester W. Johnson (1999), "The Role of Perceived Risk in the Quality-Value Relationship: A Study in a Retail Environment," *Journal of Retailing*, 75(1), 77-105.

Sweeney, Jillian C. and Geoffrey N. Soutar (2001), "Consumer Perceived Value: The Development of a Multiple Item Scale," *Journal of Retailing*, 77(2), 203-220.

Swinyard, William R. and Scott M. Smith (2003), "Why People (Don't) Shop Online: A Lifestyle Study of the Internet Consumer," *Psychology & Marketing*, 20(7), 567-597.

Szymanski, David M. and Richard T. Hise (2000), "e-Satisfaction: An Initial Examination," *Journal of Retailing*, 76(3), 309-322.

Tauber, Edward M. (1972), "Why Do People Shop?," *Journal of Marketing*, 36(4), 46-49.

Taylor, Shirley and Peter M. Todd (1995), "Assessing IT Usage: The Role of Prior Experience," *MIS Quarterly*, 19(4), 561-570.

Taylor, Stephen A. and Thomas L. Baker (1994), "An Assessment of the Relationshiop between Service Quality and Customer Satisfaction in the Formation of Consumers' Purchase Intentions," *Journal of Retailing*, 70(2), 163-178.

Teas, R. Kenneth and Sanjeev Agarwal (2000), "The Effects of Extrinsic Product Cues on Consumers' Perceptions of Quality, Sacrifice, and Value," *Journal of the Academy of Marketing Science*, 28(2), 278-290.

Teo, T. S. H., V. K. G. Lim, and R. Y. C. Lai (1999), "Intrinsic and Extrinsic Motivation in Internet Usage," *Omega: The International Journal of Management Science*, 27(1), 25-37.

Tetreault, Mary A. Stanfield and Robert E. Kleine III (1990), "Ritual, Ritualized Behavior, and Habit: Refinements and Extensions of the Consumption Ritual Construct," *Advances in Consumer Research*, 17(1), 31-38.

Thaler, Richard (1985), "Mental Accounting and Consumer Choice," *Marketing Science*, 4(3), 199-214.

Treacy, Michael and Fred Wiersema (1993), "Customer Intimacy and Other Value Disciplines," *Harvard Business Review*, 71(1), 84-93.

Triandis, Harry C. (1971), Attitude and Attitude Change. New York: John Wiley.

Urban, Glen L., Fareena Sultan, and William J. Qualls (2000), "Placing Trust at the Center of Your Internet Strategy," *Sloan Management Review*, 42(1), 39-48.

Vallerand, Robert J. (1997), "Toward a Hierarchical Model of Intrinsic and Extrinsic Motivation," in M. Zanna (ed.), Advances in Experimental Social Psychology, New York: Academic Press.

Van Kenhove, Patrick, Walter van Waterschoot, and Kristof de Wulf (1999), "The Impact of Task Definition on Store-Attribute Saliences and Store Choice," *Journal of Retailing*, 75(1), 125-137.

Vandenberg, Robert J. and Charles E. Lance (2000), "A Review and Synthesis of the Measurement Invariance Literature: Suggestions, Practices, and Recommendations for Organizational Research," *Organizational Research Methods*, 3(1), 4-69.

Venkatesh, Viswanath (2000), "Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model," *Information Systems Research*, 11(4), 342-365.

Venkatesh, Viswanath and Frank D. Davis (2000), "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies," *Management Science*, 46(2), 186-204.

Verhoef, Peter C., Philip Hans Franses, and Janny C. Hoekstra (2002), "The Effect of Relational Constructs on Customer Referrals and Number of Services Purchased From a Multiservice Provider: Does Age of Relationship Matter?," *Journal of the Academy of Marketing Science*, 30(3), 202-216.

Verhoef, Peter C. and Bas Donkers (2005), "The Effect of Acquisition Channels on Customer Loyalty and Cross-Buying," *Journal of Interactive Marketing*, 19(2), 31-43.

Wakefield, Kirk L. and Julie Baker (1998), "Excitement at the Mall: Determinants and Effects on Shopping Response," *Journal of Retailing*, 74(4), 515-539.

Westbrook, Robert A. and Richard L. Oliver (1991), "The Dimensionality of Consumption Emotion Patterns and Consumer Satisfaction," *Journal of Consumer Research*, 18(1), 84-91.

Widaman, K. F. and S. P. Reise (1997), "Exploring the Measurement Invariance of Psychological Instruments: Applications in the Substance Use Domain," in K. J. Bryant, M. Windle and S.G. West (eds), The Science of Prevention: Methodological Advances from Alcohol and Substance Abuse Research, Washington, DC: American Psychological Association.

Wolfinbarger, Mary and Mary C. Gilly (2001), "Shopping Online for Freedom, Control, and Fun," *California Management Review*, 43(2), 34-55.

Wolfinbarger, Mary and Mary C. Gilly (2002), ".comQ: Conceptualizing, Measuring and Predicting e-Tail Quality," Marketing Science Institute Working Paper.

Wolfinbarger, Mary and Mary C. Gilly (2003), "eTailQ: Dimensionalizing, Measuring and Predicting Etail Quality," *Journal of Retailing*, 79(3), 183-198.

Woo, Henry K. (1992), Cognition, Value and Price: A General Theory of Value. Ann Arbor: University of Michigan Press.

Woodall, Tony (2003), "Conceptualising 'Value for the Customer': A Structural, Attributional and Dispositional Perspective," *Academy of Marketing Science Review*, 2003(12), 1-42.

Woodruff, Robert B. and Sarah Fisher Gardial (1996), Know Your Customer: New Approaches to Customer Value and Satisfaction. Cambridge, MA: Blackwell.

Woodruff, Robert B. (1997), "Customer Value: The Next Source for Competitive Edge," *Journal of the Academy of Marketing Science*, 25(2), 139-153.

Yoo, Boonghee and Naveen Donthu (2001), "Developing a Scale to Measure the Perceived Quality of an Internet Shopping Site (SITEQUAL)," *Quarterly Journal of Electronic Commerce*, 2(1), 31-46.

Yoon, Sung-Joon (2002), "The Antecedents and Consequences of Trust in Online-Purchase Decisions," *Journal of Interactive Marketing*, 16(2), 47-63.

Zeithaml, Valarie A. (1988), "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence," *Journal of Marketing*, 52(3), 2-22.

Zeithaml, Valarie A., Leonard L. Berry, and A. Parasuraman (1996), "The Behavioral Consequences of Service Quality," *Journal of Marketing*, 60(2), 31-46.

Zeithaml, Valarie A., A. Parasuraman, and Arvind Malhotra (2000) Conceptual Framework for Understanding e-Service Quality: Implications for Future Research and Managerial Practice: Implications for Future Research and Managerial Practice. Marketing Science Institute Working Paper.

Zeithaml, Valarie A., A. Parasuraman, and Arvind Malhotra (2002), "Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge," *Journal of the Academy of Marketing Science*, 30(4), 362-375.

Appendix I Summary of online studies

Appendix I consists of three parts: (1) Technology Acceptance Model (TAM) studies (see section 2.3), (2) studies with the focus on website interaction, and (3) studies that deal with online shopping. The columns refer to whether the focus was on the website interface or on the entire shopping process; whether transaction or nontransaction websites were investigated; and, whether the study was conceptual or empirical. The last column represents the variables that were investigated in the corresponding study.

Study	Classification concept/ Dependent variable(s)	Scope	Kind of website	Conceptual or empirical	Dimensions/ Independent variable(s)
TAM studies with focus on Internet or E-Commerce					
Childers, Carr, Peck and Carson (2001)	Attitude towards online shopping	Entire shopping process	E-tailer sites	Empirical	PU, PEOU, enjoyment → A
Deveraj, Fan and Kohli (2002)	Channel preference	Entire shopping process	E-tailer sites	Empirical	SAT → Channel preference PU, PEOU → SAT PEOU → PU
Gefen and Straub (2000)	Intended inquiry, intended purchase	Entire shopping process	All	Empirical	Intended purchase PU → BI PEOU → PU Intended inquiry PEOU, PU → BI PEOU → PU
Gefen and Straub (2003)	Online purchase intentions	Entire shopping process	E-tailer sites	Empirical	PU, Trust → BI PEOU, social presence* → PU Social presence → Trust
Gefen, Karahanna and Straub (2003)	Intended use (credit card use, sharing information)	Website interface	E-tailer sites	Empirical	PU, PEOU, Trust -> BI PEOU → PU, Trust Trust → PU
Lederer, Maupin, Sena and Zhuang (2000)	Website use (frequency)	Website interface	Work-related websites	Empirical	PU, PEOU → U PEOU → PU
Lee, Park and Ahn (2000)	E-Commerce adoption (frequency and total purchase amount)	Entire shopping process	E-tailer sites	Empirical	PU, PEOU*, channel risk, performance risk → Use PEOU, channel risk, performance risk* → PU
Pavlou (2003)	Online transaction intentions, Actual transaction	Entire shopping process	E-tailer sites	Empirical	PU, risk, trust → BI PEOU → PU Trust → PEOU, PU, risk

Study	Classification concept/ Dependent variable(s)	Scope	Kind of website	Conceptual or empirical	Dimensions/ Independent variable(s)
Monsuwé, Dellaert, de Ruyter (2004) Intentions to shop online	Entire shopping process	E-tailer sites	Conceptual	PU, A → BI	PU, PEOU, Enjoyment → A
Teo, Lim and Lai (1999)	Internet usage (frequency, daily use, diversity)	Website interaction	All	Empirical	PU, PEOU, Enjoyment → Use PEOU → PU, Enjoyment
Note: PU = perceived usefulness, PEOU = perceived ease of use, BI= behavioral intentions, A= attitude, SAT= satisfaction. * insignificant result					

Studies with focus on website quality/website interaction					
Study	**Classification concept/ Dependent variable(s)**	**Scope**	**Kind of website**	**Conceptual or empirical**	**Dimensions/ Independent variable(s)**
De Haes, Lievens and van Waterschoot (2004)	Website atmospherics	Website atmospherics	All	Empirical	Text features Color features Navigation features Website speed Customization features Communication features Advertising features Multimedia features Graphic design features Shopping features Security features Information features
Eroglu, Machleit and Davis (2003)	Website atmosphere (approach/avoidance)	Website atmospherics	E-tailer sites	Conceptual/ Empirical	High task relevant info Low task relevant info
Loiacono, Watson and Goodhue (2002)	Website quality (WEBQUAL™)	Website interface	E-tailer sites	Empirical	Ease of use ▪ Ease of understanding ▪ Intuitive operations Usefulness ▪ Informational fit-to-task ▪ Interactivity ▪ Trust ▪ Response time Entertainment ▪ Visual appeal ▪ Innovativeness ▪ Flow/emotional appeal

					Complementary relationship ▪ Online completeness ▪ Better than alternative channels ▪ Consistent image
Muylle, Moenaert and Despontin (2004)	Website user satisfaction	Website interface	All	Empirical	Layout Language customization Information ▪ Info relevancy ▪ Info accuracy ▪ Info comprehensibility ▪ Info comprehen-siveness Connection ▪ Ease of use ▪ Entry guidance ▪ Structure ▪ Hyperlink connotation ▪ Website speed
Ranganathan and Ganapathy (2002)	Underlying dimensions of B2C websites	Website interface	E-tailer sites	Empirical	Information content Design Security Privacy
Supphellen and Nysveen (2001)	Intentions to revisit websites	Website interface	Corporate websites	Empirical	Safety Layout Functional attributes ▪ Availability of relevant information ▪ Richness of information ▪ Easy to search out information ▪ Easy to order tickets
Yoo and Donthu (2001)	Quality of Internet shopping site (SITEQUAL)	Website interface	E-tailer sites	Empirical	Ease of use Aesthetic design Processing speed Security

Studies with focus on online shopping					
Study Classification concept/	**Dependent variable(s) Scope**	**Kind of website**	**Conceptual or empirical**	**Dimensions/**	**Independent variable(s)**
Anderson and Srinivasan (2003)	E-satisfaction, E-loyalty	Entire shopping process	E-tailer sites	Empirical	E-satisfaction → E--loyalty *Relationship e-satisfaction and e-loyalty moderated by* Trust Perceived value Purchase size Inertia Convenience motivation
Balasubramanian, Konana and Menon (2003)	Antecedents of E-satisfaction	Entire shopping process	Online investing sites	Empirical	Price level Operational competence Trustworthiness
Barnes and Vidgen (2002)	Quality of Internet shopping site (WebQual 4.0)	Entire shopping process	E-tailer sites	Empirical	Information quality Usability ▪ Usability ▪ Design Service interaction quality ▪ Trust ▪ Empathy
Chen and Dubinsky (2003)	E-value and online purchase intentions	Entire shopping process	E-tailer sites	Empirical	Product quality Product price Perceived risk E-tailer reputation Valence of shopping experience ▪ Customer service ▪ Ease of use ▪ Information relevancy
Francis and White (2002)	Quality of internet shopping sites (PIRQUAL)	Entire shopping process	E-tailer sites	Empirical	Web store functionality Product attribute description Ownership conditions Delivered products Customer service Security

Study	Classification concept/ Dependent variable(s)	Scope	Kind of website	Conceptual or empirical	Dimensions/ Independent variable(s)
Kim and Lim (2001)	Importance of website attributes and satisfaction with online shopping	Entire shopping process	E-tailer sites	Empirical	Entertainment Convenience Reliability Information quality Speed (of transaction)
Montoya-Weiss, Voss and Grewal (2003)	Online channel use, overall satisfaction	Entire shopping process	E-tailer sites	Empirical	Online channel risk General Internet expertise Relative channel assessment ▪ Service quality in alternative channel ▪ Service quality in online channel
Parasuraman, Zeithaml and Malhotra (2005)	E-quality (E-S-Qual, E-RecS-Qual)	Entire shopping process	E-tailer sites	Empirical	Core service scale Efficiency System availability Fulfillment Privacy (incl. security) Service recovery Responsiveness Compensation Contact
Shankar, Smith and Rangaswamy (2003)	Overall satisfaction, Loyalty	Entire shopping process	Hotel booking sites	Empirical	Encounter satisfaction → Overall satisfaction → Loyalty
Srinivasan, Anderson and Ponnavolu (2002)	E-loyalty	Entire shopping process	E-tailer sites	Empirical	Customization Contact interactivity Care Community Cultivation Choice Character Convenience

Study	Classification concept/ Dependent variable(s)	Scope	Kind of website	Conceptual or empirical	Dimensions/ Independent variable(s)
Swaminathan, Lepkowska-White and Rao (1999)	Online purchasing behavior	Entire shopping process	All	Empirical	Vendor characteristics Security of transactions Concern for privacy Consumer characteristics (shopping motivations)
Szymanski and Hise (2000)	E-satisfaction	Entire shopping process	E-tailer sites	Empirical	Convenience Merchandising ▪ Product information ▪ Product offerings Site design Financial security
Wolfinbarger and Gilly (2003)	E-quality (eTailQ)	Entire shopping process	E-tailer sites	Empirical	Fulfillment/Reliability Website design Privacy/security Customer service
Yoon (2002)	Online purchase intentions, Online trust, Website satisfaction	Entire shopping process	E-tailer sites	Empirical	Transaction security Site properties Navigation functionality Personal values (familiarity, previous e-satisfaction)
Zeithaml, Parasuraman and Malhotra (2000)	E-quality	Entire shopping process	E-tailer sites	Conceptual	Access Ease of navigation Efficiency Flexibility Reliability (of website) Personalization Security/privacy Responsiveness Assurance/trust Site aesthetics Price knowledge
Zeithaml, Parasuraman and Malhotra (2002)	E-quality (conceptual E-SQ)	Entire shopping process	E-tailer sites	Conceptual	Information content and availability Ease of use Privacy/Security Graphic style Fulfillment/Reliability Other criteria ▪ Access ▪ Responsiveness ▪ Personalization

Appendix II Online and offline store attributes

Retail/store literature Baker et al. (2002), Berry (1969), Lim and Dubinsky (2004), Lindquist (1974)	Chen and Dubinsky (2003)	Loiacono, Watson and Goodhue (2002)	Montoya-Weiss, Voss and Grewal (2003)	Srinivasan, Anderson and Ponnavolu (2002)	Parasuraman, Zeithaml and Malhotra (2005)	Szymanski and Hise (2000)	Wolfinbarger and Gilly (2003)	Yoon (2002)	Zeithaml, Parasuraman and Malhotra (2002)
Price ▪ Price level ▪ Promotions	√								
Merchandise quality ▪ Quality of merchandise ▪ Assortment/selection ▪ Availability in stock	√			√		√	√		
Customer service ***Functional/cognitive*** ▪ Responsiveness/ease of contact ▪ After-sales support ▪ Service policies/guarantees	√		√	√	√		√		√
Nonfunctional/affective ▪ Courtesy ▪ Empathy ▪ Personalization				√			√		√

Retail/store literature **Baker et al. (2002), Berry (1969), Lim and Dubinsky (2004), Lindquist (1974)**	**Chen and Dubinsky (2003)**	**Loiacono, Watson and Goodhue (2002)**	**Montoya-Weiss, Voss and Grewal (2003)**	**Srinivasan, Anderson and Ponnavolu (2002)**	**Parasuraman, Zeithaml and Malhotra (2005)**	**Szymanski and Hise (2000)**	**Wolfinbarger and Gilly (2003)**	**Yoon (2002)**	**Zeithaml, Parasuraman and Malhotra (2002)**
Convenience/efficiency Accessibility/Opening hours Store layout/Queues	√	√	√	√	√	√	√	√	√
Store ambiance ▪ Store atmosphere/ attractiveness ▪ Social interaction/ clientele		√	√	√			√	√	√
Reliability/risk reducers ▪ Guarantees ▪ Keeping promises	√	√	√		√	√	√	√	√
Information ▪ Employees ▪ Product displays ▪ Commercials	√	√	√	√		√	√		√
Store image ▪ Institutional factors ▪ Reputation ▪ Trustworthiness	√	√					Trust is higher order outcome based on the four components of e-quality		
CRM tools ▪ Loyalty programs				√					

Note: This table displays the store attributes that have been identified in prior online studies; the classification is based on prior research.

Appendix III Invariance tests Study 1 & 2

Study 1: Online versus offline context (base model)

Model	Consecutive factor loading invariance tests	χ^2	df	$\Delta\chi^2$	Δdf	P-value
	Unconstrained	831.68	308	-	-	
1	All lambdas invariant	860.67	320	28.99	12	.002
2	Unc.+Risk4	832.81	309	1.13	1	.277
3	Unc.+Risk4+Time2	834.24	310	2.56	2	.278
4	Unc.+Risk4+Time2+MQ2	834.30	311	2.62	3	.454
5	Unc.+Risk4+Time2+MQ2+Price2	835.58	312	3.90	4	.420
6	Unc.+Risk4+Time2+MQ2+Price2+Int2	835.95	313	4.27	5	.511
7	Unc.+Risk4+Time2+MQ2+ Price2+Int2+Int3	845.12	314	13.43*	6	.038
8	Unc.+Risk4+Time2+MQ2+Price2+Int2+PV2	837.21	314	5.53	6	.477
9	Unc.+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3	837.75	315	6.07	7	.531
10	Unc.+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ4	847.34	316	15.66*	8	.047
11	Unc.+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5	840.61	316	8.93	8	.348
12	Unc.+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2	841.70	317	10.02	9	.349
13	Unc.+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2+Enjoy3	844.70	318	13.03	10	.222
Conclusion: items Int3 and SQ4 not invariant						
	Separate structural relationships invariance tests			Compared with Model 13		
14	Model 13+ All structural relationships invariant	917.35	331	72.82*	13	**.000**
15	Model 13+ Merchandise quality → Intentions	844.71	319	0.00	1	.975
16	Model 13+ Service quality → Intentions	848.56	319	3.75	1	*.053*
17	Model 13+ Perceived risk → Intentions	844.79	319	0.08	1	.773
18	Model 13+ Time/effort →Intentions	846.51	319	1.80	1	.180
19	Model 13+ Enjoyment → Intentions	846.15	319	1.44	1	.231
20	Model 13+ Perceived value → Intentions	844.77	319	0.06	1	.801
21	Model 13+ Service quality → Perceived Value	847.77	319	3.06	1	*.080*
22	Model 13+ Price → Perceived value	845.47	319	0.76	1	.383
23	Model 13+ Merchandise quality → Perceived value	847.74	319	3.03	1	*.082*
24	Model 13+ Merchandise quality → Time/effort	857.83	319	13.12*	1	**.000**
25	Model 13+ Merchandise quality → Enjoyment	845.54	319	0.83	1	.362
26	Model 13+ Service quality → Perceived risk	870.07	319	25.36*	1	**.000**
27	Model 13+ Service quality → Enjoyment	846.96	319	2.23	1	.133

Notes:
Figures in bold represent relationships that differ across contexts at a $p<.05$ significance level. Figures in italics represent relationships that differ across contexts only at a $p<.10$ significance level.

Read the table in Appendix III as follows: The above part (Model 1-13) tests the invariance of the measurement items. Initially, a test is conducted in which all lambdas are set to be equal. This model is compared with the unconstrained model in which all lambdas are set to be free across contexts. The difference in chi-square with 12 degrees of freedom results in a significant p-value, indicating that the lambdas are not invariant. Consecutive analyses are performed to see which items are not invariant; an asterisk indicates that the added item is nonequivalent. The below part (Model 14-27) tests the invariance of the structural relationships. As a start, all structural relationships are set to be equal to investigate whether structural invariance exists. This model is compared with the model with invariant items (i.e. Model 13); Model 14 shows that the relationships are not equal ($\Delta\chi^2=72.82$, $df=13$, $p<.001$). Subsequently, each relationship is set to be free and equal to investigate the chi-square difference with 1 *df*. A significant chi-square difference implies a significant difference in the strength of the corresponding relationship between the offline and online context (Byrne 2001)

Study 1: Online buyers versus offline buyers for online context (base model)

Model	Consecutive factor loading invariance tests	χ^2	df	$\Delta\chi^2$	Δdf	P-value
	Unconstrained	642.84	308	-	-	
1	All lambdas invariant	677.86	320	35.02*	12	.000
2	Unc+Risk4	646.05	309	3.22	1	.073
3	Unc+Risk4+Time2	651.07	310	8.23*	2	.016
4	Unc+Risk4+MQ2	648.18	310	5.34	2	.069
5	Unc+Risk4+MQ2+Price2	649.19	311	6.35	3	.096
6	Unc+Risk4+MQ2+Price2+Int[45]	654.09	312	11.26*	4	.024
7	Unc+Risk4+MQ2+Price2+Int3	650.01	312	7.18	4	.127
8	Unc+Risk4+MQ2+Price2+Int3+PV1	656.85	313	14.01*	5	.016
9	Unc+Risk4+MQ2+Price2+Int3+PV3	650.05	313	7.22	5	.205
10	Unc+Risk4+MQ2+Price2+Int3+PV3+SQ4	650.38	314	7.54	6	.273
11	Unc+Risk4+MQ2+Price2+Int3+PV3+SQ4+ SQ5	651.29	315	8.46	7	.294
12	Unc+Risk4+MQ2+Price2+Int3+PV3+SQ4+ SQ5+Enjoy2	651.66	316	8.82	8	.358
13	Unc+Risk4+MQ2+Price2+Int3+PV3+SQ4+ SQ5+Enjoy2+Enjoy3	654.78	317	11.94	9	.216
Conclusion: items Time2, Int1, PV1 not invariant						
	Separate structural relationships invariance tests			Compared with model 13		
14	Model 13+ All structural relationships invariant	691.15	330	36.37*	13	**.001**
15	Model 13+ Merchandise quality → Intentions	656.47	318	1.69	1	.194
16	Model 13+ Service quality → Intentions	666.23	318	11.45*	1	**.001**
17	Model 13+ Perceived risk → Intentions	658.09	318	2.31	1	.136
18	Model 13+ Time/effort →Intentions	656.67	318	1.79	1	.181
19	Model 13+ Enjoyment → Intentions	669.58	318	14.80*	1	**.000**
20	Model 13+ Perceived value → Intentions	655.83	318	1.05	1	.306
21	Model 13+ Service quality → Perceived Value	656.55	318	1.77	1	.183
22	Model 13+ Price → Perceived value	655.13	318	0.35	1	.552
23	Model 13+ Merchandise quality → Perceived value	656.47	318	1.69	1	.194
24	Model 13+ Merchandise quality → Time/effort	655.78	318	1.00	1	.317
25	Model 13+ Merchandise quality → Enjoyment	655.47	318	0.68	1	.408
26	Model 13+ Service quality → Perceived risk	658.33	318	3.55	1	*.060*
27	Model 13+ Service quality → Enjoyment	658.77	318	4.92*	1	**.027**

[45] The initial reference items PV1 and Int1 appeared to be nonequivalent. Subsequently, the second item was chosen as a reference item (cf. Steenkamp and Baumgartner 1998)

Study 1: Online versus offline context (extended model)

Mo -del	Consecutive factor loading invariance tests	χ^2	df	$\Delta\chi^2$	Δdf	P-value
	Unconstrained	1681.10	698	-	-	
1	All lambdas invariant	1766.76	716	85.66	18	.000
2	Unc.+Risk4	1681.71	699	0.61	1	.435
3	Unc.+Risk4+Time2	1681.80	700	0.71	2	.703
4	Unc.+Risk4+Time2+MQ2	1681.92	701	0.82	3	.845
5	Unc.+Risk4+Time2+MQ2+Price2	1682.97	702	1.87	4	.759
6	Unc.+Risk4+Time2+MQ2+Price2+Int2	1685.78	703	4.68	5	.456
7	Unc+Risk4+Time2+MQ2+Price2+Int2+Int3	1694.71	704	13.61*	6	.043
8	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2	1688.62	704	7.52	6	.275
9	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3	1689.37	705	8.27	7	.310
10	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ4	1697.38	706	16.28*	8	.038
11	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5	1692.11	706	11.01	8	.201
12	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2	1694.04	707	12.94	9	.165
13	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2+Enjoy3	1696.95	708	15.85	10	.104
14	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2+Enjoy3+Rep1	1698.01	709	16.91	11	.110
15	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2+Enjoy3+Rep1+Rep2	1702.21	710	21.12*	12	.049
16	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2+Enjoy3+Rep1+Inf1	1700.15	710	19.05	12	.087
17	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2+Enjoy3+Rep1+Inf1+ Inf2	1724.69	711	43.59*	13	.000
18	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2+Enjoy3+Rep1+Inf1+ Ease3	1701.12	711	20.02	13	.095
19	Unc+Risk4+Time2+MQ2+Price2+Int2+PV2 +PV3+SQ5+Enjoy2+Enjoy3+Rep1+Inf1+Ea se3+ Ease5	1726.91	712	45.81*	14	.000
Conclusion: items Int3, SQ4, Rep2, Inf2 and Ease5 not invariant						
	Separate structural relationships invariance tests			Compared with Model 18		
20	Model 18+ All structural relationships invariant	1789.50	733	88.39*	22	**.000**
21	Model 18+ Ease of use → Time/effort	1702.54	712	1.42	1	.233
22	Model 18+ Ease of use → Perceived risk	1715.85	712	14.74*	1	**.000**
23	Model 18+ Ease of use → Enjoyment	1706.97	712	5.85*	1	**.016**
24	Model 18+ Informativeness → Time/effort	1703.46	712	2.34	1	.126
25	Model 18+ Informativeness → Perceived risk	1701.43	712	0.32	1	.574
26	Model 18+ Reputation → Service quality	1714.22	712	13.10*	1	**.000**
27	Model 18+ Reputation → Merchandise quality	1701.51	712	0.40	1	.530
28	Model 18+ Reputation → Perceived risk	1702.57	712	1.46	1	.228
29	Model 18+ Reputation → Intentions	1701.36	712	0.25	1	.621

Study 1: Online buyers versus offline buyers for online context (extended model)

Mo -del	Consecutive factor loading invariance tests	χ^2	df	$\Delta\chi^2$	Δdf	P-value
	Unconstrained	1373.7	698	-	-	
1	All lambdas invariant	1405.7	716	32.03*	18	.022
2	Unc.+Risk4	1376.0	699	2.32	1	.128
3	Unc.+Risk4+Time2	1383.9	700	10.16*	2	.006
4	Unc.+Risk4+MQ2	1376.2	700	2.51	2	.258
5	Unc.+Risk4+MQ2+Price2	1376.2	701	2.53	3	.471
6	Unc.+Risk44+MQ2+Price2+Int2	1377.2	702	3.50	4	.478
7	Unc.+Risk44+MQ2+Price2+Int2+Int3	1380.3	703	6.56	5	.256
8	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2	1383.7	704	10.03	6	.124
9	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3	1384.6	705	10.83	7	.146
10	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4	1384.7	706	10.94	8	.205
11	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5	1384.7	707	10.94	9	.280
12	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5+Enjoy2	1384.8	708	11.08	10	.352
13	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5+Enjoy2+Enjoy3	1387.6	709	13.89	11	.239
14	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5+Enjoy2+Enjoy3+Rep1	1389.3	710	15.58	12	.211
15	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5+Enjoy2+Enjoy3+Rep1+Rep2	1389.4	711	15.71	13	.265
16	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5+Enjoy2+Enjoy3+Rep1+Rep2+Inf1	1393.0	712	19.30	14	.154
17	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5+Enjoy2+Enjoy3+Rep1+Rep2+Inf1+Inf2	1393.0	713	19.30	15	.200
18	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5+Enjoy2+Enjoy3+Rep1+Rep2+Inf1+Inf2+Ease1	1395.6	714	21.86	16	.148
19	Unc.+Risk44+MQ2+Price2+Int2+Int3+PV2+PV3+SQ4+SQ5+Enjoy2+Enjoy3+Rep1+Rep2+Inf1+Inf2+Ease1+Ease3	1397.8	715	24.05	17	.118
Conclusion: item Time2 not invariant						
	Separate structural relationships invariance tests			Compared with model 19		
20	Model 19+ All structural relationships invariant	1448.7	737	50.88*	22	**.000**
21	Model 19+ Ease of use → Time/effort	1397.8	716	0.07	1	.790
22	Model 19+ Ease of use → Perceived risk	1398.1	716	0.37	1	.545
23	Model 19+ Ease of use → Enjoyment	1397.9	716	0.17	1	.677
24	Model 19+ Informativeness → Time/effort	1398.4	716	0.67	1	.414
25	Model 19+ Informativeness → Perceived risk	1398.0	716	0.22	1	.636
26	Model 19+ Reputation → Service quality	1404.4	716	6.64	1	**.010**
27	Model 19+ Reputation → Merchandise quality	1400.3	716	2.49	1	.114
28	Model 19+ Reputation → Perceived risk	1397.8	716	0.00	1	.960
29	Model 19+ Reputation → Intentions	1398.8	716	1.07	1	.302

Study 2: Online versus offline context (base model)

Model	Consecutive factor loading invariance tests	χ^2	df	$\Delta\chi^2$	Δdf	P-value
	Unconstrained	623.91	309	-	-	
1	All lambdas invariant	659.32	321	35.40*	12	.001
2	Unc.+Risk4	624.74	310	0.83	1	.362
3	Unc.+Risk4+Time2	632.18	311	8.27*	2	.016
4	Unc.+Risk4+MQ2	625.23	311	1.32	2	.517
5	Unc.+Risk4+MQ2+Price2	626.02	312	2.11	3	.550
6	Unc.+Risk4+MQ2+Price2+Int2	629.23	313	5.32	4	.256
7	Unc.+Risk4+MQ2+Price2+Int2+Int3	634.07	314	12.16*	5	.048
8	Unc.+Risk4+MQ2+Price2+Int2+PV2	629.79	314	5.88	5	.318
9	Unc.+Risk4+MQ2+Price2+Int2+PV2+PV3	629.90	315	5.99	6	.424
10	Unc.+Risk4+MQ2+Price2+Int2+PV2+PV3+ SQ4	632.61	316	8.70	7	.275
11	Unc.+Risk4+MQ2+Price2+Int2+PV2+PV3+ SQ4+SQ5	635.43	317	11.52	8	.174
12	Unc.+Risk4+MQ2+Price2+Int2+PV2+PV3+ SQ4+SQ5+Enjoy1	644.80	318	20.89*	9	.013
13	Unc.+Risk4+MQ2+Price2+Int2+PV2+PV3+ SQ4+SQ5+Enjoy3	635.44	318	11.52	9	.242
Conclusion: items Time2, Int3, and Enjoy1 not invariant						
	Separate structural relationships invariance tests			Compared with Model 13		
14	Model 13+ All structural relationships invariant	670.52	331	35.08*	13	**.001**
15	Model 13+ Merchandise quality → Intentions	638.56	319	3.12	1	*.077*
16	Model 13+ Service quality → Intentions	635.51	319	0.07	1	.790
17	Model 13+ Perceived risk → Intentions	638.04	319	2.61	1	.106
18	Model 13+ Time/effort → Intentions	637.84	319	2.41	1	.121
19	Model 13+ Enjoyment → Intentions	636.25	319	0.82	1	.366
20	Model 13+ Perceived value → Intentions	635.45	319	0.01	1	.918
21	Model 13+ Service quality → Perceived Value	635.50	319	0.07	1	.797
22	Model 13+ Price → Perceived value	635.44	319	0.00	1	1.00
23	Model 13+ Merchandise → Perceived value	635.91	319	0.48	1	.490
24	Model 13+ Merchandise quality → Time/effort	645.78	319	10.34*	1	**.001**
25	Model 13+ Merchandise quality → Enjoyment	635.44	319	0.00	1	.962
26	Model 13+ Service quality → Perceived risk	644.59	319	9.15*	1	**.002**
27	Model 13+ Service quality → Enjoyment	637.11	319	1.67	1	.196

Notes:

Figures in bold represent relationships that differ across contexts at a $p<.05$ significance level. Figures in italics represent relationships that differ across contexts only at a $p<.10$ significance level.

Study 2: Online buyers versus offline buyers for online context (base model)

Mo-del	Consecutive factor loading invariance tests	χ^2	df	$\Delta\chi^2$	Δdf	P-value
	Unconstrained	466.27	308	-	-	
1	All lambdas invariant	485.07	320	18.80	12	.093
Conclusion: all items are invariant						
	Separate structural relationships invariance tests			Compared with model 1		
14	Model 1+ All structural relationships invariant	504.12	330	19.05	13	.120
15	Model 1+ Merchandise quality → Intentions	485.39	321	0.32	1	.574
16	Model 1+ Service quality → Intentions	488.96	321	3.89*	1	**.048**
17	Model 1+ Perceived risk → Intentions	485.96	321	0.89	1	.346
18	Model 1+ Time/effort →Intentions	491.95	321	6.88*	1	**.009**
19	Model 1+ Enjoyment → Intentions	487.14	321	2.07	1	.150
20	Model 1+ Perceived value → Intentions	485.13	321	0.06	1	.808
21	Model 1+ Service quality → Perceived Value	485.58	321	0.51	1	.474
22	Model 1+ Price → Perceived value	485.26	321	0.19	1	.661
23	Model 1+ Merchandise quality → Perceived value	485.10	321	0.03	1	.875
24	Model 1+ Merchandise quality → Time/effort	485.16	321	0.08	1	.772
25	Model 1+ Merchandise quality → Enjoyment	485.63	321	0.56	1	.455
26	Model 1+ Service quality → Perceived risk	485.40	321	0.33	1	.567
27	Model 1+ Service quality → Enjoyment	485.20	321	0.13	1	.909

Note: Figures in bold represent relationships that differ across contexts at a $p<.05$ significance level.

Appendix IV Additional factors

	Offline sample			Online sample		
Items[a]	**Store[b,c]**	**Website[b,c]**	**Store-website[d]**	**Store[b,c]**	**Website[b,c]**	**Store-website[d]**
Ease1	5.92 (1.20)	5.69 (1.38)	**.23****	5.26 (1.67)	6.53 (.85)	**-1.28*****
Ease3	5.60 (1.32)	4.66 (1.41)	**.94*****	5.10 (1.57)	5.67 (1.43)	**-.57*****
Ease5	6.05 (1.09)	4.55 (1.30)	**1.51*****	6.08 (1.02)	6.14 (1.11)	-.06
Inf1	4.72 (1.38)	4.72 (1.19)	-.01	5.12 (1.49)	5.09 (1.40)	.03
Inf2	4.96 (1.29)	4.59 (1.19)	**.37*****	4.97 (1.40)	5.26 (1.30)	**-.28***
Inf3	5.25 (1.23)	4.68 (1.15)	**.57*****	5.32 (1.33)	5.41 (1.26)	-.09
Rep1	5.96 (.98)	4.39 (1.22)	**1.58*****	6.12 (.98)	5.75 (1.17)	**.37*****
Rep2	6.21 (.86)	4.38 (1.12)	**1.83****	6.33 (.81)	5.74 (1.11)	**.59*****
Rep3	6.08 (.95)	4.33 (1.04)	**1.74*****	6.24 (.75)	5.78 (.93)	**.46*****

* p < .05; ** p < .01; *** p < .001

Notes:

a. Each item (e.g. Ease1) is measured in the offline and online context.

b. Item means are based on 7-point Likert scale (1=totally disagree, 7=totally agree).

c. Standard deviations are displayed between brackets.

d. Figures in bold represent significant mean differences measured through paired-sample *t*-tests. Sample sizes for paired *t*-tests ranged from 393 to 403 for offline buyers, and from 215 to 231 for online buyers, because of missing data.

Appendix V Effects of extension on existent relationships

	Offline context N=539		Online context N=502	
Structural relationships	Coefficients *before* addition	Coefficients *after* addition	Coefficients *before* addition	Coefficients *after* addition
Antecedents of Perceived value	R^2=.621	R^2=.630	R^2=.539	R^2=.594
H2a: Service quality → Perceived value	.26	.31	.16	.31
H3a: Merchandise quality → Perceived value	-.02$^{n.s.}$	-.03$^{n.s.}$	.07	.01$^{n.s.}$
H4: Price → Perceived value	-.46	-.44	-.46	-.49
Antecedents of Purchase Intentions	R^2=.374	R^2=.416	R^2=.565	R^2=.592
H1: Perceived value → Intentions	.11$^{n.s.}$	.10$^{n.s.}$	.07$^{n.s.}$	.07$^{n.s.}$
H5: Perceived risk → Intentions	-.17	-.13	-.14	-.08$^{n.s.}$
H6: Time/effort costs → Intentions	-.18	-.15	-.30	-.20
H7: Enjoyment → Intentions	.35	.36	.48	.54
H2b: Service quality → Intentions	-.05$^{n.s.}$	.13$^{n.s}$	.48	.08$^{n.s}$
H3b: Merchandise quality → Intentions	.15	.14	.15	.08$^{n.s.}$
H11d: Reputation → Intentions	-	.32	-	.50
Antecedents of Risk	R^2=.133	R^2=.205	R^2=.225	R^2=.415
H2c: Service quality → Perceived risk	-.29	.04$^{n.s.}$	-.59	.04$^{n.s.}$
H9b: Ease of use → Perceived risk	-	-.33	-	-.66
H10b: Informativeness → Perceived risk	-	.05$^{n.s.}$	-	.09$^{n.s.}$
H11c: Reputation → Perceived risk	-	-.24	-	.04$^{n.s.}$
Antecedents of Enjoyment	R^2=.366	R^2=.432	R^2=.381	R^2=.446
Service quality → Enjoyment	.50	.40	.66	.22
Merchandise quality → Enjoyment	.31	.15	.22	.02$^{n.s.}$
H9c: Ease of use → Enjoyment	-	.54	-	.56
Antecedents of Time/effort costs	R^2=.058	R^2=.159	R^2=.341	R^2=.467
Merchandise quality → Time/effort costs	-.33	-.02$^{n.s.}$	-.55	-.26
H9a: Ease of use → Time/effort costs	-	-.60	-	-.52
H10a: Informativeness → Time/effort costs	-	-.06$^{n.s.}$	-	.11$^{n.s.}$

Notes: Shaded areas indicate that the relationship was significant prior the addition but insignificant after the addition of the variables belonging to the extended model. N.s. represents coefficients that are not significant from zero at a .05 significance level based on one-tailed tests.

Appendix VI Exploratory Factor Analyses

Exploratory factor analysis for antecedents of perceived value and intentions

Store/Website N=411/N=408	1	2	3	4	5	6
SQ1	**.82/.74**					
SQ2	**.75/.77**					
SQ2	**.79/.69**					
SQ4	**.81/.73**					
SQ5	**.72/.43**			*/.32*		
Enjoy1		**.84/.79**				
Enjoy2		**.82/.80**				
Enjoy3		**.85/.83**				
Enjoy4		**.74/.71**				
Risk1			**.64/.74**			
Risk3			**.76/.90**			
Risk4			**.88/.79**			
Time1				**.91/.77**		
Time2				**.87/.86**		
MQ1					**.93/.92**	
MQ2					**.93/.90**	
Price1						**.83/.88**
Price2						**.89/.83**
Cronbach's alpha	.85/.78	.85/.80	.65/.73	.80/.73	.93/.91	.69/.68
Eigenvalues	5.36/5.15	1.88/1.71	2.31/1.82	1.17/1.49	1.28/1.02	1.03/1.11
Variance extracted	72.4% / 68.3%					
KMO measure	.806 / .801					

Pattern Matrix shown, Principal Axis Factoring, Oblique Rotation.

Note: The first figure refers to the store, the second figure to the website. Loadings <.30 are not shown.

Exploratory factor analysis for perceived value and intentions

Store/Website N=426/N=424	1	2
PV1	**.80/.82**	
PV2	**.93/.95**	
PV3	**.91/.88**	
Int1		**.93/.84**
Int2		**.86/.86**
Int3		**.92/.90**
Cronbach's alpha	.85/.86	.89/.84
Eigenvalues	1.75/2.81	3.03/1.80
Variance extracted	76.2% / 77.0%	
KMO measure	.734 / .709	

Pattern Matrix shown, Principal Axis Factoring, Oblique Rotation.

Note: The first figure refers to the store, the second figure to the website. Loadings <.30 are not shown.

Appendix VII Summary of hypotheses

			Offline context		Online context	
		Expected sign	Study 1	Study 2	Study 1	Study 2
H1	Perceived value → Intentions	+	.11	-.04	.07	-.06
H2a	Service quality → Perceived value	+	**.26****	**.17****	**.16****	**.21***
H2b	Service quality → Intentions	+	.13	**.31****	**.48****	**.38***
H2c	Service quality → Perceived risk	-	**-.29****	**-.30****	**-.59****	**-.74****
H3a	Merchandise quality → Perceived value	+	-.02	-.01	**.07***	.03
H3b	Merchandise quality → Intentions	+	**.15***	**.29****	**.15***	.11
H4	Monetary price → Perceived value	-	**-.46****	**-.45****	**-.46****	**-.45****
H5	Perceived risk → Intentions	-	**-.17***	.06	**-.14****	**-.11***
H6	Time/effort costs → Intentions	-	**-.18****	**-.37****	**-.30****	**-.19****
H7	Enjoyment → Intentions	+	**.35****	**.34****	**.48****	**.32****
H8	Perceived $value_{comp}$ → Intentions	-	N.i.	N.i.	N.i.	N.i.
-	Service quality → Enjoyment	+	**.50****	**.61****	**.66****	**.66****
-	Merchandise quality → Enjoyment	+	**.31****	**.17****	**.22****	**.13***
-	Merchandise quality → Time/effort costs	-	**-.33****	**-.27****	**-.55****	**-.52****
H9a	Reputation → Service quality	+	**.96****	**.71****	N.i.	N.i.
H9b	Reputation → Merchandise quality	+	**.81****	**.79****	N.i.	N.i.
H9c	Reputation → Perceived risk	-	**-.24***	.04	N.i.	N.i.
H9d	Reputation → Intentions	+	.32	**.50***	N.i.	N.i.
H10a	Informativeness → Time/effort costs	-	-.06	.11	N.i.	N.i.
H10b	Informativeness → Perceived risk	-	.05	.09	N.i.	N.i.
H11a	Ease of use → Time/effort costs	-	**-.60****	**-.52****	N.i.	N.i.
H11b	Ease of use → Perceived risk	-	**-.33****	**-.66****	N.i.	N.i.
H11c	Ease of use → Enjoyment	+	**.54****	**.56****	N.i.	N.i.

Notes: * Coefficient is significant from zero at p<.05; ** Coefficient is significant from zero at p<.01. N.i. not investigated.

Structural invariance tests between online and offline context

	Hypothesis	Study 1	Study 2
Time/effort costs → Intentions	H12: Stronger in online context	Not supported	Not supported
Enjoyment → Intentions	H13: Stronger in offline context	Not supported	Not supported
Perceived risk → Intentions	H14: Stronger in online context	Not supported	Not supported
Merchandise quality → Intentions	H15: Stronger in online context	Not supported	Not supported
Reputation → Perceived risk	H16: Stronger in online context	Not supported	N.i.
Service quality → Perceived risk	-	Stronger online	Stronger online
Merchandise quality → Time/effort costs	-	Stronger online	Stronger online

Note: N.i. not investigated.

Structural invariance tests between offline and online buyers

	Hypothesis	Study 1	Study 2
Perceived risk → Intentions	H17: Attenuated by prior online shopping experience	Not supported	Not supported
Time/effort costs → Intentions	H18: Strengthened by prior online shopping experience	Not supported	Supported
Enjoyment → Intentions	H19: Attenuated by prior online shopping experience	Supported	Not supported
Reputation → Perceived risk	H20: Attenuated by prior online shopping experience	Not supported	N.i.
Service quality → Enjoyment	-	Attenuated by prior online experience	Not supported
Service quality → Intentions	-	Attenuated by prior online experience	Attenuated by prior online experience

Note: N.i. not investigated.

Samenvatting

Inleiding

In **hoofdstuk 1** wordt een voorbeeld gegeven over John die een boek wil kopen. Hij denkt na over de vraag of hij het boek via zijn lokale boekhandel of via de website van Amazon wil kopen. Het is mooi weer, dus dat zou hem niet moeten weerhouden om wat aan zijn dagelijkse beweging te doen. Doorgaans geniet hij ervan om door de stapels boeken te snuffelen en om andere klanten te bekijken in de winkel. Hij kiest vaak voor de winkel vanwege de goede service en de prijskortingen die er geboden wordt. Helaas werkt de lieftallige verkoopster, waar hij vaak zo'n goed gesprek mee had, er niet meer. John realiseert zich dat hij momenteel weinig tijd heeft om uitgebreid door de winkel te struinen en om een praatje te maken. Bovendien is er een aanzienlijke kans dat de winkel zijn gewenste boek niet op voorraad heeft. Inmiddels heeft John voldoende ervaring opgedaan om binnen drie muisklikken het gewenste boek te vinden. In het begin maakte hij zich nog wel eens zorgen om de mogelijke fraude met zijn credit card gegevens, maar dat is verleden tijd. Hij kijkt er al naar uit om net voor het bevestigen van zijn bestelling nog even wat recensies van andere lezers door te nemen. Na het afwegen van de voor- en nadelen van beide opties besluit John om het boek via Amazon te bestellen. Het afwegingsproces dat hier beschreven wordt, kan worden omschreven als de evaluatie van kanalen vanuit een consumentenperspectief. Dit proces staat centraal in dit proefschrift.

Sinds de opkomst van het Internet als verkoopkanaal is er meer aandacht voor de keuze van het kanaal binnen de marketingwetenschap en in de praktijk. Door de toename in het aantal verkoopkanalen en de concurrentie tussen deze kanalen is het voor bedrijven van toenemend belang om beter te begrijpen hoe consumenten een kanaalkeuze maken. Een wezenlijke vraag in dit verband is: *welke factoren neemt een consument in overweging bij het bepalen van de keuze voor een kanaal*? Dit proefschrift wil een bijdrage leveren aan het beantwoorden van deze vraag door het analyseren van de factoren die de intenties bepalen om een boek via het online en het offline kanaal te kopen.

Consumenten worden geacht om de voor- en nadelen van elk kanaal af te wegen voordat ze een keuze maken. In dit onderzoek wordt het concept *perceived value* (of: gepercipieerde waarde) gebruikt om de kosten en opbrengsten te bepalen die van belang zijn bij het kiezen

tussen een online en een offline winkel. *Perceived value* kan gedefinieerd worden als de subjectieve afweging van de waargenomen kosten en opbrengsten betreffende een product, winkel of ander object. Het is te verwachten dat er een positieve relatie is tussen de gepercipieerde waarde en de kanaalaankoopintentie; de intentie om een kanaal te gebruiken zal toenemen, naarmate de balans tussen de waargenomen opbrengsten en de kosten voor de consument positiever wordt.

De hoofddoelstelling van dit proefschrift is het inzichtelijk maken van de factoren die consumenten in overweging nemen bij het evalueren van kanalen. In dit proefschrift wordt niet de daadwerkelijke keuze onderzocht, maar de factoren die de intentie bepalen om via een online of offline kanaal te kopen: de kanaalaankoopintentie. Deze factoren kunnen worden geïnterpreteerd als de criteria die consumenten in overweging nemen bij hun kanaalkeuze. Twee andere doelstellingen hebben betrekking op het relatieve belang van de factoren. In dit proefschrift wordt onderzocht of het belang van deze factoren verschilt per kanaal; dat wil zeggen of bepaalde factoren een prominentere rol spelen in de online dan wel in de offline context. Daarnaast wordt bepaald wat de invloed is van de mate van online koopervaring op het belang van de factoren in de online context. Dit alles resulteert in de volgende onderzoeksvragen:

1. Welke factoren bepalen de gepercipieerde waarde en aankoopintentie van een kanaal?
2. Zijn er verschillen in het effect van de factoren die de gepercipieerde waarde en aankoopintentie bepalen *tussen* de offline en online context?
3. Zijn er verschillen in het effect van de factoren die de online gepercipieerde waarde en aankoopintentie bepalen *tussen* ervaren en minder ervaren online kopers?

Dit proefschrift draagt op de volgende aspecten bij aan de huidige marketingliteratuur. Ten eerste maakt deze studie een één-op-één vergelijking. Bestaand onderzoek dat geïnteresseerd is in de beweegredenen om een kanaal te gebruiken richt zich veelal puur op de adoptie en het gebruik van het online kanaal. Hierdoor wordt het gebruik van het online kanaal vaak behandeld zonder het offline kanaal in de overweging mee te nemen. Het meten van de antecedenten van de gepercipieerde waarde en intenties in zowel de offline als online context maakt het mogelijk om de kennis over de kanaalkeuze te vergroten. Deze aanpak maakt het mogelijk om de afweging tussen de gepercipieerde voor- en nadelen te bepalen, alsmede het relatieve belang van de criteria tussen kanalen.

Ten tweede draagt dit onderzoek bij aan de bestaande kennis door rekening te houden met verschillen in de prestatie van online en offline retailers. Huidig onderzoek op het gebied van kanaalvoorkeur en -gebruik neemt wel meerdere kanalen in overweging, maar behandelt de kanalen vaak in zijn geheel. Hierdoor wordt de zeer onrealistische aanname gemaakt dat de prestaties van alle winkels binnen een kanaal gelijk zijn. Om deze

onvolkomenheid te verhelpen wordt in dit proefschrift ervoor gekozen om niet op kanaalniveau te meten, maar op winkelniveau. Dus de kanaalaankoopintentie wordt vastgesteld via de aankoopintenties voor specifieke winkels of websites.

Ten derde neemt dit proefschrift het effect van online koopervaring in overweging. Er wordt verondersteld dat ervaren en minder ervaren online kopers kunnen verschillen in het belang wat ze toekennen aan bepaalde factoren. Doordat ervaren online kopers beter in staat zijn om de gevolgen van het online koopproces in te schatten, zullen zij waarschijnlijk meer belang hechten aan de voordelen. Minder ervaren online kopers, daarentegen, worden geacht zich meer zorgen maken om de mogelijke risico's van het kopen van een boek online. Het analyseren van dit zogenaamde 'modererende effect' (het effect van een derde variabele op de sterkte van de relatie tussen twee andere variabelen), draagt bij aan het beantwoorden van de vraag of de sterkte van de relaties in de online context verschilt tussen ervaren en minder ervaren online kopers. Tenslotte laat dit proefschrift als één van de eerste studies zien dat het *concept* gepercipieerde waarde, dat alle saillante voor- en nadelen omvat, gebruikt kan worden om kanaalaankoopintentie te bepalen. Een belangrijke aanvulling op de bestaande waardeliteratuur is de toevoeging van plezier als component van het koopproces; in de huidige waardemodellen wordt de positieve kant van het winkelen vaak buiten beschouwing gelaten.

Theoretische achtergrond

In **hoofdstuk 2** is onderzocht wat belangrijke factoren zijn bij het bepalen van de aankoopintentie. Verschillende kwalitatieve en kwantitatieve onderzoeken geven inzicht in de beweegredenen van consumenten om online te kopen. Consumenten blijken hun online aankoopintenties voornamelijk te baseren op de verwachting van de interactie met het internet (koopproces) en op hetgeen ze ervoor terugkrijgen (uitkomst). Aan het einde van hoofdstuk 2 wordt ook gekeken in welke mate de gevonden factoren uniek zijn voor het online kanaal. Een nadere bestudering leert ons dat veel van de genoemde factoren (gemak, informatieverschaffing, reputatie, prijsniveau, servicekwaliteit) ook genoemd worden in de literatuur die zich bezighoudt met het verklaren van de aankoopintenties in de offline context. Eigenlijk is de kanaalkeuze niets meer of minder dan de keuze voor een offline of online winkel. Bestaande literatuur is al uitvoerig ingegaan op de winkelattributen; dit zijn de attributen die consumenten in het algemeen gebruiken om de waarde van een winkel te bepalen. Op basis van deze winkelattributen blijkt dat er meer overeenkomsten dan verschillen zijn in de criteria die gebruikt worden tussen de online en offline winkel, hoe verschillend het online en offline koopproces ook is. Het is wel aannemelijk dat consumenten kunnen verschillen in de scores en het belang dat ze toekennen aan de winkelattributen. In **hoofdstuk 3** wordt dieper ingegaan op de toekenning van de gepercipieerde waarde aan online en offline winkels.

In **hoofdstuk 3** wordt het concept *perceived value* uitgewerkt. Dit concept heeft sinds het eind van de jaren '80 meer aandacht gekregen in de marketingliteratuur. Auteurs stellen dat dit concept belangrijk is bij het behalen van een verdedigbaar concurrentievoordeel voor bedrijven en dat het in staat is om de koopintenties van consumenten te verklaren in meerdere situaties. Dit concept zal gebruikt worden om de factoren te identificeren die consumenten van belang vinden bij het kopen van producten via een online of offline winkel. In dit onderzoek gaat het over de waarde die consumenten ontlenen aan hun aankoop van een boek via het online en offline kanaal. In dit opzicht is het essentieel om te achterhalen wat consumenten precies waarderen voordat bepaald kan worden waarom consumenten een bepaald kanaal kiezen. Er wordt verondersteld dat consumenten waarde bepalen op een hiërarchische wijze, namelijk via een doel-middel-keten (Gutman 1982). Ondanks dat het concept gepercipieerde waarde zeer dynamisch en moeilijk te omvatten is, hebben auteurs gezocht naar algemene criteria die consumenten gebruiken in de waardebepaling van aankopen. In deze context zijn er 2 stromingen binnen de waardeliteratuur te onderscheiden. De eerste stroom is geïnteresseerd in het definiëren van de dimensies of componenten van de gepercipieerde waarde. Het gaat hier om de definitie van het construct: wat omvat het? In deze stroom wordt de gepercipieerde waarde vaak gezien als een optelsom van de componenten. De tweede stroom is in het bijzonder geïnteresseerd in de mogelijke verbanden tussen de antecedenten en consequenties van gepercipieerde waarde en de sterkte van deze verbanden. Dit proefschrift past binnen de tweede stroom, aangezien deze stroom het complexe proces van waardebepaling realistischer weergeeft en de relatieve effecten van de componenten duidelijk toont.

In bestaand empirisch onderzoek wordt de gepercipieerde waarde veelal gemeten in de context van productwaarde en winkelwaarde. Dit proefschrift maakt de vertaalslag naar de kanaalkeuze, maar meet het wel op winkelniveau. De volgende 6 factoren zijn geïdentificeerd als belangrijke criteria bij het evalueren van online en offline winkels: *servicekwaliteit*, *assortimentskwaliteit*, *prijsniveau*, *risico*, *benodigde tijd/moeite*, en *plezier van het koopproces*. Voor een definitie van elk van de factoren wordt verwezen naar paragraaf 5.2.2. De eerste 3 factoren bepalen voornamelijk *wat* de consument krijgt, terwijl de laatste 3 factoren betrekking hebben op *hoe* het product geleverd wordt: het koopproces. Tevens wordt vaak het construct *value for money*, oftewel *waar voor je geld,* toegevoegd. Dit construct treedt vaak op als *mediërende* variabele tussen de kosten/opbrengsten en de aankoopintentie.

In **hoofdstuk 4** wordt het conceptueel raamwerk gepresenteerd op basis van de in hoofdstuk 3 geïdentificeerde variabelen. Het conceptueel raamwerk is sterk gebaseerd op bestaande modellen, maar introduceert *plezier* als extra construct binnen het koopproces om de positieve kant van het winkelen te belichten. De verwachting is dat de online en offline aankoopintentie bepaald worden door de *waar voor je geld* (die bepaald wordt door servicekwaliteit, assortimentskwaliteit en prijsniveau), servicekwaliteit, assortimentskwaliteit en de kosten en opbrengsten van het koopproces (risico, benodigde tijd/moeite, plezier).

Daarnaast wordt een negatief verband verwacht tussen de *waar voor je geld* in het concurrerende kanaal; hoe meer waar voor hun geld consumenten krijgen in het concurrerende kanaal, hoe zwakker de intenties zullen zijn voor het huidige kanaal.

Het basismodel wordt uitgebreid met 3 factoren (gemak, informatieverschaffing, en reputatie), die een belangrijke rol spelen in de online context, maar ook van belang zijn voor de offline context. Deze toevoeging is gemaakt om er zeker van te zijn dat er geen elementaire factoren vergeten worden, en om extra inzichten te verschaffen in de constructie van de antecedenten van waar voor je geld en aankoopintentie.

Tevens worden in dit hoofdstuk de hypothesen opgesteld met betrekking tot de sterkte van de relaties tussen de online en offline context, en tussen ervaren en minder ervaren online kopers. De hypothesen zijn op basis van verschillende stromingen in de literatuur onderbouwd. Naast de evidente directe effecten, verschaffen deze hypothesen extra inzicht in hoe de sterkte van de relaties kan verschillen per context en tussen groepen kopers (ervaren vs. minder ervaren online kopers).

Methodologie

In **hoofdstuk 5** wordt de onderzoeksmethodologie, de onderzoekstechniek, de vragenlijst, de achtergrond van de studies, en het stappenplan besproken. Er zijn twee empirische studies uitgevoerd om de hypothesen te testen. De eerste studie is uitgevoerd onder 656 klanten van een Nederlandse boekhandel, die zowel offline als online boeken verkoopt. De klanten hebben een enquête ingevuld waarin zij hun *verwachting* uiten over het kopen van een boek via de winkel én de website van de genoemde boekhandel. De tweede studie dient als replicatiestudie en is uitgevoerd onder 437 klanten van een boekhandel die alleen online actief is en zich puur richt op het verkopen van managementboeken. De gekozen productcategorie in de tweede studie is dan ook *management*boeken. De winkels van de boekhandel uit de eerste studie dienen als tegenhanger van de website.

In **hoofdstuk 6** en **hoofdstuk 7** worden de resultaten van de twee empirische studies besproken. De resultaten laten zien dat het conceptueel model goed in staat is om de aankoopintenties in beide contexten te bepalen. De meeste hypothesen worden bevestigd door de data. In beide contexten blijkt dat de intentie voornamelijk wordt bepaald door servicekwaliteit, assortimentskwaliteit, benodigde tijd/moeite en plezier. Daarnaast speelt risico –gedefinieerd als de subjectieve kans dat er iets mis kan gaan tijdens het koopproces– een significante, maar beperkte rol in beide contexten. Deze beperkte rol valt te verklaren door het relatief lage productrisico. Wanneer gekeken wordt naar de totale effecten van de antecedenten op de aankoopintenties, dan valt allereerst de belangrijke rol van plezier op. Ondanks dat bestaande waardemodellen het construct vaak niet opnemen, blijkt plezier een sterke invloed te hebben op de online en offline aankoopintentie. Tevens vallen de sterke indirecte effecten op van service- en assortimentskwaliteit; een toename in de

servicekwaliteit versterkt de intentie via een vermindering van het risico en een verhoging van het plezier, terwijl een verbetering van de assortimentskwaliteit leidt tot een versterking van de intentie via tijd- en moeite besparingen en meer plezier. In tegenstelling tot de heersende mening dat *waar voor je geld* van belang is, blijkt het construct geen significante invloed te hebben op de intentie. Ook het prijsniveau, dat een sterk verband heeft met de waar voor je geld, blijkt een verwaarloosbare invloed te hebben op de intenties. De klanten lijken niet sterk beïnvloed te worden door financiële prikkels.

De *waar voor je geld* wordt in beide contexten sterk beïnvloed door het prijsniveau en de servicekwaliteit, maar niet door assortimentskwaliteit. Een mogelijke verklaring hiervoor is dat voorgaande studies die het effect vonden, winkels hebben onderzocht waarvan het assortiment gedifferentieerder was. In dat geval kunnen retailers toegevoegde waarde leveren door de juiste producten in het assortiment op te nemen. Een andere verklaring is dat klanten in hun overweging voor *waar voor je geld* met name kijken naar de tastbare aspecten van een aankoop. In dit geval zal de waarde die ze online dan wel offline krijgen niet veel verschillen, aangezien het gekochte boek in beide gevallen identiek is.

De resultaten van het uitgebreide model laten zien dat de drie toegevoegde factoren, zoals te verwachten was, een grote invloed hebben op de online aankoopintentie. Echter, het effect was navenant in de offline context. Het effect van gemak en reputatie op de aankoopintentie is zeer groot in beide contexten, terwijl de informatieverschaffing geen rol van betekenis speelt. Over het algemeen blijkt dat wanneer klanten het koopproces gemakkelijker gaan vinden, het risico daalt (vooral in de online context), het voor tijd- en moeite besparingen zorgt, en tot meer plezier leidt. Reputatie is zeer sterk gerelateerd aan de percepties van service- en assortimentskwaliteit. De belangrijke rol van reputatie in de online context wordt onderstreept, doordat de reputatie een direct effect heeft op de aankoopintentie via de website.

Bij de beantwoording van de tweede onderzoeksvraag is gekeken of er verschillen zijn in het relatieve belang van de factoren tussen beide contexten. Het was verondersteld dat de benodigde tijd/moeite, het risico en het assortiment een belangrijkere rol in de online context zouden spelen en plezier een minder belangrijke rol. Tevens werd in het uitgebreide model de hypothese opgesteld dat het effect van reputatie op risico sterker zou zijn in de online context, door de afwezigheid van intrinsieke cues. Uit de data blijkt dat er geen ondersteuning is voor deze hypothesen. De constructies van de online en offline gepercipieerde waarde en aankoopintentie blijken gelijk te zijn. Het is dus zo dat de klanten dezelfde factoren in dezelfde mate meenemen in hun overweging. Ze blijken alleen te verschillen in de scores die ze toekennen aan de factoren van elk kanaal.

Ten behoeve van de derde onderzoeksvraag worden de verschillen in de sterkte van relaties tussen ervaren en minder ervaren online kopers onderzocht in de online context. In de

eerste studie is besloten om de ervaren en minder ervaren online kopers toe te wijzen op basis van het feit of men al dan niet een boek via de website van deze multichannel boekhandel heeft besteld. In de tweede studie is dit niet mogelijk en is besloten om de klanten van de pure e-tailer op te splitsen op basis van het aantal online aankopen dat ze ooit gedaan hebben. In de eerste studie wordt aangetoond dat ervaren online kopers minder belang hechten aan plezier in het bepalen van hun online aankoopintentie. Het blijkt dat onervaren kopers een gebrek aan plezier ervaren, en dat dit zeer sterk hun online aankoopintentie vermindert. In de literatuur is dit verschijnsel bekend als de asymmetrische invloed van positieve en negatieve attribuutscores op aankoopintenties (Mittal, Ross and Baldasare 1998). Ook zijn er indicaties dat ervaren online kopers minder sterk beïnvloed worden door het risico en sterker door de benodigde tijd/moeite, al zijn deze verschillen niet significant. In de tweede studie wordt bewijs gevonden dat ervaren online kopers sterker beïnvloed worden door de benodigde tijd/moeite. In beide studies valt op dat ervaren online kopers minder belang hechten aan de servicekwaliteit dan de minder ervaren online kopers. Deze bevinding valt te verklaren uit het feit dat één van de items van servicekwaliteit verwijst naar of de website haar afspraken nakomt; voor minder ervaren kopers is het van eminent belang dat de afspraken worden nagekomen. Kortom, de invloed van online koopervaring op de sterkte van relaties is beperkt waarneembaar.

Conclusies en aanbevelingen

In het slothoofdstuk, **hoofdstuk 8**, worden de voornaamste bevindingen samengevat en worden de onderzoeksvragen beantwoord. De bevindingen met betrekking tot de online context worden gerelateerd aan bestaande E-Commerce studies. Ondanks de verschillen in de manier waarop de online aankoopintenties worden bepaald, is er een aantal overeenkomstige bevindingen met betrekking tot het relatieve belang van de factoren. Zo blijkt het erkende belang van servicekwaliteit en de benodigde tijd en moeite bevestigd te worden in deze studie. Daarnaast blijkt net als in vorige studies dat de rol van het risico beperkt is; vorige onderzoeken toonden aan dat consumenten niet sterk beïnvloed worden door de onzekerheid over de veiligheid van betaling en de waarborg van privacy. Vervolgens wordt een aantal aanbevelingen gegeven voor het management van zowel multichannel bedrijven als bedrijven die slechts in één kanaal actief zijn. Voor beide contexten blijken dezelfde vier factoren (service- en assortimentskwaliteit, tijd/moeite, en plezier) van belang te zijn; het verbeteren van deze aspecten zal leiden tot een sterkere aankoopintentie in zowel de online als offline context. Indien het streven is om minder ervaren online kopers over te halen om hun boeken online te bestellen dan is het aanbevelenswaardig om vooral het proces gemakkelijker te maken. Dit zal als gevolg hebben dat ze bij het online kopen meer plezier beleven, minder risico ervaren, en minder tijd en moeite nodig hebben. Het vergemakkelijken kan bijvoorbeeld door middel van het verduidelijken van de rol die de klant moet spelen in het koopproces via een stappenplan, of door het geven van demonstraties van het koopproces in de winkel (bijvoorbeeld bij afwezigheid van een boek). Het onderzoeksinstrument biedt managers een hulpmiddel om

elk kanaal beter te profileren op basis van de bepaling van de relatieve sterkten en zwakten. Daarnaast biedt het mogelijkheden om de intenties van klanten op een effectieve manier te verhogen door het analyseren van het relatieve belang van factoren. Tevens kunnen de motivaties van verschillende segmenten (bijv. ervaren en minder ervaren online kopers) bepaald worden, waardoor het management beter in staat is om op de wensen van elk segment in te springen. Het hoofdstuk wordt afgesloten met de beperkingen van het onderzoek en de mogelijkheden voor toekomstig onderzoek.