Towards understanding online purchase behavior

VRIJE UNIVERSITEIT

Towards understanding online purchase behavior

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geboren te Eindhoven

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Preface

This dissertation is about the impact that consumer perceptions of an online store have on consumer intentions to purchase at this online store. The research comprises theoretical analysis, resulting in organized theoretical frameworks, and two empirical explorations.

It has been a real challenge to examine the impact of online store perceptions on consumer purchase intentions. The fact that online purchasing is a relatively new phenomenon underpins the need for both theoretical and empirical explorations. To be able to contribute to a rather unexplored scientific research field has been a great joy.

This dissertation would not have been completed without the support of several people. I especially would like to thank prof. Marcel Creemers and dr. Hans van der Heijden.
As a supervisor, Marcel Creemers has been very stimulating from the beginning. Next to providing comments on the individual chapters, Marcel closely monitored the overall structure of the dissertation. Moreover, being a true patron, Marcel took care of many aspects that are of essential importance for the work of a doctoral candidate.
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Chapter 1: Introduction

1.1 Introduction

In this dissertation we will investigate the relationships between consumer perceptions of online store characteristics and intentions to purchase at an online store. We will identify the most important online store characteristics and explore the nature of the relationships between online store perceptions and online purchase intentions. Based on the resulting insights we will examine the extent to which perceptions of the online store explain consumer purchase intentions.

Online purchasing is a relatively new phenomenon. Statistics demonstrate that the number of online purchases has grown impressively since 1995. And growth has been particularly significant over the past five years. Consumer spending on European sites rose from $111 million in 1997, to $3.3 billion in 2001 and will be around $5 billion in 2002. The results for the US market are even more striking, which is supported by the fact that revenue within the online retail market increased from $8 billion in 1998 to a predicted $108 billion in 2003 (NUA, 2003).

Despite these figures, online purchasing accounts for only a fraction of total retail sales (OECD, 2001). In 1999 and 2000 online retail sales accounted for 0.5% and 0.9 % respectively of total retail sales for the US market (Census, 2002). For the Netherlands, percentages of 0.2% (1999) and 0.3% (2000) of total Dutch retail market sales were reported (CBS, 2001). The current balance between offline and online purchasing obviously strongly favors offline purchasing.

When comparing offline purchasing more closely with purchasing in an electronic shopping environment, three store related aspects would seem to affect online purchasing more than offline purchasing.

First, an online store lacks physical presence. Consumers cannot experience the products to be purchased by, for example, touching, feeling or smelling them. Consequently, consumers rely on perceptions of virtual product representations as input for product choice. Moreover, physical absence implies that consumers are not able to visit a store to reassure appropriate settlement should they be dissatisfied for any reason (e.g. payment problems, product failure).

In other words, consumers depend on perceptions of the online store to assess its trustworthiness before completing an online transaction.

Second, when purchasing at an online store consumers interact with an electronic shopping system. This means that consumers have to be capable of using certain forms of technology. In addition to using a computer system, consumers have to know how to use browsers (to visit an online location and browse through an online store) and interact with various software applications such as search engines, shopping carts, electronic forms and online payment procedures. By introducing these prerequisites, online stores affect purchase behavior, and especially the behavior of the less technology literate consumers. What is more important is that online stores facilitate, and in fact represent, the entire process consumers go through in order to purchase a product. The structure of the online store determines how consumers move through the store (e.g. to search for products), proceed to the checkout and complete the transaction. By 'shaping' this process, the online store affects consumer purchase behavior.

Third, in an online environment consumers are not hampered by any locational restriction. When purchasing online, consumers can effortlessly visit several stores to, for example, gather information or find products and special offers. Consequently, the characteristics of online stores are likely to be weighted against each other, and will function as input for store choice. While moving through an online store, the relatively easy access to other online stores is likely to have an additional effect on consumer purchase behavior. If the characteristics of the online store visited lead to dissatisfaction (e.g. navigation problems, inaccurate information, unexpected errors) or doubt (i.e. can the online store be trusted, will I receive the product?), the decision to abort the purchase process or proceed to another online store is relatively easy to make since it is not hampered by any locational restriction.

The lack of physical presence, the characteristics of the electronic system and the absence of locational restrictions are distinctive for online purchasing. Based on these store related aspects, online stores are likely to affect consumer purchase intentions. In this context, it will be of particular interest to focus more closely on the relationships between online stores and consumer purchase intentions. Several interesting questions arise. What is the relationship between consumer perceptions of online stores and intentions to purchase at an online store? Which online store characteristics can be identified? To what extent do these characteristics relate to consumer purchase intentions?

Surprisingly, these are questions that have been given little attention when focusing on research on electronic commerce. So far, research has focused mainly on the following three aspects.

First, researchers have seen the Internet, and in particular the World Wide Web (WWW), as a fruitful tool with various commercial opportunities (Huizingh, 2000). Attention has been paid to the potentials of using the Internet to penetrate existing and new markets and segments easily and cheaply on a global scale. Research has also related the Internet to operational efficiencies. In this context, lower distribution costs (e.g. for digital and information goods), error reduction, time in information processing and the ability for suppliers to access each others' databases for optimization purposes have been widely discussed (Hoffman, Novak and Chatterjee, 1995).

Second, research has considered factors that influence electronic exchange and focused on descriptions of user characteristics and purchase numbers. Various investigations have examined the impact of factors such as time spent online, consumer orientation (e.g. convenience versus experiential), attitudes towards computers, web experience, household size, education, gender, income and age on consumer purchasing (Crisp, Jarvenpaa and Todd, 1997; Li, Kuo and Russell, 1999). With respect to the characteristics of Internet users, several

studies have described the demographics of online shoppers, usually resulting in a picture of 'the online shopper' as a relatively highly educated middle-aged male. As far as purchase numbers are concerned, research has provided overviews of total online spending (worldwide, per region, per country) and the kind of items purchased online (GVU, 1998).

Third, research has focused on detailing the impact of new information technology on marketing. It has described how the Internet as an interactive medium can be used as an alternative to mass media communications for effective personal marketing (Hoffman et al., 1995). Attention has in particular been given to the facilities afforded by online marketing to learn about consumers, to enhance customer service, to offer personalized products (Dewan, Jing and Seidmann, 1999) and to conduct marketing research.

In general, research within the three research areas has been primarily conceptual and descriptive in nature. As argued by the following authors:

"Despite the need to understand what drives Internet consumers, much of the empirical research of the Web as a retail channel has been descriptive, focusing on estimating the current Internet and Web user base, understanding what the users are buying, and how much they are spending" (Crisp et al., 1997, p.2).

"Although there has been significant research on supporting Electronic Commerce, existing empirical research focusing on success factors of Web sites is mainly anecdotal and exploratory in nature" (Liu and Arnett, 2000, p.23).

Remarkably, very little empirical research has been conducted on issues relating to electronic commerce (Crisp et al., 1997; Swaminathan, Lepkowska-White and Rao, 1999). As argued by Chau, Au and Tam (2000):

"Although electronic commerce has become an area of increasing importance among MIS researchers, as indicated by the launch of journals dedicated to electronic commerce, it is surprising to find that little empirical research has been done so far"(Chau, et al., 2000, p.2).

This lack of empirical research supports the need for further empirical examination. More importantly, research so far has paid relatively little attention to the consumer side of electronic commerce. In particular, empirical studies on how consumers experience and perceive websites are not available (Balabanis and Vassileiou, 1999). As stated by Chau et al. (2000):

"There is a gap between the proliferation of online shops and the development of behavioral research in this area" (Chau et al., 2000, p.2).

Obviously, the research field on the consumer side of electronic commerce is still in its infancy. Little empirical research has been conducted so far. Research has not explicitly focused on online purchase behavior, nor has the impact of online stores on consumer purchase intentions been considered. These observations should stimulate further research. In this context, Balabanis and Vassileiou argue that:

"further research on how targeted consumers perceive, integrate and respond to web sites features and content needs to be undertaken so as to identify ways to sharpen the appeal of retailers' web sites" (Balabanis and Vassileiou, 1999, p. 378)

This thesis aims to make a contribution to the relatively unexplored research field of online purchasing. We will explicitly focus on how consumer perceptions of online store characteristics affect intentions to purchase at an online store.

1.2 Research problem and research objective

Before studying the relationships between consumer perceptions of online store characteristics and consumer purchasing, the most important elements under consideration will be clarified and specified in advance. This section will be used to introduce and elucidate the most important terms and definitions. Based on these explanations and definitions, we arrive at the research objectives of this thesis and conclude with a definition of the research problem and corresponding research questions.

We start with the term *purchasing*. Purchasing, also referred to in the literature as consumer buying, is usually described as a number of stages consumers go through in order to purchase a product (Mowen, 1988; Malaga, 2001). Purchasing can be defined as: "a problem solving activity in which consumers move through a series of stages in order to solve a problem" (Mowen, 1988, p.16). While going through these stages consumers engage in rational problem solving behavior. The series of stages is also referred to as the consumer decision process (Engel, Miniard and Blackwell, 1995; Mowen and Minor, 1998). In this thesis we build upon the purchasing problem solving definition of Mowen. This implies that we will explicitly focus on rational purchase behavior.

In line with the purchasing definition, we define *online purchasing* as: the series of steps consumers go through when purchasing in an online environment. In this thesis an online environment refers to the World Wide Web in general, and to *online stores* in particular. Online stores are defined as company websites that sell products to single consumers who will be the end user of the item (cf. Coupey, 2001, p.76).

Online stores differ from physical stores in many ways. As mentioned above, the lack of physical presence, the actual characteristics of the electronic shopping system and the different role of location are likely to have an effect on online purchasing. However, as implied by the definitions above, consumers still go through a series of stages in order to purchase a product. Many authors emphasize that online purchasing itself is rather similar to purchasing at a physical store. Even though online stores affect purchasing differently, consumers still go through a similar series of stages in order to purchase a product (e.g. Kalakota and Whinston, 1997; O'Keefe and McEachern, 1998).

In this dissertation we will focus on the relationships between the online store and online purchase intentions. More specifically, we will examine the relationships between consumer perceptions of online store characteristics and intentions to purchase at a particular online store. Consumer purchase intentions can be interpreted as a predictor of final choice (Howard and Sheth, 1969). By examining the extent to which consumers intend to purchase at a particular online store, predictions for future choice can be made. Insight into the relationships between perceptions of online store characteristics and purchase intentions can be applied to assess the potential impact of the online store on consumer purchasing. This brings us to the following definition of our research objective:

Research objective: *"To investigate the relationships between consumer perceptions of an online store and consumer intentions to purchase at this online store".*

In line with the research objective, our research problem can be defined as follows:

Research problem: *"What are the relationships between consumer perceptions of the characteristics of an online store and consumer intentions to purchase at this online store?"*

Three research questions have been formulated in order to address our research problem. The first question is related to the process underlying our investigation. If we want to examine the relationships between consumer perceptions of online store characteristics and consumer purchase intentions, it is necessary to understand the way consumers form intentions. In this context, the first research question is:

Research one: *"How do consumers form intentions to purchase at an online store?"*

The second question concerns the research object under consideration. Before investigating the relationships between online store characteristics and purchase intentions, the online store characteristics have first to be identified and specified. Based on our proposition that perceptions of online store characteristics affect consumer purchase intentions, the second research question can be formulated as follows:

Research question two: *"Which perceived online store characteristics affect consumer intentions to purchase online?"*

In order to examine the relationships between perceptions of online store characteristics and the intention to purchase at an online store, the nature of the relationships needs to be specified in advance. Therefore, the question of how consumer perceptions of online store characteristics affect intentions to purchase at an online store will be addressed. Based on the outcome, and the derived insights from research questions one and two, the extent to which consumer perceptions of online store characteristics affects intentions to purchase at an online store will be examined. Both aspects are captured in our final research question:

Research question three: *"How and to what extent do consumer perceptions of online store characteristics affect consumer intentions to purchase at an online store?"*

The next section will examine and underpin the research methodology used in this thesis to answer the research questions defined above.

1.3 Research Methodology

In this dissertation we build upon literature studies and empirical research. Based on the conceptual research framework, which is shown in figure 1.1, both will be elucidated below.

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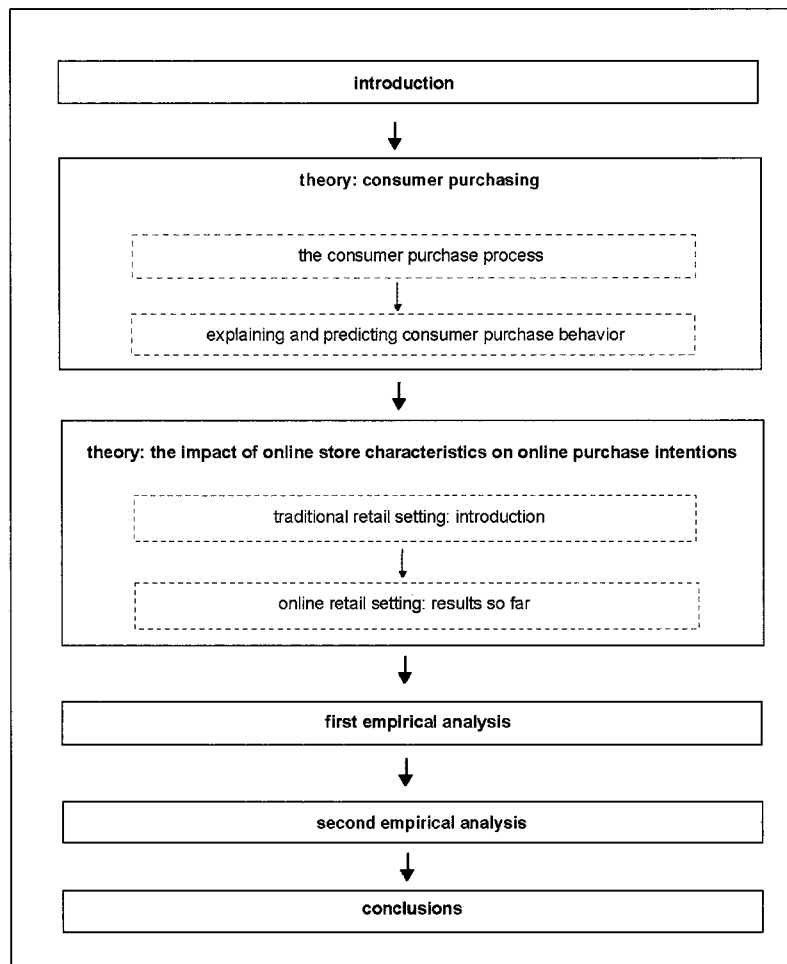
Figure 1.1: Conceptual research framework

Literature research

Literature studies are the first research method to be applied in this thesis. Literature research will be used to: a) introduce and discuss consumer purchasing, and b) provide an overview of the available research concerning the impact of online store characteristics on the intention to purchase at an online store.

With respect to consumer purchasing, a first literature study will focus on the consumer purchase process. The purpose of this study is to provide a contextual background for this dissertation and to address how consumer purchase intentions are formed. A second theory study will explicitly consider theory that is used to explain and predict behavior in general and consumer purchase behavior in particular. Consumer purchase intentions form an essential part of this theory. The derived insights will be used as input for empirical analysis.

Literature research will then focus on online store characteristics. More specifically, we will pay attention to the impact of online store characteristics on the intention to purchase at an online store. As indicated at the beginning of this chapter, the research field concerning the relationships between online stores and consumer purchasing is relatively unexplored. Consequently, it is unlikely that a large amount of readily available literature will be found. Because online stores are in many ways similar to physical stores (cf. the work of Spiller and Lohse, 1997; Lohse and Spiller, 1999), we start our theoretical consideration with a review of traditional retail literature. Parts of this third study will function as a starting point for further empirical analysis. In a fourth, and final literature study we will extend our consideration to an online setting. This study will be used to discuss the empirical results so far, relating perceptions of online store characteristics to online purchase intentions. The main objective of this study is to identify online store characteristics that affect consumer intentions to purchase at an online store.

Empirical Research

Building on the four theory studies mentioned above, empirical research will be applied to address how and to what extent perceptions of online store characteristics affect intentions to purchase at an online store. Empirical research can be either qualitative or quantitative. Qualitative approaches are likely to be applied when the research questions are explanatory and focus on 'how' and 'why' questions (Yin, 1994). In the relatively unexplored field of online purchasing, qualitative methodologies are used to get a deeper understanding of the online environment and the behavior of consumers (Schau, Wolfinbarger and Muniz, 2001). Applied techniques include focus groups (Geissler and Zinkhan, 1998), depth interviews (Weinberg, 2001), observation (Raman, 1997) and netnography (Kozinets, 1998) Quantitative approaches are likely to be used when the research questions focus on 'what', 'how', 'how many', 'how much' and 'where' questions and when the research aims to describe and predict the phenomenon under study (Yin, 1994). This approach fits best to our research problem and the corresponding research questions. The quantitative technique that will be applied in this dissertation is the survey. Surveys are particularly appropriate when the purpose is to relate variables (Creswell, 1994) and when primary data collection is unavoidable (Hedrick, Bickman and Rog, 1993). Both characteristics apply to our research. First, the objective of this dissertation is to investigate the relationships between perceptions of online characteristics and intentions to purchase at an online store (i.e. to relate variables). Second, the research field is relatively unexplored, which implies that primary data collection is required.

Survey designs contain several methods of data collection: personal interview, mail questionnaire, panel, telephone interview (Kerlinger, 1973) and online surveys (Miller, 2001). In this thesis we apply the online survey technique. Compared to other methods, online surveys require fewer resources, are efficient and relatively fast (Yun and Trumbo, 2000). Basically, there are three methods of conducting online surveys: e-mail surveys, HTML forms, and downloadable interactive survey applications (Bowers, 1998). We apply the HTML form survey.

In this dissertation two online surveys will be conducted.
Building upon the literature discussed in our fourth literature study, a first online survey will focus on the impact of perceived online store characteristics related to trust in the online store and the website as online shopping system on the intention to purchase at an online store. The relationships will be tested for two online CD stores and two online insurance retailers. Data was collected by a sample consisting of 227 undergraduate students.

A second survey involves the relationships between the overall impression of online store characteristics and online purchase intentions. Due to the absence of an appropriate measurement instrument, we start with the adoption of a well-known process of instrument development. Based on retail literature discussed in our third literature study, focus group interviews and an online survey will be applied to construct, refine and test an instrument that measures the overall impression of online store characteristics. Next, a lab experiment with a student sample is conducted in order to examine the relationships between the overall impression of an online store and intentions to purchase at an online store. The relationships are tested for two online bookstores. The sample consists of 312 undergraduate students.

1.4 Contributions

In this dissertation we explore the relationships between perceptions of the online store and consumer purchase intentions. Building upon both literature studies and empirical research we aim to add to the relatively unexplored field of online purchasing. The major contributions of this thesis are as follows.

First, new theoretical insights are provided into the relationships between online store characteristics and online purchase intentions. We introduce an organized theoretical framework to identify the most important traditional store characteristics and arrive at overall observations concerning the relationships between perceived store characteristics and consumer purchase intentions. An exploration of ecommerce research so far provides preliminary understanding concerning both the nature and magnitude of the impact of perceived online store characteristics on online purchase intentions.

Second, the dissertation contributes with new empirical material to a scant body of empirical research on online purchasing. We investigate online purchase intention using two different perspectives: a trust-oriented perspective and a technology-oriented shopping system perspective. We review and synthesize the antecedents of online purchase intention that have been developed within these two perspectives. An empirical study addresses the contributions of trust and technology related online store characteristics in explaining the intention to purchase at an online store.

Third, the dissertation develops a new instrument to study the perceptions about the online store. Building upon a well-known process of instrument development, we construct a reliable and valid measurement instrument, measuring the overall impression of the online store. We apply the instrument an empirical study to address the impact of the overall impression of an online store on the intention to purchase at an online store. To the best of our knowledge this is the first time that this relationship is explored.

1.5 Thesis outline

The structure of this thesis is as follows:
Chapter two discusses the consumer purchase process. After an introduction of three perspectives that can be applied when considering consumer purchasing, we will focus on the dominant research stream, which sees the purchase process as a rational decision-making activity. Within this perspective, one of the most elaborate purchase process models will be discussed in detail.

In *chapter three* we will study a relatively well-established model in order to explain and predict rational behavior: the Theory of Reasoned Action. A review of the empirical results so far will demonstrate the validity and robustness of the model for behavior in general as well as for consumer purchase behavior in particular. We will also pay attention to variables that are not part of the theory itself (i.e. external variables) but which are likely to add to the predictive and explanatory power of the model.

In *chapter four*, we focus on the impact of the store when it comes to explaining and predicting consumer purchase intentions. Based on store image literature, we will first provide an overview of the most important store characteristic classifications. We will then go on to discuss research findings concerning the impact of perceptions of store characteristics on consumer purchase intentions.

In *chapter five*, our empirical review will be extended to an online setting. We will consider research results relating *online* store characteristics to online purchase intentions. One of the observations of this chapter is that the research field remains under-explored and that more research is needed.

Chapter six reports on our first empirical contribution. We will report on a study into the impact of perceived online store characteristics, either related to trust or the website as a shopping system, on online purchase intentions within the online CD and online insurance market.

In *chapter seven*, we will consider a second empirical examination. Instead of trust and shopping system related characteristics, we will explicitly focus on online store characteristics from an online store image perspective. Due to the unavailability of an appropriate online store image measurement scale, we will first discuss the results of a measurement scale construction process. We will then report on the effects of perceptions of online store image on online purchase intentions within the online book market.

Finally, a summary and discussion of our findings can be found in *chapter eight*. The research questions will be answered and final conclusions drawn. We will finish with the limitations of our research and implications for practice.

The outline of this thesis is summarized in table 1.2.

Table 1.2: Dissertation outline

Chapter	Title	Purpose
1	Introduction.	• Introduction, motivation and positioning of our research.
2	The consumer purchase process.	• Insight into consumer purchasing, including the formation of intentions. • Address how intentions to purchase at an online store are formed.
3	Explaining and predicting purchase behavior: a theoretical and empirical overview.	• Description and empirical overview of the Theory of Reasoned Action. • Provide a theoretical background to address how perceptions of online store characteristics affect consumer purchase intentions.
4	Store characteristics: an overview and exploration of their impact on consumer purchase intentions.	• Description of store characteristics and discussion of results relating perceptions of store characteristics to consumer purchase intentions. • Function as starting point for online research.
5	The impact of online store attributes on consumer purchase intentions: an exploration of empirical results.	• Description of research relating online store characteristics to online purchase intentions. • Address which perceived online store characteristics affect consumer intentions to purchase online. • Address how consumer perceptions of online store characteristics affect intentions to purchase at an online store.
6	Empirical explorations: the impact of trust, perceived risk, ease of use and usefulness on the intention to purchase.	• Gathering empirical data: first online survey • Address which perceived online store characteristics affect consumer intentions to purchase online. • Address how and to what extent consumer perceptions of online store characteristics affect their intentions to purchase at an online store.
7	Empirical explorations: measuring and assessing the impact of online store image.	• Gathering empirical data: second online survey. • Address which perceived online store characteristics affect consumer intentions to purchase online. • Address how and to what extent consumer perceptions of online store characteristics affect their intentions to purchase at an online store.
8	Discussion and conclusion.	• Final conclusions. • Limitations and recommendations for further research. • Implications for practice.

Chapter 2: The consumer purchase process

2.1 Introduction

The objectives of this chapter are to consider the consumer purchase process and to introduce some basic terminology.We will start with the introduction of three perspectives that are applied when discussing consumer purchase behavior: the decision-making perspective, the experiential perspective and the behavioral influence perspective. The characteristics of each perspective will be described and the differences highlighted.We then go on to focus on the decision-making perspective, which is well established and considered to be the dominant point of view in consumer purchasing literature. After a brief overview of existing models within the decision-making perspective, we will focus on the consumer purchase model of Engel, et al.. This model is one of the most elaborate models in consumer behavior literature. Many consumer purchase process models are based on the Engel et al. model and have comparable stages.

The structure of this chapter is as follows. First, section 2.2 takes a look at the three perspectives in consumer purchasing. Next, in section 2.3 we will focus on purchase models within the decision-making perspective, and consider the model of Engel et al. in particular. Finally section 2.4 presents a summary of our findings.

2.2 Consumer purchase behavior: three perspectives

Consumer purchase behavior can be viewed from three perspectives. The characteristics of each perspective determine both the sequence and interpretation of the purchase process. Based mainly on the work of Mowen (1988) and Mowen and Minor (1998 & 2001) these perspectives as well as their differences will be considered below.

1) The Decision-Making Perspective

The most widely used perspective to describe consumer purchase behavior is the decision-making perspective. Established in the 1970's and 1980's this perspective views purchasing as a rational problem solving activity. Consumers go through several stages in order to solve the "purchasing problem". These stages include: problem recognition, information search, evaluation of the alternatives and choice. The decision-making perspective investigates the impact of information inputs (verbal and written), tangible benefits and economic benefits on the purchase of utilitarian goods or services. The processes involved in these inputs and outputs are based on cognition, belief formation and memory and information processes.

The purchase process as described in the decision-making perspective can be interpreted as a sequence of three effects (Mowen and Minor, 1998):
First, the consumer forms beliefs (this is the cognitive effect): a belief is "the knowledge a consumer has and all the inferences a consumer makes about objects, their attributes and their benefits" (p.242). In the context of purchasing, the object is the good or service a consumer considers purchasing.
Next, an attitude is formed (this is the affect effect): an attitude is the amount of affect or feeling a consumer has for or against an object or stimulus (p.249).
Finally, the affect component leads to the final (purchase) behavior (this is the conative effect): "the actions consumers undertake to acquire, use, and dispose of products and services"(p.251)
This sequence is known as the hierarchy of effects model (Lewis, 1898). It is also referred to as the standard learning hierarchy (Zinkhan and Fornell, 1989; Mowen and Minor, 1998) or the high-involvement hierarchy (Mowen and Minor, 1998).
As indicated by the term high-involvement hierarchy, the beliefs→ attitude →behavior sequence assumes that consumers are highly involved in the purchase. High-involvement reflects strong motivations in the form of high-perceived personal relevance accompanying the purchase (Engel et al., 1995, p.161). With high-involvement, consumers go through the purchase process rather extensively and make thorough use of all the purchasing stages.
Next to high-involved purchasing, the literature reports on low-involved purchase behavior. Low-involvement reflects weak motivations in the form of a low perceived personal relevance accompanying the purchase (Engel et al., 1995). With low-involvement, consumers still perform the activities that are distinctive for the decision-making perspective but go through the purchase process rather briefly and are likely to skip some stages. The corresponding hierarchy of effects differs from high-involved purchasing. The formation of beliefs directly precedes the act of purchasing (Mowen, 1988; Zinkhan and Fornell, 1989). Next, the attitude is formed. This hierarchy is known as the low-involvement hierarchy (Mowen, 1988).

2) The Experiential Perspective

The decision-making approach has been challenged by several consumer researchers (e.g. Hoyer, 1984; Rook, 1987). Well-known arguments are that the decision-making perspective ignores the possibility of purchasing without the traditional decision-making stages (Mowen, 1988; d'Astous, Bensouda and Guindon, 1989) and disregards activities containing feelings and emotions. These general points of criticism come together in another consumer behavior approach: the *experiential perspective*. According to the experiential perspective, or hedonic perspective as it is also known (Holbrook and Hirschman, 1982a; Holbrook and Hirschman, 1982b), consumers purchase a product by relying on emotions and feelings rather than on cognitive problem solving.

The experiential perspective investigates the impact of emotional inputs, symbols, visual information and affective themes (e.g. music, odors, fear) on the purchase of affective and experiential products or services. Here, affect formation, emotional responses, imagery/exploratory processes, the need for stimulation, opponent processes and reaction might be considered as intervening response systems.

Two specific purchase types can be considered within the experiential perspective: impulse buying and variety seeking.
Impulse buying has been defined by many researchers (e.g. Weinberg and Gottwald, 1982; Rook and Hoch, 1985; Rook, 1987; Piron, 1991). Rook's definition in particular (1987) has been widely applied. According to Rook: "Impulse buying occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately. The impulse to buy is hedonically complex and may stimulate emotional conflict. Also, impulse buying is prone to occur with diminished regard for its consequences" (Rook, 1987, p.191). Compared to traditional purchasing, impulse purchasing is a fast, often spontaneous, experience with an emotional load (Piron, 1991).
Variety seeking refers to the tendency to spontaneously purchase a new brand or product even though the previously bought product or brand expressed satisfaction (Mowen, 1988, p.17). The desired new or novel product (or brand) often contains characteristics derived from the original product (Hoyer and Ridgway, 1984).

An important characteristic of the experiential approach is that the hierarchy of effects underlying the purchase process is different from the two hierarchies used within the decision-making perspective. First an attitude (feelings/affect) is formed. Next, the product or service is purchased. And then beliefs are formed (Mowen, 1988; VanderVeen, 1994; Solomon, 1996).

3) The Behavioral Influence Perspective

In addition to the experiential perspective, another approach has emerged as a reaction towards the decision-making perspective: the *behavioral influence perspective*. Compared to the decision-making perspective, internal decision–making processes are not considered (Mowen, 1988, Mowen and Minor, 1998). Unlike the experiential perspective, feelings, emotions or any other intrapersonal determinants are not taken into account (Foxall, 1993). Nor is it assumed that beliefs or the formation of feelings precede behavior. In contrast, based on behavioral learning theory (see Rothschild and Gaidis, 1981), the behavioral influence perspective focuses on the direct effects of environmental forces (i.e. stimuli) on behavior (Mowen, 1988; Foxall, 1993). The impact of environmental forces such as store layout, in-store music, store design, group norms, cultural values and several other situational factors on consumer behavior are examined. Primitive consumption patterns and movement of consumers through the store environment are common research topics.

Two forms of consumer behavior that fit well into the behavioral influence perspective are operant and classical conditioning. Both have been investigated extensively in distinctive behaviorism schools: the classical conditioning school and the operant conditioning school (Markin and Narayana, 1976).
Classical conditioning, which was introduced by Pavlov (1927), has been widely applied in consumer behavior research (see McSweeney ad Bierley, 1984). Classical conditioning can be defined as: "a form of learning in which a conditioned stimulus is paired with an existing unconditioned stimulus until the conditioned stimulus alone is sufficient to elicit a previously

unconditioned response which is now a conditioned response" (Engel et al, 1995, p.G3). Applied to store settings, unconditioned stimuli might be: background music, layout, in-store promotions and credit card signs. The consumer might pair these unconditioned stimuli with the act of purchasing the products (i.e. the conditioned stimulus). In that case, the unconditioned stimuli are associated with the conditioned act of purchasing or spending money resulting in the conditioned response of purchasing (Mowen and Minor, 1998). Skinner (1938) was one of the first to explore *operant conditioning*. Whereas classical conditioning forms an association between two stimuli, operant conditioning associates a behavior and a consequence. Applied to consumer purchasing, operant conditioning involves how the consequences of purchase behavior will affect the frequency or probability of the purchase behavior being performed again (based on Engel et al, 1995). The purchase/usage of a product might lead to satisfaction or dissatisfaction, which positively (positive reinforcement) or negatively (punishment) affects the likelihood of purchasing the product again. The factors that accompany the purchase/usage of the product leading to satisfaction or dissatisfaction are called positive reinforcers and punishers respectively (Foxall, 1986). The occurrence of these reinforcing or punishing factors in the shopping context increases or decreases the likelihood of purchasing the product again. Not surprisingly, some of the most important research questions in operant conditioning theory are: what factors accompany the purchase/usage of the product?, what was their impact (reinforcers/punishers)?, and how do they directly influence the occurrence of purchasing the product again? Applied to a store environment, aspects such as cleanliness, promotions and friendly personnel might function as positive reinforcers that trigger the act of purchasing a product (Mowen and Minor, 1988 & 2001).

The hierarchy of effects underlying the behavioral influence approach differs from the two perspectives discussed before. Stimulated by environmental factors, consumers first perform the behavior. Next beliefs and affect are formed.

Table 2.1: Purchase processes and their possible hierarchies of effects

CONSUMER BEHAVIOR PERSPECTIVE	PURCHASE PROCESS	HIERARCHY OF EFFECTS
Decision Making Perspective	High-involvement	beliefs – affect - behavior
	Low-involvement	beliefs – behavior - affect
Experiential Perspective	Experiential /impulse	affect- behavior – beliefs
Behavioral Influence Perspective	Behavioral influence	behavior – beliefs – affect

(Mowen and Minor, 1998, p.256)

The different perspectives in consumer purchasing, including the corresponding hierarchy of effects, are shown in table 2.1. Research into online purchase behavior is still in its infancy. The relationships between perceptions of online store and consumer purchase intentions are starting to be explored. Without saying that the other perspectives are not important or irrelevant, we will confine ourselves in this dissertation to the decision-making perspective. This rational perspective is the most well-established perspective when considering consumer purchase behavior. We believe studying online purchase behavior from a rational perspective will provide some interesting results that are likely to add to the existing body of knowledge.

2.3 The consumer purchase process according to the decision-making perspective

This section examines the consumer purchase process from a decision-making point of view. First, an overview of three consumer purchase model types will be provided that can be identified within the decision-making perspective: general purchase models, adoption process models and communication models. Next, we will build upon a general purchase model to consider the consumer purchase process in detail.

2.3.1 Rational purchase processes: three types

Various consumer purchase process models have been introduced within the decision-making perspective. Based on the work of Hansen (1972) and Bettman (1979) three rational purchase model types can be identified: *general purchase models*, *adoption process models* and *communication models*.

General purchase models are widely known in the literature. They describe the purchase process as a consumer decision process and focus on aspects such as cognitive problem solving and information processing. General purchase models usually comprise the following steps: need recognition, search for information, evaluation, purchase, post-purchase evaluation and divestment. One of the most elaborate general models in consumer behavior theory is the model developed by Engel et al. (1995). Many consumer purchase process models are derived from the Engel et al. model and comprise comparable stages (e.g. Solomon, 1996; Mowen and Minor 1998; Kotler and Armstrong, 1999; Harell and Frazier, 1999; Kotler, 2000). Other established general purchase models include the consumer decision process of Nicosia (1966), the Hansen model (1972), the theory of Bettman (1979) and the theory of buyer behavior by Howard and Sheth (1969).

Although *adoption process models* regard consumer purchasing as a rational activity as well, adoption theory explicitly focuses on the purchase process for new products/innovations. Here, an innovation refers to any good, service or idea that the consumer perceives as new. Within adoption theory the consumer purchase process is seen as "the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of his decision" (p.20). Usually adoption process models comprise the following stages: exposure to innovation, formation of attitude towards innovation, decision to adopt (purchase) innovation,

usage of innovation and confirmation of the purchased innovation. A well-known adoption process model is the Rogers (1983) model.

Finally, *communication models* regard the rational purchasing as a sequence of steps that customers go through when confronted with commercials/advertising. In line with general purchase models and adoption theory, the sequence of these steps is usually based on the classic hierarchy of effects. However, the purpose of many communication models is to describe how marketing communications can be used to support customers, step by step, through the purchase process (Lavidge and Steiner, 1961; Floor and van Raaij, 1989). The fist step usually consists of a stage where the consumer is exposed to an advertisement. Next, the advertisement is understood and/or triggers a consumer's interest. Finally, based on aspects such as preference formation and/or conviction, the process is completed with the purchase of the advertised product. Examples of widely applied communication models are the AIDA model (Strong 1925), the DAGMAR model (Colley, 1961) and the Lavidge and Steiner model (1961).

To recapitulate, the three model types regard the consumer purchase process from a general, adoption process theory or communication point of view. Since this dissertation is not about the adoption of the Internet or any product, nor about the communicational aspects of online purchasing, we build on general purchase models to discuss the purchase process in detail. Because most general purchase models available in the literature comprise comparable stages and cover similar activities (cf. the work of Hansen, 1972 & Bettman, 1979) we will use the model of Engel et al. to illustrate the purchase process. This model is one of the most elaborate within the literature and, as indicated above, has functioned as a starting point for many equivalent models.

2.3.2 The general purchase process

Engel et al. (1995) describe the consumer decision process as a series of stages consumers go through to purchase, consume and dispose of a product. Building upon the conceptualizations of Dewey (1910), which has been adopted by many consumer behavior theorists (Subasinghe, 1998), they consider the consumer decision process as a problem solving activity. Problem solving refers to the process whereby consumers feel, locate and define a difficulty, suggest possible solutions, evaluate the consequences and finally consider the solution (Dewey, 1910). It can be defined as "thoughtful, consistent action undertaken to bring about need satisfaction" (Engel et al., p.142).

The consumer decision process of Engel et al. comprises the following stages: need recognition, search for information, pre-purchase alternative evaluation, purchase, consumption, post-purchase alternative evaluation, divestment. The stages are presented in figure 2.1 and will be discussed below.

26
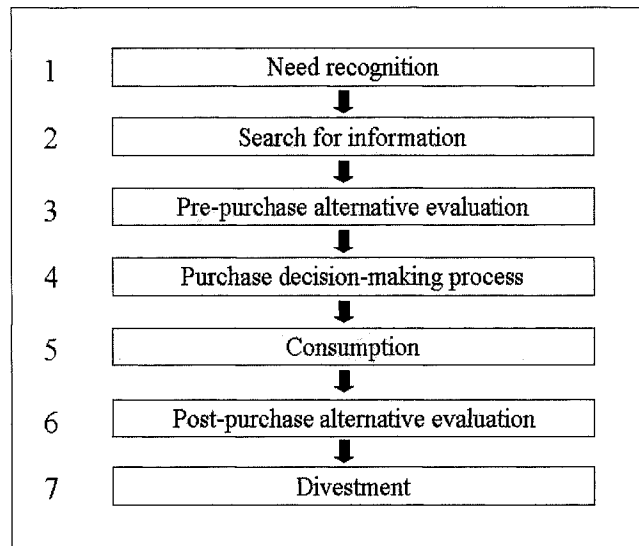
Figure 2.1: The consumer decision process according to Engel et al.
(based on Engel et al., 1995, p.154)

1) Need recognition

According to Engel et al., the first stage of the consumer decision process is need recognition. In the literature, this stage is also known as problem recognition, arousal, need arousal, problem arousal, need awareness, activation, problem identification and problem perception (for an extensive overview see Subasinghe, 1998). It is defined as "the perception of a difference between the desired state of affairs and the actual situation, sufficient to arouse and activate the decision process" (p.176). Need recognition is activated by factors such as marketing stimuli, time, product consumption and changed circumstances. The level of discrepancy between the actual and desired state determines whether a need is recognized. If this level is above the individual's threshold, a need will be recognized and the decision process will be entered into. One example might be a consumer who is hungry (actual state) and who wants to eliminate this feeling (desired state). If the hungry feeling is at or above the threshold, the decision process will be activated. Below the threshold a need is not recognized. The presence of need recognition does not automatically lead to action. Firstly, the recognized need has to be sufficiently important. Secondly, the solution to the need has to be within the consumer's means (p.176-179).

2) Search for information

After the recognition of a need, the consumer enters the second stage of the model: the search for information. During this stage consumers look for information about potential purchases that satisfy the recognized need. This stage can be defined as: "the motivated activation of knowledge stored in memory or acquisition of information from the environment" (p.182). As indicated by the definition, two consumer search processes are important: internal and external search. Both have been thoroughly discussed in information processing theory (e.g. Bettman, 1979).

According to Engel et al., *internal search* can be described as "a memory scan for decision relevant knowledge stored in long-term knowledge" (p.183). Once a need has been recognized, the first search for information is typically internal. If the amount and quality of internal information is sufficient to make a decision, an external search will not be necessary. More experienced purchasers are likely to use internal search only. In contrast, first-time purchasers will seldom possess the adequate internal information to make a decision (p.183).

External search involves the search for information from the environment. External search can be divided into two types: pre-purchase search and ongoing search. If the external information search is driven by a purchase need, the external search is called pre-purchase search. In contrast, ongoing search refers to information acquisition that occurs relatively regularly, regardless of a purchase need. One example might be the ongoing search for product related information by reading a computer magazine after the purchase of a desktop system. The primary motive behind the search for pre-purchase information is the desire to make better purchase decisions. However, ongoing search might, in addition to the desire to make better decisions in the future, also be conducted just for the fun of it. It seems that the need for a pre-purchase search is influenced by the amount of ongoing search. A consumer who is up-to-date with the latest computer technologies and prices, because he has a subscription to a magazine, will not need to make an intensive external information search (p.183-184).

3) Pre-purchase alternative evaluation

The next step in the purchase process of Engel et al., is the evaluation stage. Pre-purchase alternative evaluation can be defined as: " the process by which a choice alternative is evaluated and selected to meet consumers needs" (p.206). The evaluation stage is closely related to the information search stage. In fact, these stages are intertwined because information is evaluated every time it is acquired. Moreover, the outcome of evaluation might be to go through the search stage again in order to obtain more relevant information (p.206-207). The basic components of the evaluation process are shown in figure 2.2 and will be elucidated below.
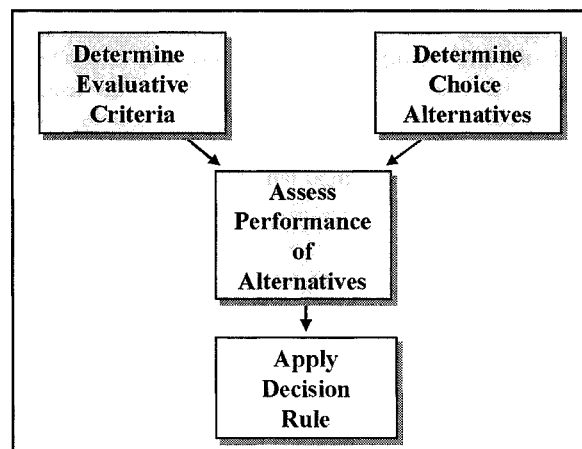
*Figure 2.2: Basic components of the pre-purchase alternative evaluation process
(based on: Engel et al., 1995, p.207)*

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a) Determine evaluative criteria

Evaluative criteria can be described as: "the particular dimensions or attributes that are used in judging the choice alternatives" (p.208). The criteria can be both utilitarian and hedonic. Utilitarian criteria are criteria that refer to objective, functional product attributes. For example, consumers might evaluate products or stores on safety, reliability, brand name, price, country of origin, price, status and prestige. Hedonic criteria, in contrast, are dimensions that are subjective in nature (like aesthetic considerations, sensory gratification and pleasure). "It is common for utilitarian and hedonic needs to function simultaneously in a purchase decision" (p.405). There are likely to be dissimilarities with respect to the potential impact of single evaluative criteria. Depending on aspects such as the product to be bought and customer characteristics, some criteria are weighted more heavily than others.

b) Determine choice alternatives

In addition to determining which evaluation criteria to use, consumers also have to decide from which alternatives the final choice will be made. This final selection is known as the *consideration set* or *evoked set*. It is defined as: "the set of alternatives from which choice is made" (p.g3). The consideration set contains a subset of all the alternatives available to the consumer. Based on both internal and external information, the consumer determines which alternatives to include. Those alternatives in the consideration set that are entered after internal search, are together called the *retrieval set*. Experienced purchasers will mainly use the retrieval set as input for the consideration set. First-time purchasers, in contrast, will determine the consideration set by conducting external search (p.215-118).

c) Assess the performance of choice alternatives

After the selection of criteria and the consideration set, consumers assess the performance of choice alternatives by using various judgment rules. In many cases consumers have judgments or beliefs about the alternatives stored in their memory. Consumers without such information will have to rely on external information.

The rules that are used are often based on *cutoffs* and *signals*. A *cutoff* is: "a restriction or requirement for acceptable attribute values" (p.219). For example, one might be considering buying a camera that costs between 200 and 300 euros. All the alternatives that fall outside this category will not be included in the consideration set. *Signals* are cues that are used to evaluate the consideration set. Warranties and price are often used as cues because consumers see them as signals of product quality (p.218-222).

Cutoffs and signals are mainly used to "simplify incoming information to overcome the limited ability of the human mind to process complex information" (Berri and Schmidt, 2002, p.3), and have been introduced and discussed in prospect theory (see Kahneman and Tversky, 1979).

d) Apply decision rule

The last step in the evaluation stage is the application of a *decision rule*. Decision rules are: "the strategies consumers use to make a selection from choice alternatives" (p.223). Decision rules vary according to the amount of time and process effort they require.

When choice is habitual, the decision rule is usually simple. Even when choice is not a habit, consumers may use simplistic decision rules like "purchase the cheapest". Relatively simple decision rules are likely to occur for repetitive purchases that are rather low in importance or involvement.

In other situations consumers might be more motivated and will therefore use complex decision rules that require greater processing effort.

Complex decision rules are either *noncompensatory* or *compensatory* (p.222). *Noncompensatory decision rules* refer to: "a strategy in alternative evaluation in which a brand's weakness on one attribute cannot be offset by a strength on another attribute"(p.g10). *Compensatory decision rules* can be defined as: "a strategy in alternative evaluation in which a perceived weakness on one attribute may be compensated for or offset by strength on others"(p.g-3). Compared to the noncompensatory decision rule, it allows weak performance of an attribute to be offset by good performance of another.

While applying decision rules "consumers continually make trade-offs between the quality of their choice (that is, purchasing the "best brand") and the amount of time and effort necessary to make a decision" (p.222). Consumers usually follow decision rules that combine satisfactory choice (instead of optimal choice) with an acceptable amount of time and effort. As stated by Simon (1987), a consumer who "chooses the best available alternative according to some criterion is said to optimize; one who chooses an alternative that meets or exceeds specified criteria, but that is not guaranteed to be either unique or in any sense the best, is said to satisfy" (p.243). Due to cognitive limitations in the human mind, optimal rational choice, as described in classical and neoclassical economics, is almost impossible. This is known in the literature as bounded rationality (Simon, 1957).

4) Purchase decision-making process

After the evaluation stage consumers will enter the purchase decision-making stage. An important characteristic of this stage is that it can be seen as a decision-making process on its own. While going through the purchase decision-making stage, consumers make a number of decisions: what to purchase, whether to purchase, where to purchase, when to purchase and how to pay (p.236).

According to Engel et al., the decision *what to purchase* does not refer to the decision made during the evaluation process. The result of the evaluation process might be an intention to purchase a specific product/brand. However, the outcome might well be an open-ended intention, which needs the search for further information. During the purchase decision-making stage, the formed intention(s) are translated into one of the following categories (p.238-240):

I)   *Fully planned purchase*: When performing a *fully planned purchase*, "the buyer knows exactly what he or she wants and is willing to shop until it is found" (p.238). In other words: "both product and brand are chosen in advance. This intention category is the outcome of high involvement and extended problem solving" (p.238). *Extended problem solving* (based on Howard and Sheth, 1969) is "detailed and rigorous decision-making behavior including need recognition, search for information, alternative evaluation, purchase, and outcomes" (p.G-6). It is often used in making critical purchases. Lower involvement purchases might also be fully planned. Then a purchaser makes a shopping list in advance and purchases all products/brands by routine scanning (p.238).

II) *Partially planned purchase*: This category can be defined as: "there is an intention to buy a given product, but the choice of brand is deferred until shopping is completed"(p.238). An in-store information search is very important during this stage, especially when it concerns a high involvement purchase. When involvement is low, the final decision might be influenced by promotional influences such as in-store

displays and price discounts. Furthermore, under low involvement affect referral is often used as a decision strategy (p.239).

III) *Unplanned purchase*: this last category is described as: "both the product and brand are chosen at point of sale"(p.238). When the consumer enters the store the intention is present but latent. It is triggered by in-store information and displays that function as a surrogate shopping list. This is a little different from an impulse purchase. An impulse purchase is hedonically complex and may stimulate emotional conflict (Rook, 1987). In contrast to the unplanned purchase, the impulse purchase does not fit into the model of Engel et al. (cf. section 2.2).

Not all purchase intentions are fulfilled. The decision *whether to purchase* depends on various factors that might intervene between the intention to purchase and the purchase itself. The most important are: changed motivations, changed circumstances, new information and the availability of products (p.236).

Over the past few decades the decision *where to purchase* has encountered an ever increasing number of options. In-home shopping, the Internet, telephone, catalog mail order, department stores and specialty stores all belong to the options from among which consumers have to choose (p.240).

Furthermore, consumers have to decide *when to purchase* and *how to pay*. Some products are bought on a seasonal basis (like Halloween apparel). Other products are bought as soon as a shortage has been recognized (food). There are also several options when it comes to payment. In addition to cash, consumers might decide to pay by credit card or other methods of delayed payment (p.236-237).

5) Consumption

Consumption or usage follows a purchase. The consumer decides how this is to be done. There are a number of different options (p.263):

- Consumption/usage at the earliest convenient opportunity;
- Short-term storage in anticipation of usage opportunities in the future;
- Long-term storage with no specific use in mind.

Consumption can also be cancelled. Unanticipated situations such as a job layoff or new information that reveals that the product is inappropriate, might abort consumption. If post-decision doubt about a purchase arises consumers can react in two ways. First, they might search for information that supports their choice. Second, they might conclude that they have made an unwise decision. Both might result in a temporary or final abortion of the consumption process (p.263-265).

6) Post-purchase alternative evaluation

After the purchase and product consumption, evaluation usually continues. The outcome of this *post-purchase evaluation* leads to satisfaction or dissatisfaction. Satisfaction is defined as: "post-consumption evaluation that a chosen alternative at least meets or exceeds expectations" (p.273). The opposite response is called dissatisfaction. A widely applied theory when considering satisfaction and dissatisfaction formation is the disconfirmation of expectations model of Oliver (1980). In line with this theory, Engel et al. use the term *positive*

disconfirmation to refer to the situation where the product performs better than expected. If performance meets expectations, the term *simple confirmation* is used. Both simple confirmation and positive disconfirmation lead to satisfaction. If performance is worse than expected, the term *negative disconfirmation* is used. Negative disconfirmation results in dissatisfaction (p.273-276).

7) Divestment

Finally, consumers enter the last stage of the consumer decision process: *divestment*. Divestment, a stage which has received relatively little attention in the literature (Roster, 2001), refers to the disposition of (a part of) the product after it has been chosen, bought and consumed. The time between consumption and divestment differs depending on the type of product and the psychological ties between consumer and product. Nevertheless, finally all products will be disposed of. Following divestment, products might be recycled (partly), used again (flea market) or simply destroyed (Jacoby, Berning and Dietvorst, 1977).

2.4 Summary

In this chapter we considered the consumer purchase process. We started with an introduction of three perspectives for considering consumer purchasing: the decision-making perspective, the experiential perspective and the behavioral influence perspective. Within the decision-making perspective consumer purchasing is regarded as a rational problem solving activity, whereas researchers within the experiential and behavioral influence perspective focus on emotions and environmental factors respectively as driving the purchase mechanisms.
In order to discuss the consumer purchase process, we focused on the decision-making perspective, which is the most dominant perspective in the literature. Three purchase model types have been identified within the decision-making perspective: general purchase models, adoption process models, and communication models. In line with the objectives of this thesis we focused on general purchase models. For illustration purposes we discussed the model of Engel et al., which is one of the most elaborate general purchase models. Similar to other general purchase models, this model describes the purchase process as a series of fixed stages which consumers go through in order to purchase a product. It starts with the recognition of a need. Next, consumers apply internal and external search to gather information about potential purchases that satisfy the recognized need. After the search for information, consumers assess and evaluate choice alternatives and apply decision rules to make a selection. Based on these processes consumer purchase intentions are formed. During the following stage, the purchase decision-making stage, the formed purchase intentions are translated into action. Depending on the nature of the intentions (open ended or specific), this results in a planned purchase, partially planned purchase or unplanned purchase. In addition to the decision what to purchase, consumers also decide where to purchase, when to purchase, whether to purchase and how to pay. If all the decisions have been made and the product has been purchased, consumers consume/use the product, engage in post-purchase evaluation and eventually conclude the consumer decision process by disposing of the product.
In the remainder of this dissertation we limit our research to a part of the consumer purchase process. The goal of our research is to investigate the relationships between perceptions of the online store and consumer purchase intentions. As discussed in this chapter, consumer purchase intentions are the outcome of the evaluation stage of the consumer decision process.

Since we are not investigating activities following the purchase, our research is restricted to what is known as the pre-purchase process (based on Engel at al., 1995) or the ex-ante part of a transaction (Williamson, 1985). Moreover, our focus on purchase intentions implies that we do not address the impact of the online store on final purchase behavior, nor consider the translation of intentions into behavior. This places our research within the first three stages of the consumer purchase process.

In the next chapter, we will focus on the explanation and prediction of consumer behavior. We will introduce theory that has been widely applied to explain and predict various forms of behavior, including consumer purchase behavior.

Chapter 3: Explaining and predicting purchase behavior: a theoretical and empirical overview

3.1 Introduction

The objective of chapter three is to introduce theory that explains and predicts rational purchase behavior. More specifically, this chapter will consider and discuss one of the most elaborate behavior predicting models that, based on a cognitive structure, applies to both offline and online behavior (Crisp et al.,1997; O'Keefe, Cole, Chau, Massey, Montoya-Weiss and Perry, 2000). This theory, known as the Theory of Reasoned Action, has been widely applied to behavior in general as well as to consumer purchase behavior in particular. It states that the behavioral intention is the only direct determinant of behavior. The intention itself comprises two determinants: the attitude toward the behavior and subjective norms concerning the behavior. All constructs, terms and interrelationships will be considered in detail. Furthermore, we will consider how the theory links external variables (i.e. variables that are not part of the theory) to behavior and briefly discuss an extension of the theory. After the theoretical consideration we will provide an overview of the empirical results. First, the application of the model to predict several forms of behavior will be explored, including findings with respect to the effects of external variables. Second, we will focus on research findings in the context of consumer purchasing. Although the Theory of Reasoned Action was initially developed to predict rational behavior in general, it also fits rational purchase behavior (Ajzen and Fishbein, 1980). Outcomes that consider the impact of external variables will also be discussed. This chapter concludes with a recapitulation of our findings and a discussion of a number of limitations with respect to theory and practice.

The content of this chapter is as follows. In section 3.2, the Theory of Reasoned Action is introduced. In addition to the theory and its assumptions (3.2.1) we will also pay attention to the impact of external variables (3.2.2) and an extension of the theory (3.2.3). After this theoretical consideration, the empirical results of the Theory of Reasoned Action will be examined in section 3.3. The findings on the predictive validity in general (3.3.1) and the

effects of external variables will be explored (3.3.2). Section 3.4 goes on to amplify the empirical exploration with respect to consumer purchasing by considering the most important results so far. In section 3.5 limitations of the Theory of Reasoned Action will be considered. Finally, section 3.6 presents a summary of our findings.

3.2 Explaining and predicting behavior: the Theory of Reasoned Action

This section introduces and discusses the Theory of Reasoned Action (TRA). In addition to the theoretical foundations, the most important assumptions will be considered. Finally, we will take a brief look at an extension of the TRA, known as the Theory of Planned Behavior (TPB).

3.2.1 The Theory of Reasoned Action

The TRA[1] was introduced by Fishbein and Ajzen (1975) to explain and predict behavior. The TRA covers the interrelationships between the following components: *beliefs, attitude toward the behavior, subjective norms concerning behavior, intentions to perform the behavior* and the *overt behavior* (Fishbein and Ajzen, 1975). These components and their interrelationships are considered below.
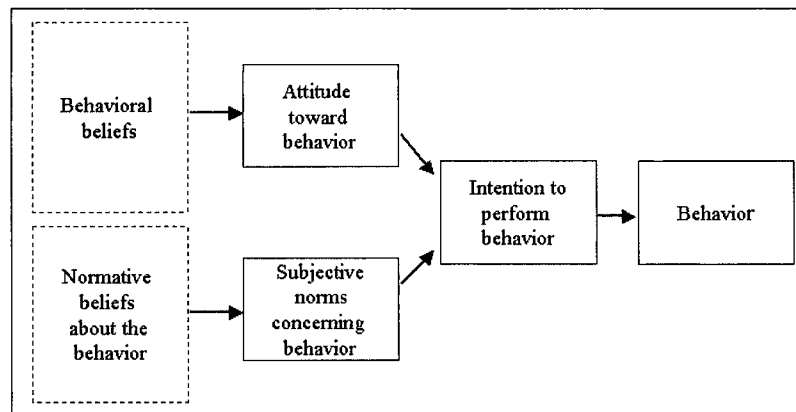
Figure 3.1: The Theory of Reasoned Action (from Fishbein and Ajzen, 1975, p.16)

Beliefs: a belief represents salient information or knowledge that an individual has about an object. A belief links an object to the object attributes. For example, a consumer might have the belief that a Psion organizer (the object) stands for a modern but expensive handheld device (the attributes). Beliefs are formed by information processing and learning and can

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[1] The term TRA was derived from Ajzen and Madden (1986), "Prediction of Goal-Directed Behavior: Attitudes, Intentions, and Perceived Behavioral Control", Journal of Experimental Social Psychology

either be positive or negative. They represent the cognitive elements of the TRA and ultimately determine attitudes, intentions, and behavior (Fishbein and Ajzen, 1975).

The description of beliefs as introduced above is rather general. However, two particular beliefs are important to the TRA: *behavioral beliefs* and *normative beliefs about the behavior* (Ajzen and Fishbein, 1980). *Behavioral beliefs* represent salient information or knowledge that an individual has about performing a particular behavior. For example, a consumer may have the belief that purchasing a new television will make him happy (Ajzen and Fishbein, 1980). *Normative beliefs about the behavior* refer to the beliefs that referents think that the individual should or should not perform the behavior in question. These referents might be family, friends or others (Fishbein and Ajzen, 1975).

Attitude toward behavior: an attitude stands for a person's general feeling of favorableness or unfavorableness toward a concept. In other words, it represents the amount of *affect* (Fishbein and Ajzen, 1975). The *attitude toward behavior* considers behavior as a concept. It represents the person's general feeling of favorableness or unfavorableness for the behavior in question. Behavioral beliefs underlie the attitude toward behavior (Ajzen and Fishbein, 1980). The attitude toward behavior is seen as a latent variable that is assumed to guide or influence behavior (Fishbein and Ajzen, 1975).

Subjective norms concerning behavior: the subjective norms concerning behavior embody "the person's perception of the social pressures put on him to perform or not perform the behavior in question"(Ajzen and Fishbein, 1980, p.6). It is determined by the motivation to comply with the normative beliefs about the behavior (Fishbein and Ajzen, 1975).

Behavioral intention: the behavioral intention is the antecedent of behavior. It refers to the intention to perform the behavior in question (Ajzen and Madden, 1986). It represents the conative part of the Fishbein and Ajzen theory. Behavioral intentions "capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior"(Ajzen, 1991, p.181). Moreover, they refer to "a person's subjective probability that he will perform some behavior" (Fishbein and Ajzen, 1975, p.288). The behavioral intention is determined by subjective norms and the attitude toward behavior (Fishbein and Ajzen, 1975). The impact of both constructs on the behavioral intention depends on their *relative weights*. The relative weights represent "the importance of the attitudinal and normative factors as determinants of intentions" (Ajzen and Fishbein, 1980, p.6).

Behavior: behavior refers to overt behavior (Fishbein and Ajzen, 1975). In other words, it consists of observable action (Ajzen and Fishbein, 1977). According to the TRA, behavior is preceded by the behavioral intention (Fishbein and Ajzen, 1975).

To recapitulate, the TRA states that the behavioral intention is determined by both subjective norms toward performing the behavior and the attitude toward behavior. The behavioral intention itself precedes the final behavior and is the most essential construct if predicting behavior is the objective.

Assumptions of the TRA

The TRA as presented above is used to predict and explain behavior. It identifies the most important determinants of the behavioral intention, which is seen as the best predictor of

behavioral response (Fishbein and Ajzen, 1975). However, it is based on a number of assumptions that have to be taken into account.

Firstly, according to Fishbein and Ajzen (1975), the relationship between the constructs can only be predicted accurately if they are measured at the same level of *specificity of target, situation, time and behavior*. Target specificity means that the constructs refer to the same object (the Kotler millennium edition), a class of objects (marketing books) or any objects. Situation specificity indicates if the constructs are related to a given situation (shopping at a specific supermarket), a class of locations (shopping at supermarkets) or any location. Time specificity points to a specific time (3pm), a time period (the afternoon) or any time. Finally, behavioral specificity refers to the degree that constructs are general or specific. For example, do they refer to general behavior (being polite) or specific behavior (inviting a friend) (Fishbein and Ajzen, 1975; Bagozzi, 1981).

Secondly, the value of constructs might change over time. Intentions especially tend to change as a result of intervening events. To obtain accurate predictions of the behavioral intention, all constructs (attitude, subjective norms and intention) need to be measured at the same time. When the relationship between the behavioral intention and the behavior is investigated this is something that cannot usually be realized. In that case, researchers will have to pay attention to the question as to what events might interfere and what their impact might be (Fishbein and Ajzen, 1975).

Thirdly, the theories are based on the assumption that "human beings are usually quite rational and make systematic use of the information available to them. People consider the implications of their actions before they decide to engage or not engage in a given behavior" (Ajzen and Fishbein, 1980, p.5). Based on this assumption, the theory is referred to as the Theory of *Reasoned Action* (Ajzen and Fishbein, 1980).

Fourthly, both theories are based on the determinants and performance of a single behavior (Fishbein and Ajzen, 1975). This implies that choosing from among a number of alternatives is not considered (Sheppard, Hartwick and Warshaw, 1988).

3.2.2 External variables and the TRA

In addition to the variables discussed above, various *external variables* might influence the behavioral intention and the overt behavior. External variables refer to variables that can only indirectly influence behavior. As stated by Ajzen and Fishbein (1980), "External variables will be related to behavior only if they are related to one or more of the variables specified by our theory"(Ajzen and Fishbein, 1980, p.82). This is called the *claim to sufficiency*: external variables do not add to the prediction of intentions over and above attitudes and subjective norms (Fishbein and Ajzen 1975; Ajzen and Fishbein, 1980). Ajzen and Fishbein (1980) distinguish three classes of external variables (Ajzen and Fishbein, 1980):

1) *Demographic variables*: this category consists of variables such as age, gender, occupation, socioeconomic status, religion and education (p.84 and p.88).

2) *Attitudes toward targets*: attitudes toward targets or attitudes toward objects are usually assumed to be positively related to the likelihood of performing any given behavior with respect to that object. For example, the attitude of people toward blacks might impact on the likelihood of voting for a black candidate (p.88-89).

3) *Personality traits*: various personality traits underlie or influence the behavior in question. For example, personality characteristics such as: introversion-extroversion, aggressiveness, neuroticism, masculinity-femininity, lifestyle, altruism, authoritarianism and dominance (p.86-87).

According to Ajzen and Fishbein (1980), external variables only influence the behavioral intention and the behavior as specified in the structure of the figure below:
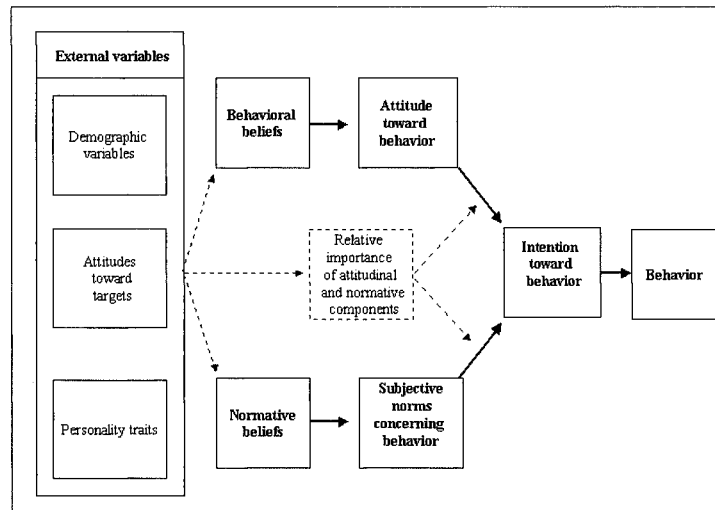
Figure 3.2: The impact of external variables on the TRA
(adapted from Ajzen and Fishbein, 1980, p.84)

Figure 3.2 illustrates that external variables influence intentions and behavior indirectly by their effects on the attitude toward behavior and subjective norms concerning the behavior. The impact of the external variables on the attitude and subjective norms is mediated by behavioral and normative beliefs. Furthermore, external variables may affect the relative importance of the attitudinal and normative components. For example, the behavioral intention to gamble might be mainly determined by the attitude toward the behavior and only partially by subjective norms. If the external variable under consideration is the attitude toward religion, the relative importance of subjective norms might become more important. As a result, the behavioral intention to gamble might decrease due to the effect of the external variable that changes the relative importance of the precedents of behavioral intention (Ajzen and Fishbein, 1980).

In addition to the indirect impact of external variables on both intention and behavior, there is another important distinction between construct relationships as originally specified in the TRA. Whereas the relations specified in the TRA are always assumed to apply as long as appropriate measures are obtained, external variables are not expected to have consistent effects. As stated by Ajzen and Fishbein: "there is no necessary relation between any external variable and a given behavior"(Ajzen and Fishbein, 1980, p.85). The impact of external variables may change over time. Furthermore, because behaviors vary in terms of action, target, context and time specificity, the impact of external variables on the attitude and subjective norms cannot be consistent because the intermediating beliefs will seldom be similar. In other words, an external variable does not relate to a behavior because it is related to another, even if the behaviors are rather similar (Ajzen and Fishbein, 1980, p.85).

3.2.3 An extension of the TRA: the Theory of Planned Behavior

The TRA, as described above, relates the attitude toward behavior and subjective norms concerning behavior to the behavioral intention. This construction implies that people have *complete volitional control* over their behavior (Fishbein and Ajzen, 1975). In other words, a person can decide at will to perform the behavior or not because no interfering factors exist. As such, motivation is the most important underlying factor that determines whether the behavior will be performed (Ajzen, 1991). The TRA does not pay attention to the possibility that non-motivational factors might interfere.

However, people might not always have complete volitional control over their behavior. There are many non-motivational factors that might interfere. Examples would include the lack of available opportunities and resources such as time, money, skills and cooperation of others (Ajzen, 1991). When considering purchase behavior, there are many non-controllable situational influences one can think of that are part of the retail environment (e.g. the product assortment, sales promotions). Both physical and social surroundings contain uncontrollable conditions that might attenuate the volitional control over a (purchase) situation (Darden and Dorsch, 1990).

In an attempt to overcome this limitation of the original TRA model, Ajzen (1991) introduced the concept of *perceived behavioral control*. In the real world, many factors might interfere with one's intention. "Together these factors represent people's actual control over the behavior"(Ajzen, 1991, p.186). In other words, both behavioral intention *and* the actual behavioral control determine the final behavior. The actual control is also referred to as *behavioral control*. The confidence of people to perform the behavior is called the *perceived behavioral control*. It refers to "people's perception of the ease or difficulty of performing the behavior of interest" (Ajzen, 1991, p.183).

Similar to the formation of the attitude toward behavior and subjective norms concerning behavior, perceived behavioral control is also formed by beliefs. These beliefs are called *control beliefs*. Control beliefs refer to salient information or the knowledge an individual has about the control of a situation (Ajzen, 1991).
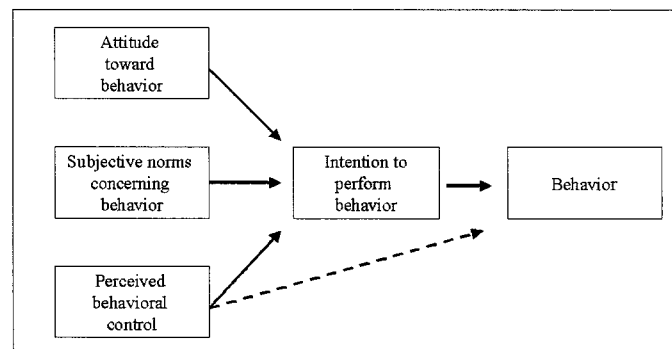
Figure 3.2: The Theory of Planned Behavior (Ajzen, 1991, p.182)

The *Theory of Planned Behavior* (TPB) adds the perceived control to the structure of the Theory of Reasoned Action. According to the TPB, the perceived behavioral control is, in addition to the attitude toward behavior and subjective norms concerning behavior, another

determinant of the behavioral intention. Moreover, the perceived behavioral control also directly influences behavior (Ajzen, 1991).

3.3 Explaining and predicting behavior: an empirical overview of the TRA

The TRA has been used extensively to predict and explain various types of behavior or the intentions to perform the behavior. In this section we will consider some major examples of behavior to which the model has been applied and observe the predictive power of the model. First, in 3.3.1, we will discuss results regarding the TRA as such. Next, section 3.3.2. explores whether external variables increased the predictive power of the model. After this exploration the findings will be summarized and discussed.

3.3.1: Explaining and predicting behavior: results of the TRA

The TRA has been applied many times to predict and explain behavior. Consequently, there are a lot of research results. The findings of some of the most important investigations are summarized in the table below:

Table 3.1: Results of examinations using the TRA

Reference	Subjects (n) who participated	Behavior	Relation tested	Results
De Vries and Ajzen (1971)	Undergraduate students (n=146)	Cheating in college (cheat in college, copy from others, allow others to copy)	Aact→ BI SN→BI Aact+SN→ BI BI→ B	r = .459, r = .546, r = .526 (all p<.01) r =.474, r =.534, r =.652 (all p<.01) R= .566, R=.647, R=.714 (all p<.01) r =.593, r =.583, r =.781 (all p<.01)
Newman (1974)	Employees of a nursing home(n=108)	Job turnover: absenteeism and resignation	Aact→ BI SN→BI Aact+SN→ BI BI→ B	r =.36, r =.63 r =.38, r =.53 R = .45 (p <.01), R = .70 (p<.01) r = .10 and r =.39
Pomazal and Jaccard (1976)	Students and people walking by	Altruistic behavior	Aact→ BI SN→BI BI→ B	r = .59 (p<.001) r = .23 (p<.001) r =.59 (p<.001)
Schlegel, Crawford and Sanborn (1977)	Student males from a high-school (n=196)	Alcohol use	Aact→ BI SN→BI Aact+SN→ BI	Significant significant R: ranging from .711 to .824 (p<.01)
	High school students (n= 417)	Drinking beer	Aact+SN→ BI	R^2: .40, .53 and .51 (p<.01)
Bowman and Fishbein (1978)	Random voters, Portland Oregon (n = 89)	„ „	Aact→ BI SN→BI Aact+SN→ BI BI→ B	r = .91(p<.01) r = .72 (p<.01) R = .92 (p<.01) r = .89 (p<.01)

Vinokur-Kaplan (1978)	White Americans (n= 239)	Family planning/ child bearing behavior	Aact→ BI SN→BI Aact+SN→ BI BI→ B	β = .17 (<.001) β =.71 (p<.001) R=.85 (p<.001) r =.55 (p<.001)
Zuckerman and Reis (1978)	Undergraduate students (n=251)	Blood donating behavior	Aact→ BI SN→BI Aact+SN→ BI BI→ B	R = .438 (p<.001), r^2 = .192 (p<.001) R =.500 (p<.001), r^2 = .250 (p <.001) R^2 =.249 (p<.001) r^2 = .204 (p<.001)
Brinberg (1979)	Psychology students (n=95 and n=105)	Going to church: Catholics, Protestants and Jews	Aact→ BI SN→BI Aact+SN→ BI	β = .48 (p<.01), β =.58 (p<.01), β = .36 (p<.01) β = .33 (p<.01), β = .22 (p<.05), β =.38 (p<.05) β = .68 (p<.01), β =.75 (p<.01), β =.57 (p<.01)
Davidson and Jackard (1979)	White married women (n=244)	,,　　　　,,	BI→ B	r = .526 (p<.01), r = .678 (p<.01)
Greenstein, Miller and Weldon (1979)	College sophomore women (n=189)	Occupational choice for various occupations	Aact→ BI SN→BI Aact+SN→ BI	b = .222 (p<05), b = -.008 (n.s.), b = .075 (n.s.), b = .089 (n.s.), b =.112 (n.s.), b = .280 (p<.05), b = .135 (n.s.), b = -.006 (n.s.) b = .584 (p<.05), b = .677 (p<.05), b = .643 (p<.05), b = .563 (p<.05), b = .651 (p<.05), b = .552 (p<.05), b = .599 (p<.05), b =.771 (p<.05). R= ranging from .609 to .771 (all: p<.0001)
Hom, Katerberg and Hulin (1979)	National guard members (n=534)	,,　　　　,,	Aact→ BI SN→BI Aact+SN→ BI BI→ B	r =.79 (p<.05) r = .69 (p<.05) R =.81 (p<.05) R =.65 (p<.05)
Jaccard, Knox and Brinberg (1979)	Males and females living in Midwestern community (n=119)	Voting behavior	BI→ B	r =.87 (p<.01), r = .85 (p<.01)
Loken and Fishbein (1980)	Married woman (n= 100)	,,　　　　,,	Aact→ BI SN→BI Aact+SN→ BI	β = .84 (p<.01) β = .12 (p <.01) R = .92 (p<.01), R^2 = .846
McCarty (1981)	Unmarried students (n=309)	Contraceptive usage	Aact→ BI SN→BI Aact+SN→ BI	β = .227, β = .254, β = .346, β = .724, β = .467, β =.710 β = .454, β = .536, β = .288, β = .072, β = .386, β = .137 R = .614, R =.698, R =.488, R =.756, R =.769, R =.764
Kantola, Syme and Campbell, (1982)	Perth residents (n=125)	Conserving water	Aact→ BI SN→BI	β = .23 β =.32
Loken (1983b)	Undergraduates (n=53)	Viewing television	Aact→ BI SN→BI Aact+SN→ BI BI→ B	β =.45 (p<.001) β = 36 (p<.01) R = .68(p<.001), R^2 = .46 78% of intentions predicted behavior

Fisher (1984)	Male psychology undergraduates (n=145)	,, ,,	Aact→ BI	r = .65 (p<.001), b = .68 (p<.001)
			SN→BI	r = .66 (p<.001), b = .48 (p<.001)
			Aact+SN→ BI BI→ B	R^2 = .53 (p<.001) r =.44, b = .47 (p<.001)
Pagel and Davidson, (1984)	Female introductory psychology undergraduates (n=70)	,, ,,	Aact→ BI	β =.19 (p<.05), β = .21(p<.05), β = .28 (p<.03)
			SN→BI	β =.28 (p<.03), β = .25 (p<.03), β = .26 (p<.03)
Crawford and Boyer (1985)	Women (n=163)	,, ,,	Aact→ BI SN→BI	r = 63 and b =.35 (no clear p) r = .69 and b = .49 (no clear p) R = .75 (no clear p)
Warshaw, Calantone and Joyce (1985)	Residents of Central Florida (n=758)	Blood donation behavior	Aact→ BI SN→BI BI→ B	β = .084 (p<.04) β = .441 (p<.01) r = .30 (p<.01), r =.31 (p<.01)
Netemeyer and Burton (1990)	Graduate and undergraduate students (n=141)	Voting behavior	Aact→ BI SN→BI Aact+SN→ BI BI→ B	r = .47 (p<.01) r = .36 (p<.01) R^2 = .20 r^2 = .35

(Aact = Attitude toward the behavior; S.N. = Subjective Norms concerning the behavior; BI= Behavioral Intention; B= the overt behavior; R = multiple corr. coef.; r = corr. coef. ; β = standardized regr. coeff.; b =regression coef.; R^2 = coef. of multiple determination; r^2 = coef. of determination; n.s. = not significant)

Based on table 3.1 the observation can be made that the results provide strong support for the TRA as is. The fact that most statistical measurements reveal strong interrelationships at a significant level underpins this statement. In sum, there is overwhelming evidence that the attitude and subjective norms determine the behavioral intention, which itself precedes the overt behavior. This conclusion is supported by the meta-study of Sheppard, et al.(1988). Based on 87 studies they conclude: "These results provide strong support for the overall predictive utility of the Fishbein and Ajzen model" (p.336).

3.3.2 External variables and the TRA: empirical results

The impact of external variables on the predictive ability of the TRA has been tested by various authors. Some important results are shown in the table below:

Table 3.2: The impact of external variables on the constructs of the TRA

Reference	Subjects (n)	Behavior	External variable (EV)	EV→TRA construct tested (direct)	Results: TRA construct directly related to (p)	Impact EV on BI or B, mediated by Aact and/or S.N. (p)
Songer-Nocks (1976)	Students (160)	In-game choice	Prior experience	Aact	Aact (p< .01)	BI (p<.01) B (p<.01)
			Motivational set	S.N.	S.N. (p< .01)	BI (p<.01) B (p<.01)
Schlegel et al. (1977)	Male high school	Alcohol Use	A combination of 33 variables			BI (p<.01)

	students (417)					
Bowman and Fishbein (1978)	Potential voters (89)	Voting for nuclear energy restrictions	Demographic variables (sex, age, education)	BI B	n.s. n.s.	n.s. n.s.
Loken and Fishbein (1980)	Married woman (100)	Childbea-ring intentions	Various external variables (e.g.: religiosity, age, intention to work, working experience).	Aact SN BI	Aact (p<.01) SN (p<.05) n.s.	BI
Bagozzi (1981)	Students (157)	Blood donation	Past behavior	BI B	BI B	
Kantola et al., (1982)	Residents of Perth (125)	Water conser-vation	Age	BI	BI (p< .05)	BI (p< .05)
Stutzman and Green (1982)	Students (113)	Energy consump-tion	Knowledge	BI	BI(p<.01)	
	Male and female consumers (368)	Energy consump-tion	Income	BI	BI(p<.05)	
Crosby and Muehling (1983)	Students (293)	Attend arts	Self concept	BI	BI (p<.05)	
			Past behavior	BI	BI (p<.01)	
			Awareness-pricing	BI	BI (p<.05)	
			Interest in Arts	BI	BI (p<.001)	
			Age	BI	BI (p<.05)	
Loken (1983b)	Undergrad uate students (53)	Television viewing	Attitudes toward the program	Aact S.N. B	Aact (p<.01) S.N.(p<.01) n.s.	
			Attitude toward watching late night TV	Aact S.N. B	Aact (p<.05) S.N. (p<.01) n.s.	
			Attitude toward the television actor; number of people in the household; number of hours per week watching TV	Act S.N. B	Aact (p<.01) n.s. n.s.	
Cote and Wong (1985)	Students (61)	Attendan-ce social function	Past behavior	BI B	BI (p<.001) B (p<.001)	B
			Various situational variables	BI B	BI (p<.001) B (p<.001)	
Crawford and Boyer (1985)	Married woman (163)	Child-bearing	Religiosity and sex-role traditionality	SN	SN (p<.05)	BI (p<.05)
			Affluence values	SN	SN (p<.05)	BI (p<.05)
Schifter and Ajzen (1985)	College women	Weight loss	Self knowledge	B	B (p<.05)	B (p<.01)

	(83)					
			Planning	B	B (p<.05)	B (p<.01)
			Ego strength	B	n.s.	B (p<.01)
			Health focus of control, Action control and Competence	B	n.s.	
Bagozzi and Warshaw (1990)	Undergraduate students (240)	Weight loss	Recency of past trying	B	B (p<.01)	
			Frequency of past trying	BI B	BI (p<.001) n.s.	
Beale and Manstead (1991)	Mothers (162)	Limit the frequency of sugar intake	Age	BI	n.s.	
			Educational status	BI	n.s.	
			Economic status	BI	n.s.	
Alwitt and Berger (1993)	Undergraduate students (134)	Purchase environmental friendly products	Attitude toward the product category	BI	BI	
Boldero (1995)	Adults (254)	Recycling behavior of newspapers	Insufficient newspapers	BI	BI (p<.05)	
			Past behavior	BI B	BI (p<.001) B (p<.05)	
Dahab, Gentry and Su (1995)	Residents community (111)	Recycling behavior	Prior behavior	BI	BI (p<.01)	
			Perceived effort	BI	BI (p<.001)	
			General attitude toward recycling	BI	n.s.	
Kurland (1996)	Financial services agents (144)	Ethical intention toward client	Experience	BI	n.s.	
			Income	BI	n.s.	
			Professional accreditation	BI	n.s.	
			Moral obligation	BI	BI (p<.01)	
Laroche, Toffoli, Kim and Muller (1996)	Residents Montreal (187) and Hamilton (180)	Pro environmental behavior	Culture	Aact B	n.s. n.s.	B
			Eco literacy	Aact	Aact (p<.05)	B
Kokkinaki (1999)	Students (78)	Purchase and use of a computer	Past behavior	BI B	BI B	B

(Aact = Attitude toward the behavior; S.N.= Subjective Norms concerning the behavior; BI= Behavioral Intention; B= the overt behavior; n.s. = not significant)

Based on this table two important observations can be made.

First, several results in table 3.2 support the claim of sufficiency (Songer-Nocks, 1976; Loken and Fishbein, 1980; Loken, 1983b; Crawford and Boyer, 1985; Laroche et al., 1996). However, other research outcomes reveal that external variables may well well have *direct effects* on the behavioral intention or behavior. For example, the results of Bagozzi(1981), Crosby and Muehling (1983), Dahab et al. (1995), Boldero (1995) and Kokkinaki (1999) show a direct significant relationship between an external variable and the behavioral intention. Furthermore, several research findings (Bagozzi, 1981; Schifter and Ajzen, 1985;

Cote and Wong, 1985; Bagozzi and Warshaw, 1990; Boldero, 1995; Kokkinaki, 1999) reveal a significant direct relationship between external variables and the overt behavior. Obviously the claim to sufficiency is not a very strong one. According to Laroche et al. (1996), there is a growing body of literature which found direct effects of external variables on various forms of behavior (Laroche et al, 1996, p.201). Fisher (1984) states: "Taking these findings together, it can be speculated that the theory of reasoned action is a generally useful predictor, across behavioral domains, but that inclusions of external variables that are relevant in a specific behavioral domain may improve prediction of that type of behavior"(Fisher, 1984, p.119). In addition, Stutzman and Green (1982) consider the TRA to be appropriate for rather simple forms of behavior (single act criterion). However, for more complex forms of behavior other variables that are directly linked to behavior should be included (1982).

Second, table 3.2 demonstrates that in addition to the variables that fit into the Ajzen and Fishbein (1980) classification of demographic variables, attitudes and personality traits, various other external variables might influence the behavioral intention and/or behavior. For example, results show that past behavior, experience, knowledge, motivation and perceived effort also influence the behavioral intention and/or behavior.

So far we have not considered the magnitude of effects the external variables have on the behavioral intention and/or behavior. Some of the most important results are summarized in the table below:

Table 3.3: The magnitude of effects of external variables on behavioral intention and behavior

External variable	Reference	Correlation with BI	Correlation with B	Percentage of BI variance accounted for above TRA variables	Percentage of B variance accounted for above other TRA variables
Age	Hom et al. (1979)	.27 (p<.05)	.31 (p<.05)		
	Fishbein, Ajzen and Hinkle (1980)		n.s.		no improvement
	Fishbein, Bowman, et al. (1980)		n.s.		
	Kantola et al.(1982)	-.11			
	Boldero (1995)		n.s.		
Attitude toward the object of behavior	Alwitt and Berger (1993)	.31 (p<.05)			
	Loken (1983b)			no improvement	
	Fishbein, Bowman et al. (1980)		.60		no improvement
Culture	Laroche et al. (1996)		n.s.		
Development of a plan of action concerning the behavior	Schifter and Ajzen (1985)		.24 (p<.05)		
Educational level	Davidson and Jaccard(1979)		n.s.		
	Hom et al. (1979)	-.23 (p<.05)	-.19 (p<.05)		
	Fishbein, Ajzen and Hinkle (1980)		.26 (p<.05)		
	Fishbein, Bowman et al.		n.s.		no improvement

	(1980)				
Ego strength	Schifter and Ajzen (1985)		n.s.		
Experience	Pomazal and Brown (1977)	.56 (p<.05)		3.2%	
	Kolvereid (1996)	.37 (p<.05)			
	Kurland (1996)	n.s.			
Household type	Boldero (1995)		n.s.		
Income	Fishbein, Ajzen and Hinkle (1980)		n.s.		
	Stutzman and Green (1982)		.28		
	Kurland (1996)	n.s.			
Interest	Fishbein, Ajzen and Hinkle (1980)		n.s.		
Involvement	Fishbein, Ajzen and Hinkle (1980)		n.s.		
Knowledge	Stutzman and Green (1982)	.24 (p<.05) n.s. n.s. n.s.	-.46 (p<..05)		18%
	Stutzman and Green (1982)	-.11 (p<.05) -.18 (p<.01) n.s. -.14 (p<.01)	.24 (p<.05)		1%
	Schifter and Ajzen (1985)		.25 (p<.05)		
Marital status	Hom et al.(1979)	n.s.	n.s.		
Moral norms	Pomazal and Jaccard (1976)	.50 (p<.001)	.43 (p<.001)		
	Zuckerman and Reis(1978)			4.7%	no improvement
Perceived effort	Dahab et al (1995)	.66 (p<.01)			
Prior Behavior	Fishbein, Ajzen and Hinkle (1980)		.50		2%
	Bagozzi,(1981)	.70 (p<.01)			19%
	Kokkinaki (1999)	.24 (p<.05)		no improvement	
Race	Hom et al. (1979)	-.17 (p<.05)	-.22 (p<.05)		
Religiosity	Pomazal and Brown (1977)	-.21(p<.05)		no improvement	
	Fishbein, Ajzen and Hinkle (1980)		n.s.		
	Crawford and Boyer (1985)	n.s.			
Sex	Hom et al. (1979)	.10 (p<.05)	n.s.		no improvement
	Fishbein, Bowman et al. (1980)		n.s.		
	Crosby and Muehling (1983)	n.s.			
	Boldero (1995)		n.s.		
	Kolvereid (1996)	.25 (p<.05)			
Unexpected changes in situations	Cote and Wong (1985)				16.4% 13.1% 9.9%

Various external variables	Songer-Nocks (1976): 10 external variables				27.9%
	Schlegel et al.(1977) 33 exogenous variables			7.3%	

(n.s. = not significant)

Table 3.3 reveals that the *magnitude* of the direct impact of many external variables is likely to be rather modest. External variables such as income, attitude toward the object of behavior, household type, age, ego strength, sex, culture, interest and marital status have no or only marginal effects on the behavioral intention and/or behavior. External variables with more impressive effects are: past behavior (i.e. prior behavior), experience, knowledge and unexpected changes in situations. The impact of past behavior in particular has been widely discussed in the literature (e.g. Bagozzi, 1981; Cote and Wong, 1985; Bagozzi and Yi, 1989; Bagozzi and Warshaw, 1990). According to Kokkinaki (1999), in situations when involvement is low, individuals might not expend much effort in forming their intentions. In such cases, behavior will probably be directly influenced by past behavior (Kokkinaki, 1999). Moreover, the more the behavior becomes habitual, the more important past behavior will be (Boldero, 1995). Furthermore, positive consequences of prior behavior may serve to encourage future intentions and past behavior may provide the experience or information that lowers the perceived effort required to engage in the behavior and improves attitudes toward the behavior (Dahab et al, 1995).

Another observation is that the direct impact of the external variables is not unequivocal. In fact, many results tend to contradict one another. For example, Hom et al. (1979) found correlations between the educational level and behavioral intention and behavior of .27 and .31 respectively (both p<.05). In contrast, Fishbein et al. (1980) and Boldero (1995) did not find a significant relationship at all. Table 3.3 reveals similar ambiguous findings for the following external variables: income, educational level, sex, age, income, religiosity and knowledge. Past behavior and experience are external variables that show a more stable pattern.

3.4 Empirical results of the TRA in consumer purchasing

In this section we will focus on both the application and outcomes of the TRA in consumer purchasing. Compared to behavior in general, the amount of research applying the TRA to predict purchase behavior is rather modest. The most important results are summarized in the table below:

Table 3.4: Results of the TRA in consumer purchase behavior

Reference	Subjects (n)	Behavior	Relation tested	Results
Douglas and Wind (1971)	Panel of women (n = 82)	Purchasing clothing	BI→ B	r =.75

Raju, Bhagat and Sheth (1974)	243 students, student wives and housewives(n = 243)	Purchasing a car	Aact→ BI SN→BI Aact+SN→ BI	$b = .467$ (p<.001) $b = -.037$ (n.s.) $R^2 = .223$
Fishbein and Ajzen (1980)	college students (n= 37)	Purchasing automobile brand, toothpaste brand and a beer brand	Aact+SN→ BI	$R = .63$ (overall, for all product classes)
Ryan and Bonfield (1980)	93 prospective loan customers from a credit union (n= 93)	Obtaining a loan	Aact→ BI SN→BI Aact+SN→ BI	$\beta = .36$ (p<.001) $\beta = .24$ (p<.001) $R = .47$ (p<.001)
Ryan (1982)	Panel members of various church groups located in the Southeastern United States (n= 80)	Purchasing toothpaste	Aact→ BI SN→BI Aact+SN→ BI	$\beta = .25$ (p<.001) $\beta = .53$ (p<.001) $R^2 = .51$
Stutzman and Green (1982)	Students (n = 113)and consumers (n= 506) (two studies)	Energy consumption behavior (raising thermostat, use fan, turn down water heater thermostat; conserve energy at home)	Aact→ BI SN→BI	$r = .42$ (p<.01), $r = .26$ (p<.05), $r = .29$ (p<.01), $r = .09$ (n.s.) $r = .17$ (n.s.), $r = .33$ (p<.01), $r = .38$ (p<.01), $r = .23$ (p<.05)
Brinberg and Durand (1983)	Students (n=104)	Eating at fast food restaurants	Aact→ BI SN→BI Aact+SN→ BI BI→ B	$b = .64$ (p<.01) $b = .03$ (n.s.) $R = .65$ (p<.01) $\beta = .41$ (p<.01)
Loken (1983a)	n = 72 (laboratory setting)	Purchasing at a specific supermarket	Aact+SN→ BI	$R^2 = .50$
Seligman, Hall and Finegan (1983)	Homeowners (n=48)	Energy consumption	Aact→ BI SN→BI Aact+SN→ BI	significant n.s. $R^2 = .60$ (p<.001)
Brinberg and Cummings (1984)	Households (n=153) College sample (n=96)	Purchasing generic prescription drugs	Aact→ BI SN→BI Aact+SN→ BI Aact→ BI SN→BI Aact+SN→ BI	$\beta = .56$ (p<.01) $\beta = .16$ (p<.05) $R = .65$ (p<.01) $\beta = .44$ (p<.05) $\beta = .30$ (p<.30) $R = .63$ (p<.01)

Netemeyer, Andrews and Durvasula (1993)	Female undergraduate students (n= 82)	Purchase of flowers, clothing, dinner, candy and cards	Aact→ BI	β = .25 (p<.05) (flowers) β = .40 (p<.01) (clothing) β = .21 (p<.01) (dinner) β =.42 (p<.01) (candy) β = .48 (p<.01) (card)
			SN→BI	β = .28 (p<.05) (flowers) β = .18 (n.s.) (clothing) β = .36 (p<.01) (dinner) β =.24 (p<.05) (candy) β = .24 (p<.05) (card)
			Aact+SN→ BI	R^2 = .24 (flowers) R^2 = .26 (clothing) R^2 = .28 (dinner) R^2 =.37 (candy) R^2 = .45 (card)
			BI→ B	r^2 = .19 (flowers) r^2 = .46 (clothing) r^2 = .13 (dinner) r^2 =.23 (candy) r^2 = .41 (card)

(Aact = Attitude toward the behavior; S.N.= Subjective Norms concerning the behavior; BI= Behavioral Intention; B= the overt behavior; R = multiple corr. coef.; r = corr. coef. ; β = standardized regr. coeff.; b =regression coef.; R^2 = coef. of multiple determination; r^2 = coef. of determination; n.s. = not significant)

Table 3.4 shows that the TRA has been applied to various forms of purchase behavior including purchasing a car, clothing, toothpaste, beer, flowers, candy and cards (cf.. the decision as to what to purchase as discussed by Engel et al., 1995). Only two investigations (Brinberg and Durand, 1983 and Loken, 1983b) used the TRA to predict purchasing at specific locations (cf.. the decision where to purchase as discussed by Engel et al., 1995). Obviously, research focusing on the prediction where people purchase is still in its infancy. As indicated by Korgaonkaer, Lund and Price (1985): "Surprisingly, little published research has been geared toward understanding the role and influence of shoppers' attitude on retail patronage. Future studies in retailing may benefit by expanding the scope of attitude research beyond the typical multi-attribute models. Of particular interest would be a study investigating the causal relationship between cognitions→ affect→ intentions→ behavior in retail settings" (Korgoankar et al., 1985, p.58).

In general, the results provide strong support for the TRA in a consumer purchasing context. Although several investigations did discover insignificant relationships, the vast majority confirm the TRA as is. When regarding the insignificant relationships, we notice that this mainly concerned the SN→ BI relationship (e.g. Raju et al., 1974; Stutzman and Green, 1982; Brinberg and Durand, 1983; Seligman et al., 1983; Netemeyer et al., 1993). Overall, the magnitude of the effects of the statistical measures seems more than acceptable. A similar conclusion was drawn by Ryan and Bonfield (1975) who conducted a meta study.

3.5 Limitations of the TRA

Although the overall findings encourage application of the TRA, several limitations have to be taken into account.

First, as discussed in this chapter, not all behavior is under complete volitional control. Behavior that contains some volitional restrictions might best be predicted by adding a construct such as perceived behavioral control (cf. the TPB). According to East (1993), if the behavior is completely involuntary it might not even be possible to use the TRA for any prediction at all. Examples include behavior that is required by social convention (e.g. going to work, having a phone) or behavior that is compelled by prior commitments (e.g. when purchasing a car one must purchase petrol) (p.338).

A second limitation is related to the *assumption of single behavior*. According to this assumption, choosing from a number of alternatives is not considered. However, consumers are "constantly faced with choice among stores, products, brands, models, sizes, colors and so on" (Sheppard et al., 1988, p.326). Because the TRA studies only one of the choice alternatives, its predictive accuracy is likely to diminish in situations of choice (Sheppard et al., 1988). However, we assume that this limitation should not be overestimated. A meta study indicated that the TRA still outperforms models that do pay attention to situations under choice (Sheppard et al., 1988). The Theory of Reasoned Action performs very well "in the prediction of activities involving an explicit choice among alternatives. It has a strong predictive utility, even when utilized to investigate situations and activities that do not fall within the boundary conditions originally specified for the model" (Sheppard et al, 1988, p.338).

A third limitation is concerned with the fact that the more specific the construct level, the lower the correlations among the various constructs might be (Fishbein and Ajzen, 1975). For example, predictions of the intention to purchase a present are likely to be more accurate than predictions of the intention to purchase a CD at a specific store. Douglas and Wind (1971) showed that predictions based on specific intention measures are less accurate in predicting the overt behavior than general intention measures (Douglas and Wind, 1971).

A fourth limitation is that the TRA is based on the assumption that human decision-making is usually rational. As mentioned in chapter two, not all consumer behavior is rational. In fact, a substantial element of purchasing behavior consists of impulse purchases (Cobb and Hoyer, 1986). The exact rate of planned/impulse purchasing varies according to the type of product and the type of outlet (Williams and Dardis, 1972). However, in general, impulse purchases are likely to account for 40% of all purchases (West, 1951; Bellenger, Robertson and Hirschman, 1978; Rook and Hoch, 1985).

3.6 Summary

In this chapter we have looked at the Theory of Reasoned Action. First, we discussed the theoretical foundations of the model extensively, including the most important assumptions and the potential impact of external variables. Based on a weakness of one of the assumptions we also considered an extension of the theory, which accounts for situations that are not under complete volitional control. Next, we focused on the empirical validity of the model. Generally speaking, the results demonstrate the robustness and validity of the model in explaining and predicting behavior. As far as the effect of external variables is concerned, the

claim to sufficiency was only partially confirmed. The fact that several examinations revealed that external variables might also directly influence the behavioral intention and behavior, demonstrates that this is not a generality. As stated by Stutzman and Green (1982) and Fisher (1984), the inclusion of external variables may improve the predictive validity of the model. Similar findings have been reported with respect to consumer purchase behavior. Again, the TRA proved its robustness and validity. Because we did not find any research findings concerning the influence of external variables, no results were reported. The focus within consumer purchase research seems to be on predicting product purchases. Except for a few references, the TRA has seldom been applied to predict and explain store choice behavior.

In the next chapter we will shift the attention to a variable group that, according to TRA terminology, can be labeled as an external variable. More specifically, we will focus on store characteristics. In addition to an introduction of store characteristics, we will explore empirical results relating store characteristics to consumer purchase intentions.

Chapter 4: Store characteristics: an overview and exploration of their impact on consumer purchase intentions

4.1 Introduction

The research field concerning the impact of online stores on consumer purchasing is relatively under-explored. Since physical stores are in many ways similar to online stores (Lohse and Spiller, 1999) and the rational purchase process and corresponding underlying cognitive structure are comparable for offline and online settings (based on: Crisp et al., 1997; O'Keefe and McEachern, 1998; Maes, Guttman and Moukas, 1999) chapter four explores the impact of store characteristics on consumer purchase intentions. The findings will add to the contextual background of this dissertation and function as input for further analysis.

In general, if understanding behavior is the purpose, the factors determining the intention must be specified (Fishbein, 1972; Fishbein and Ajzen, 1975). In this context we will introduce a research school in store choice decision-making focusing on the overall perception of a store's characteristics. In the literature, this overall perception is known as *store image*, whereas store characteristics are referred to as *store attributes*. We first define the terms, and then provide an overview of various store attribute classifications. Next, in line with the objective of this thesis, we will explore the relationships between perceptions of store characteristics and consumer purchase intentions. Building upon the rational theory discussed in the previous chapter, we will focus on relationships mediated by an affective component. Moreover, if present, non-mediated effects (i.e. direct effects) will also be considered. Finally, our findings will be summarized and discussed.

The content of this chapter is as follows. First, section 4.2 considers store attributes from a theoretical perspective. Both research background and meaning of the term store attribute will be elucidated (4.2.1.). Furthermore, an overview of the most important store attribute classifications will be provided (4.2.2.). Next, in section 4.3, the empirical findings of the impact of store attributes on purchase intentions will be explored and discussed. Finally, our findings will be summarized in section 4.4.

4.2 Store attributes: a theoretical overview

This section examines retail store attributes. First, section 4.2.1 considers two main research schools in *store choice decision-making*. One of these schools focuses on the impact of store attributes. Within this research stream, there are several taxonomies of store attributes. In 4.2.2 we will specify store attributes by providing an overview of the most elaborate store attribute classifications.

4.2.1 Store attributes: an introduction

Retail stores and consumer service institutions are continually compelled to make decisions directed toward meeting the varying demands of prospective customers (Bearden, 1977, p.15). The extent to which retailers are able to maintain their market positions depends on the extent to which they can creatively adapt their operation to changing patterns of consumer shopping behavior and consumer attitudes toward store patronage (Prasad, 1975, p.42). Store patronage can be defined as: "the degree to which a consumer shops at a particular store relative to competitive outlets" (Peter and Olson, 1990, p.588). Investigating and understanding the critical dimensions influencing store patronage is a necessary condition for retail management (Bearden, 1977, p.15).

Store patronage dimensions have been identified and studied by a host of store patronage researchers (e.g. Bearden, 1977; Bellenger, Robertson and Greenberg, 1977; Houston and Nevin, 1981; Korgaonkar, Lund and Price, 1985; Wee and Pearce, 1985). Most of retail patronage research can be divided into two research schools (Houston and Nevin, 1981; Howell and Rogers, 1981; Kelly and Smith, 1983).
The first school focuses on the impact of store location on the probability of purchasing (Kelly and Smith, 1983). Within this approach, the gravitational model of Huff (1962) in particular has received a substantial amount of attention (Houston and Nevin, 1981). This model views retail patronage as a function of store size and distance from the consumer (Huff, 1962). However, a serious drawback of the model is that it is based on the assumption that consumers perceive no differences when it comes to other stores aspects (Huff and Blue, 1966; Bucklin, 1971).
In contrast, a second approach does recognize store differences beyond size and distance. To explain store choice decisions, this research school focuses on the impact of *store image*. (Howell and Rogers, 1981). Many authors have defined store image. Martineau (1958) labels store image as: " the way in which the store is defined in the shopper's mind, partly by its functional qualities and partly by an aura of psychological attributes" (p.47). Arons (1961) defines store image as a "complex of meanings and relationships serving to characterize the store for people "(1961, p.2).
According to Kunkel and Berry (1968) retail store image is "the total conceptualized or expected reinforcement that a person associates with shopping at a particular store" (p.22). Houston and Nevin (1981) define store image as: "the complex of a consumer's perceptions of a store on functional attributes and emotional attributes" (Houston and Nevin, 1981, p.677). Other scholars see store image as an attitude. For example, James, Durand and Dreeves (1976) define store image as a "set of attitudes based on evaluation of those store attributes deemed important by consumers (James et al., 1976, p.25). However, this last definition has

been criticized because it fails to make a distinction between store image and attitude (Mazursky and Jacoby, 1986).

Although store image definitions are based on different perspectives, their essence is rather similar. Most researchers stress that store image is a total impression of tangible or functional factors *and* intangible or psychological factors (Lindquist, 1974, p.31; Oxenfeldt, 1974-1975; Zimmer and Golden, 1988). These factors are also referred to as *store attributes* (Houston and Nevin, 1981). Functional store attributes apply to features such as merchandise selection, prices ranges and store layout (Mazursky and Jacoby, 1986). Psychological store attributes refer to aspects such as the manner of the sales staff, service level and reputation (Rich and Portis, 1964). The overall impression of both store attribute groups results in a picture of the store (i.e. store image). It is a composite, based on its interacting components (Oxenfeldt, 1974-1975), and usually more than the sum of its parts (Oxenfeldt, 1974-1975; Zimmer and Golden, 1988; Keaveney and Hunt, 1992).

4.2.2 An overview of store attribute classifications

One of the most elaborate and most frequently used (e.g. Gentry and Burns, 1977; Hansen and Deutscher, 1978; Houston and Nevin, 1981; Mazursky and Jacoby, 1986) store attribute classifications has been constructed by Jay Lindquist (1974). In *"Meaning of Image: a survey of empirical and hypothetical evidence"*, Lindquist conducted a meta study of store attribute literature. Based on the findings, he put a classification together of nine store attribute categories that form store image or contribute to consumer's attitudes toward retail outlets. This classification of functional and psychological store image attributes, comprises the following categories: *merchandise, service, clientele, physical facilities, convenience, promotion, store atmosphere, institutional factors* and *post-transaction satisfaction*. Several attributes can be distinguished within each category (Lindquist, 1974).

Lindquist's classification has received strong support in the literature. Therefore, we have used it as an anchor to provide an overview of available store attribute classifications. Table 4.1 was constructed based on the work of Martineau (1958), Arons (1961), Fisk (1961), Bucklin (1963), Rich and Portis (1964), Kelly and Stephenson (1967), Kunkel and Berry (1968), Singson (1973), Lindquist (1974), Bearden (1977), Arnold, Ma and Tigert (1978), Kelly and Smith (1983) and Wee (1986). The table specifies and identifies the most important store attributes. The classifications used were both theoretically constructed (e.g. Martineau, 1958; Bucklin 1963) and derived from questionnaires or interviews (e.g. Rich and Portis, 1964; Kunkel and Berry, 1968; Arnold et al, 1978).

Several observations can be made based on this overview.
First, the vast majority of store attributes seem to fit well in Lindquist's store attribute classification. As such, this is not a revelation because most classifications prior to 1974 were also part of Lindquist's meta study. However, the fact that attributes from more recent classifications can be placed without substantial problems within Lindquist's taxonomy supports the robustness of his taxonomy.
Second, table 4.1 reveals that, in addition to the attributes as described by Lindquist, there are also a number of additional store attributes. The most important are: value for money, in-store traffic/congestion, opening times and maintenance/cleanliness.

Lindquist (1974)	Martineau (1958)	Arons (1961)	Fisk (1961)	Bucklin (1963)	Rich and Portis (1964)	Kelly and Stephen-son(1967)	Kunkel and Berry (1968)	Singson (1973)	Bearden (1977)	Arnold, Ma & Tigert (1978)	Kelly and Smith (1983)	Wee (1986)
A) Merchandise												
Quality		Quality	Quality of lines stocked		Quality	Quality	Quality	Quality	Quality	Highest Quality	Quality	
Selection of assortment		Wide selection	Breadth and depth of assortment	Assortment	Selection and variety		Assortment: including: Breadth and depth	Wide selection	Select Styling/ fashion	Largest overall selection	Variety	Has every-thing
Styling/ fashion		Styled/ practical selection					Fashion of merchandise	Fashion		Fashionable		New and fashion-able
Guarantees			Guarantees									
Pricing		Pricing	Price in store items and competitiv	Price		Price compared to other stores	Price (low, fair, competitive)	Price	Price	Lowest price	Price	Lower prices
		Values at sales (good/jun))				Value for money	Values			Value for money		
B) Service												
General service		Helpful / indifferent service		Service			Various services	Customer service			Speed of service	
Sales clerk service			Helpful-ness of sales clerks		Sales clerk service	Helpful store personnel Adequate number of personnel	Knowled-geable sales personnel	Know-ledge and helpful-ness sales personnel		Helpful, knowledgeable clerks0		
Presence of self service												

Table 4.1: Store attribute classifications

Lindquist (1974)	Martineau (1958)	Arons (1961)	Fisk (1961)	Bucklin (1963)	Rich and Portis (1964)	Kelly and Stephenson (1967)	Kunkel and Berry (1968)	Singson (1973)	Bearden (1977)	Arnold, Ma and Tigert (1978)	Kelly and Smith (1983)	Wee (1986)
Ease of merchandise return					Ease of returning merchandise			Returns				
Delivery service			Delivery promptness and care			Delivery service		Delivery	Deliveries			
In store credit policies		Credit and exchanges	Billing procedure	Credit	Charge accounts			Credit	Easy credit			
						Fast/slow checkout						
C) Clientele												
Social class appeal		Likely unlikely to meet friends	Class of customers			Known/ liked/ recommended by friends	Customer type					
Self-image congruency		(Not) my kind of store										
Store personnel	Sales personnel	Friendly/ Formal / stiff store personnel	Courtesy of sales clerks			Courtesy store personnel Cold/friendly store personnel	Attitude sales personnel	Attitude and courtesy sales personnel	Friend-liness sales people		Courtesy	Sales people care
D) Convenience												
general convenience							Convenience in general and compared to other stores					Convenient washrooms Place to shop with children
Locational convenience		No transportation problems/	Access routes, traffic barriers and travel time			Time/ease/distance to reach the store	Locational convenience /access	Convenient location	Loca-tion	Easiest to get to		Easy to get to

Lindquist (1974)	Martineau (1958)	Arons (1961)	Fisk (1961)	Bucklin (1963)	Rich and Portis (1964)	Kelly and Stephenson (1967)	Kunkel and Berry (1968)	Singson (1973)	Bearden (1977)	Arnold, Ma and Tigert (1978)	Kelly and Smith (1983)	Wee (1986)
Parking		Parking	Parking		Accessibility and parking	Ease of finding a parking place	Parking	Parking	Parking facilities			Parking
							Hours open	Store hours				Convenient store hours
			In-store congestion				Congestion (in-store)					
E) Physical Facilities												
general physical facilities			Restaurant, eating facilities				Restaurant facilities	Restaurant				Better eat and drink places
Store layout	Layout		Store layout		Efficient store layout	Easy/difficult to move through the store	Store layout	Store layout				Well planned
shopping ease				Shop-ping ease		Easy/difficult to find the items you						
Architecture	Architec-ture											
						Maintenance: -cleanliness					Clean-liness	Maintenance
F) Promotion												
Sales promotion							Special sales And events	Sales and specials				
Advertising	Adverti-sing		Advertising			Advertising	Advertising	Quality of advertising		Best advertis-ing		

Lindquist (1974)	Martin-eau (1958)	Arons (1961)	Fisk (1961)	Bucklin (1963)	Rich and Portis (1964)	Kelly and Stephenson (1967)	Kunkel and Berry (1968)	Singson (1973)	Bearden (1977)	Arnold, Ma and Tigert (1978)	Kelly and Smith (1983)	Wee (1986)
Advertising/ display					Display					Most exciting display		
Trading stamps			Trading stamps and discounts				Stamps					
Symbols and colors	Symbols and colors											
G) Store atmosphere												
Atmosphere / congeniality		Inviting/ cold Exciting/ dull	Store décor and attractive ness display's	Enjoyment		Attractivene ss décor	Store atmosphere	Store atmosphere	Atmos-phere		Atmosphere Décor	Good lighting/ Attractive landscaping
H) Institutional factors												
Conservative/ modern		Modern/ old fashioned										
Reputation			Well known/ unknown		Reputation		Reputation on adjustment					
Reliability		Reliable			Reliability							
			Small/large number of stores									
I) Post-transaction satisfaction												
Satisfaction			Satisfaction									

4.3 The impact of store attributes on consumer purchase intentions: an empirical overview

An overview of store attributes was presented in the previous section. In this section we will discuss empirical research relating these attributes to consumer purchase intentions. Effects mediated by attitudinal components (cf. TRA) as direct effects, if present, will also be discussed. In general, the emphasis of our discussion will be on the intention to purchase at a particular store. Because this level of consideration is rather specific, results might be hard to be find (Korgaonkar, et al., 1985). Therefore, research concerning the impact on the purchase intention construct at a less specific level or referring to closely related targets will also be examined (e.g. the intention to purchase at retail outlets; the intention to purchase at a shopping area).

We start with the research of Nevin and Houston (1980). In their publication, "Image as a Component of Attraction to Intraurban Shopping Areas", both researchers investigated the impact of retail image on consumer's choice of five intraurban shopping areas. Based on studies by Lindquist (1974) and Bearden (1977) and a discussion with shopping center managers, a retail shopping area/center image questionnaire was constructed (semantic differential). A mail-out survey was then conducted to gather data. Based on the responses (n = 827 households), exploratory factor analysis was applied to identify underlying shopping area components. This resulted in three underlying shopping area image subcomponents: *assortment* (including: product quality, product variety, selection and sales promotions), *facilities* (including: layout of area, parking facilities, availability of lunch/refreshment and comfort areas) and *market posture* (general price level, store personnel, conservative center). Next, multivariate regression analysis was applied to relate the subcomponents and two additional variables to three shopping behavior constructs (i.e. the dependent variables). The additional variables included a mass/distance variable (measuring the combination of total square footage and driving time to the shopping center) and a specialty store variable (indicating the presence of an attractive specialty store). The dependent variables were: (1) affect (liking a shopping area), (2) intention to shop at a shopping area, and (3) actual shopping behavior at a shopping area. The three models were tested for five different shopping areas.

The final results show that assortment explains most of the variance of *affect* toward a shopping area. Around 20 percent of the affect variance is explained by this factor. In addition to assortment, the specialty store variable adds to the explanatory power of the affect-model. Together, both variables account for approximately 30 percent of the affect variance. The impact of the other variables is negligible.

As far as the *intention* and *actual behavior* level are concerned, the results showed that only the specialty store and the mass/distance variable explained a part of the variance (on average just above 30 percent). The shopping area image components did not add to the explanatory power of both models, and in most cases were not even significant.

Nevin and Houston emphasize that these findings do not imply that shopping center image is not important. "Consumers can be moved through the hierarchy of effects such as liking, intentions and behavior through the effective communication of a shopping center image. Creating or changing a shopping area's image is often a prerequisite to getting consumers to change their existing shopping intentions and behavior" (p.91).

Instead of shopping area image, Grewal, Krishnan, Baker and Borin (1998) examined the impact of *store image* and *perceived value* on the intention to purchase a bicycle. Although the intention construct itself was not completely location specific, their approach is closely related to the research conducted by Houston and Nevin and will therefore be considered briefly.

As a sample, Grewal et al. took 309 undergraduate students. Store image was measured by using the seven-item Likert scale derived from Baker, Grewal and Parasuraman (1994). Perceived value, described as the value consumers receive in an exchange versus what they give up, was measured by six items that mainly referred to price and quality aspects (p.337). We assume that perceived value is rather similar to value for money as used in the store image classifications of Kelly and Stephenson (1967), Kunkel and Berry (1968) and Arnold, Ma And Tigert (1978) (see table 4.1). As such, perceived value might be interpreted as a store image component.

As part of a more complex structural equation model, where perceived store image and perceived value were the only direct purchase intention determinants (for details see Grewal et al., p.334), the following standardized path coefficients were found: .10 (p<.05) and .63 (p<.05). The findings indicate that both variables have a significant effect on the purchase intention. The effect of perceived store image is rather weak whereas perceived value can be described as a very strong predictor of the purchase intention. Together, the variables account for 41% of the purchase intention variance.

As a third example we refer to the study of Cronin, Brady and Hult (2000). Instead of store or shopping area image as a whole, they investigated the direct effects of *service quality perception*, *value perception* and *post-transaction satisfaction* on behavioral intentions within the following six service industries: spectator sports (viewing sports), participative sports (skilled physical interaction), entertainment (non-sporting, either observing or participating), health care, long distance carriers and fast food.

Since service quality, value and post-transaction satisfaction can be interpreted as store image components (see table 4.1 and discussion 4.2.2), the results will be examined briefly. In their study, 'service quality perception' was regarded as a quality of the service as a product. 'Value perception' related to the assessment of the utility of the service based on what is received and what is given (p.204) while 'post-transaction satisfaction' was described as the degree to which a consumer believes that the possession or use of a service evokes positive feelings (p.204). In the context of this thesis, not all service industries are appropriate for discussion. We will only consider the results for the fast food store category since it has the required tangible and intangible store attributes. The essence of the model under consideration is given in the figure below:
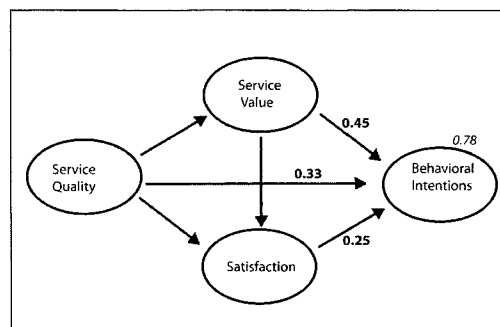
Figure 4.1: The research model of Cronin et al. (1998)
(excerpt from Cronin et al., 1998, p.207)

As part of this structural model, Cronin et al. examined the direct impact of service quality, service value and satisfaction on the behavioral intention to use fast food facilities. Structural equation modeling was used to estimate the parameters. Based on a sample of 309 respondents, the results showed the following path coefficients for service quality, service value and satisfaction: .33, .45 and .25 respectively (all significant). Together, the three constructs explained 78 percent of the behavioral intention variance.

In addition to the three examples given above, the impact of store attributes/store image has also been investigated from an environmental psychology perspective. This research stream uses the model of Mehrabian and Rusell (1974) as underlying theory. In accordance with this model, *environmental stimuli* (i.e. store experiences and stimuli) have an impact on the *emotional states* (i.e. affective states) of consumers, which eventually lead to positive or negative responses (approach-avoidance behavior). The emotional states are often described in terms of pleasantness and arousal (Mano, 1999) while the behavioral responses are expressed in terms such as purchase intentions, satisfaction/dissatisfaction and leave a store/stay longer (Mano, 1999).

Compared to the rational cognitive perspective used in this thesis, most research based on the environmental psychology approach is not applicable since both underlying theory and variable definitions differ too much. In contrast, the research conducted by Bell (1999), would seem to be an exception. Bell investigated the impact of *retail area image* on willingness to purchase at a retail area (i.e. willingness to shop; intentions to shop), mediated by the affect toward a retail area. Instead of emotional responses like arousal, Bell's definition of affect is rather similar to the attitude used in the Theory of Reasoned Action (see chapter three). It was defined as: "the degree of liking a consumer has for a particular retail area" (p.73). To measure retail area image, Bell used the following variables: fashionability of the merchandise in the shopping area, levels of service, visual amenity of the shopping area, convenience, quality and variety of stores and perceived price fairness within the area. Based on a mail-out survey (n = 569), factor analysis was used to determine the final structure of the model variables. This resulted in five factors: *visual amenity, quality and range of products and services, price fairness, convenience* and *customer service*.
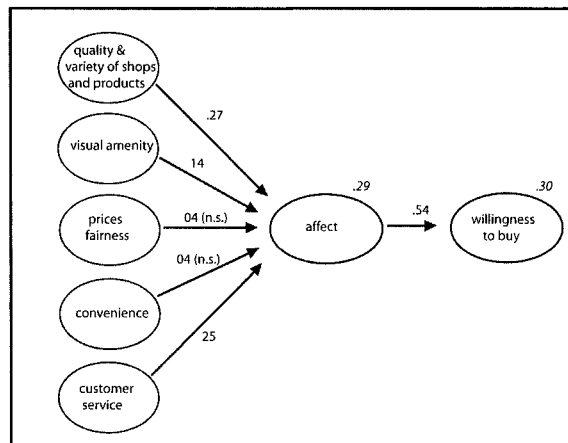
Figure 4.2: The research model of Bell, standardized path coefficients and explained variance (excerpt from Bell, 1999, p.75)

A path analysis resulted in the following standardized path coefficients between the mentioned variables and affect: *quality and range of products and services* .27 (p<.05), *customer service* .25 (p<.05), *visual amenity* .14 (p<.05), *price fairness* .04 (N.S.) and *convenience* .04 (N.S). Together, these five variables explained 29 percent of the variance of the affect construct. A standardized path coefficient of .54 (p<.05) was found for the relationship between affect and willingness to purchase. Affect accounted for 30 percent of the willingness to purchase variance.

Finally, in addition to the examples examined above, little research has been conducted on the impact of only one or two store attributes on consumer purchase intentions. Although the operationalizations of the intention constructs are not location specific, the overall indication is worth considering. The results are can be seen in table 4.2:

Table 4.2: The impact of store attributes on purchase intention: some results

Store attribute	Ref.	Subjects (n)	Relation of variable with:	Mediated by	Result
Satisfaction	LaBarbera and Mazursky (1983)	125 consumers	Intention to repurchase		$\beta = .56(p<.01)$ (Margarine) $\beta = .79(p<.01)$ (Coffee) $\beta = .62(p<.01)$ (Toilet tissues) $\beta = .65$ (p<.01) (Paper towels) $\beta = .68$ (p<.01) (Macaroni) p.s. all direct effects
Brand satisfaction	Mazursky and Geva (1989)	Study 1: 103 adults	Intention to purchase		$\beta: .02$ (n.s.)
		Study 2:100 respondents	" "		$\beta: .01$ (n.s.)
Satisfaction	Anderson and Sullivan (1993)	22300 customers	Intention to repurchase		$b = ..58$ (t = 6.78)
Advertising	Lee (1985)	1666 (who bought an air-conditioner) 1760 (who bought a TV)	Repeat purchase intention		Rank correlation: .77(p<.01) Rank correlation .55 (p<.06)
Product announcements	Burke, Cho, Desarbo and Mahajan (1990)	30 students	Intention to purchase a brand		Significant (p<.00001)
Price perception Brand name perception Store name perception	Dodds, Monroe and Grewal (1991)	585 undergraduate students	Willingness to buy: a) a calculator b) a stereo headset player		All relations between the three dependent variables and the willingness to buy were significant (for both products)
Value for money	Sweeney, Soutar and Johnson, (1999)	459 consumers	Willingness to buy		Path coefficient: .57 $r^2 = .33$

(β = standardized regr.coef.; b = multiple regression coef. ; r² = coef. of determination, n.s. = not significant)

The table shows that, with the exception of the findings of Mazursky and Geva (1989), all the store attributes investigated have a significant relation with the purchase intention or with purchase intention related constructs (e.g. repeat purchase intention). None of these relationships is mediated by other variables.

4.4 Summary

In this chapter, we explored the impact of perceptions of store attributes on consumer purchase intentions. To identify and specify the most important store attributes, we first focused on available classifications in store image literature. We then discussed the empirical findings to date. The discussion of empirical results focused on intentions to purchase at a store while also paying attention to closely related attribute operationalizations (shopping area attributes) and less specific behavioral intentions.
In general, the empirical overview shows that store attributes might have a significant impact on the intention to purchase at a specified location. This impact may be either direct or indirect. The results of Grewal, et al. (1998), Cronin et al.(2000) and the findings presented in table 4.2 reveal significant direct effects between store/shopping area attributes and the intention to purchase. In contrast, the findings of Houston and Nevin (1980) and Bell (1999) support the view that the influence of store attributes is mediated by an affective component.

However, both observations have to be interpreted with care. First, due to the different levels of specificity of the intention construct (cf. *specificity* discussion in chapter three), it is not possible to arrive at a general conclusion. Intentions to purchase a product, at a store, to shop at a shopping area and to repurchase cannot be compared without encountering problems. More importantly, there are insufficient research findings available to draw general conclusions. Obviously, the impact of store attributes on consumer purchase intentions is a research area that requires further investigation. Several researchers support this statement. In the publication "A Threshold Model of Store Choice", Malhotra (1983) stressed that what is missing are attempts that relate store image characteristics to store choice or efforts to develop predictive models of consumer expenditure (p.3). Baker, Grewal and Levy (1992) discussed the fact that remarkably little research has been conducted into the effect of store environment on consumer attitudes and/or behavior (p.448). According to Ward, Bitner and Barnes (1992) their paper is "one of the relatively few that focuses on the empirical study of how consumers perceive physical environments, an important but perhaps under-researched part of the retail and services mix"(p.196). The overview of store image research over the past 25 years given by Samli, Kelly and Hunt (1998) leads to similar findings. It shows that store image research has focused on retail image components, comparative image analysis, image measurement techniques, store versus area image comparisons, congruency between store image and self image, and on store image as a diagnostic tool (p.29). Indications of research groups investigating the impact of store image on behavioral intentions were not part of the classification.

In the next chapter, we will extend our consideration to an online setting. In the context of this thesis, we will explore the impact of online store attributes on online purchase intentions.

Chapter 5: The impact of online store attributes on consumer purchase intentions: an exploration of empirical results

5.1 Introduction

The objective of chapter five is to explore research concerning the impact of perceptions of online store attributes on online purchase intentions. The outcomes function as input for empirical analysis and provide an insight into the status of the research field.

In line with the goal of this dissertation, we focus on studies relating perceptions of online store attributes to the intention to purchase at an online store. However, despite decades of research in traditional retailing, the relationships between store attribute perceptions and the intention to purchase at a physical location have been somewhat under-explored (see chapter four). Less than a decade of online research results are unlikely to have led to a large number of findings. Therefore our level of consideration will not be limited to the intention to purchase at an online store. We will extend our exploration to closely related research. Also studies regarding the impact of online store attribute perceptions on purchase intentions at less specific levels (i.e. the intention to buy online) as well as on intention-related constructs (i.e. customer preference) will be part of our exploration.

We first focus on studies integrating trust related attributes as determinants of online purchase intentions. Trust is assumed to be an important issue in online purchasing. Then, we go on to discuss research considering the effects of information presentation modes on the intention to purchase online. Consumers depend to a large extent on this interface related aspect when engaging in online purchase behavior. Next, the impact of perceived online store attributes on customer preference is covered. Finally, we end with works adding to the context of this dissertation by relating online store attributes to consumer purchasing in a broader context (i.e. purchase numbers, sales).

The content of this chapter is as follows. In section 5.2 we discuss research concerning the impact of perceptions of trust and closely related attributes. In section 5.3 we focus on research integrating information presentation modes and the intention to use online shopping

services. Studies relating online store attributes to customer preference will be considered in 5.4. In section 5.5 closely related works are discussed. Finally, section 5.6 sets out and discusses the most important findings.

5.2 Integrating trust and online purchase behavior

Trust is an important issue for those who engage in electronic commerce (Keen, Balance, Chan and Schrump, 1999). Trust mitigates the feelings of uncertainty that arise when the store is unknown, the storeowners are unknown, the quality of the product is unknown, and the settlement performance is unknown (Tan and Toen, 2001). These conditions are likely to arise in an electronic commerce environment. Two studies focusing on the impact of trust on online purchasing are the works of Jarvenpaa, Tractinsky and Vitale (2000) and Pavlou (2001). Both will be considered below.

Jarvenpaa et al. investigated the effect of *perceived* online store attributes on consumer purchase behavior. They specifically examined the impact of perceived trust and perceived risk on the attitude and intention to shop/purchase at an online store. Furthermore, as a second objective, Jarvenpaa et al. endeavoured to determine the antecedents of consumer trust in an Internet store.

The initial step in their examination consisted of a theoretical investigation about possible antecedents and interrelations of the constructs mentioned above. We will consider trust first, as it is an essential variable in their research (p.46).

In the study, *trust* refers to trust in a commercial store on the Internet. Based on the work of Bradach and Eccles (1989), trust is described as "a governance mechanism in exchange relationships that are characterized by uncertainty, vulnerability, and dependence" (Jarvenpaa et al., p.46). Derived from the work of Schurr and Ozanne (1985), Jarvenpaa et al. state that trust influences the behavior of consumers. To relate trust to online buying behavior, the authors combine exchange theory, balance theory and the Theories of Reasoned Action and Planned Behavior. Exchange theory assumes that individuals form associations based on trust. Relationships that are likely to bring more pain than pleasure are avoided (Thibaut and Kelley, 1959 in Jarvenpaa et al. 2000). "Balance theory suggests that people tend to develop positive attitudes towards those with whom they have prior association" (Heider, 1958 in Jarvenpaa et al. 2000, p.47). Finally, the Theories of Reasoned Action and Planned Behavior of Fishbein and Ajzen (1975) and Ajzen (1991) (see chapter three) assume that behavior is determined by a behavioral intention, which is preceded by attitudes. The attitudes are influenced by formed beliefs. Based on a combination of these theories, Jarvenpaa et al. assumed trust to be an important determinant of the willingness to buy at an online store. As stated in the Theories of Reasoned Action and Planned Behavior this relation should be mediated by the attitude towards buying at a store. This theoretical approach is supported by the findings of Schurr and Ozanne (1985) and Anderson and Narus (1990) who relate high levels of trust to favorable attitudes and behavior. The findings of Macintosh and Lockshin (1997) show that a consumer's trust in a store has an impact on the attitude towards that store. Closely related to the trust construct (McAllister, 1995), is *perceived risk*, which Jarvenpaa et al. also examined. Based on the work of Bradach and Eccles (1989), the authors consider that trust reduces the perceived risk associated with opportunistic behavior by the seller (p.49). In their work, risk perception is defined as " trustor's belief about likelihoods of gains and losses outside of considerations that involve the relationships with the particular trustee" (Mayer,

Davis and Schoorman, 1995, p.726). As mentioned above, a consumer's trust in a specific store might also have an impact on the attitude towards that store (Macintosh and Lockshin, 1997). Exchange partners who are socially bonded have positive attitudes towards each other (John, 1984). Jarvenpaa et al. assume this is because "trust reduces the perceived risk of being mistreated by the store (based on Anderson and Weitz, 1989) and the low perception of risk in turn influences the attitudinal orientation of the consumer toward the store" (p.50). Based on this argumentation, they state that perceived risk has an effect on the attitude to buy at an online store and that trust in a store precedes perceived risk.

In addition to the impact on the attitude to buy, Jarvenpaa et al. argue that perceived risk also has an effect on the willingness to buy. According to the authors, perceived risk is closely related to the planned behavioral control construct of the Theory of Planned Behavior (see chapter three). Applied to online buying, "perceived risk associated with shopping in the store may reduce the consumers' perception of control, and the extent to which this occurs might negatively influence willingness to shop" (p.50). Jarvenpaa et al. use this statement to assume that perceived risk has an independent direct influence on behavioral intentions.

Finally, related to the second objective of their examination, the researchers consider possible determinants of trust in an online store. Based on the literature, two important factors are identified: perceived size and reputation.

Perceived store size "assists consumers in forming their impressions regarding the store's trustworthiness" (p.48) because it functions as an indication of expertise and resources needed for support systems such as customer and technical services (based on Chow and Holden, 1997). Furthermore, derived from the work of Doney and Cannon (1997), Jarvenpaa et al. discuss the fact that perceived size implies that other consumers trust the organization and successfully conduct business with it (p.48).

Perceived reputation refers to the perception of the extent to which buyers believe a seller is honest and concerned about its customers (Doney and Cannon, 1997). Based on the work of Chiles and McMackin (1996), Jarvenpaa et al. discuss that firms with a good reputation are not likely to engage in opportunistic behavior. Moreover, the cost of untrustworthy behavior for firms with a good reputation would be expected to be relatively high (Axelrod, 1984 in Jarvenpaa et al.). Combined with the fact that Internet consumers are likely to prefer online stores that represent a familiar traditional merchant (Quelch and Klein, 1996) because this leads to a positive impression of a site (Lohse and Spiller, 1999), Jarvenpaa et al. state that a store's perceived reputation is positively related to the store's perceived trust.

In addition to the individual impacts of the perceived store and perceived reputation on perceived risk, Jarvenpaa et al. also expect both constructs to be related. Large stores might be perceived as being more reputable because they might have been around longer. On the other hand, stores with a favorable reputation might attract more business compared to similar stores with less favorable reputations. Hence Jarvenpaa et al. hypothesize that both constructs are related.

All the relationships that have been discussed so far are integrated in the following research model:
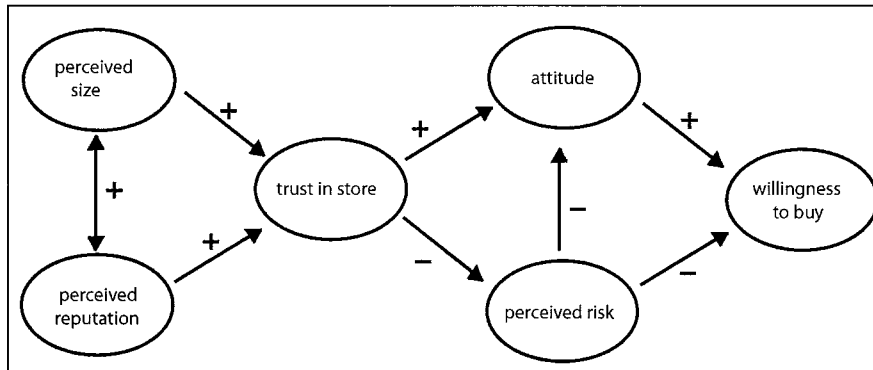
Figure 5.1: Factors influencing willingness to buy (Jarvenpaa et al., 2000, p.47)

The model was tested by an experimental survey approach. The sample consisted of undergraduate and MBA students (n = 184) who participated voluntarily or received a small payment. The participant had to perform several shopping tasks: select and purchase a book, purchase a specified book for a course, plan a holiday trip to Helsinki and plan a work-related trip to Sydney. The participants were presented with four commercial sites for each activity. "It was recommended but not required to visit each of these sites" (p.53). Furthermore, purchasing a product was not required, although allowed if using their own credit cards. The participants were asked to fill in a questionnaire each time a shopping activity was completed. Based on the data, the model was estimated using covariance structure analysis. Overall, the results revealed a model with a good fit. Measures like the RMSEA, NFI all GFI exceeded well-recommended guidelines (respectively <.08, >.90, >.90). Furthermore, the explained variance of all dependent variables was acceptable. Eighty-three percent (books) and 94% (travel) of the trust variance was explained by perceived size and perceived reputation. Trust itself accounted for 38% (books) and 45% (travel) of the variance of perceived risk. Together, perceived trust and perceived risk explained 57% (books) and 62% (travel) of the variance of attitude. Finally, 43% (books) and 48% (travel) of the willingness to buy variance was explained by perceived risk and attitude.

The estimates of the individual path coefficients are presented in the table below:

Table 5.1: Unstandardized path results of the research model of Jarvenpaa et al., 2000

Relation tested	Path coefficient books	Path coefficient travel	Overall path coefficient
Perceived size ← → reputation	.32	.60	
Perceived size→ trust	-.03 (n.s.)	.27	
Perceived reputation→ trust	1.46	.96	
Trust→attitude			.59
Trust→ perceived risk			-.91
Perceived risk→attitude	-.37		
Attitude→willingness to buy			.58
Perceived risk→ willingness to buy			-.29

All parameters significant at < .05 level. (n.s.) indicates non-significance

The results lead to several conclusions. First, the path coefficients and the explained amount of variance lead to the observation that the model as a whole is rather robust. Second, the impact of perceived store size and perceived store reputation on trust is quite large, indicated

by the high amount of explained variance. Moreover, the influence of perceived store reputation and perceived store size in particular on trust differs across store types. According to Jarvenpaa et al. (p.61) this is related to differences in the product to be bought. Expensive products like air travel services are rather high-priced and also involve a number of uncertainties about the final product (e.g. routing, schedule, penalties for changes). In contrast, books are less expensive and there is little uncertainty about whether the book received is the same as the book ordered. Based on these differences the authors state that " the more significant (i.e. expensive) and hence more unfavorable the outcome if the merchant does not behave as expected, the more consumers' trust might be influenced by size" (p.61). Another observation of Jarvenpaa et al. is that the variability in trust perception across the sites is smaller than the variability of perceived reputation and perceived size. This finding suggests that trust might be linked to perception to "trust in the Internet" or "trust in Internet-based bookstores". This infrastructure-based trust factor might function as a mediator between perceived size and perception reputation and perceived trust.

Like Jarvenpaa et al., Pavlou (2001) also conducted a study to investigate the impact of trust on consumer purchase behavior. Pavlou specifically examined the influence of trust and variables of the *Technology Acceptance Model* (TAM) on the intention to transact. TAM (Davis, 1989; Davis, Bagozzi and Warshaw,1989) was introduced to explain and predict the acceptance of information technology. There are two variables here that function as key determinants: perceived ease of use and perceived usefulness (Davis, 1989). Perceived ease of use is defined as: "the degree to which a person believes that using a particular system is free of effort" (p.320). Perceived usefulness is defined as: "the degree to which a person believes that using a particular system would enhance his or her job performance" (p.320). Perceived usefulness is closely related to the effectiveness of the system. To relate both variables to system usage behavior, Davis et al. (1989) built on the rational decision-making structure of the Theory of Reasoned Action (see chapter three). TAM assumes that perceived ease of use and perceived usefulness affect the attitude and/or intention to use the system (Davis et al., 1989) as shown in the figure below:
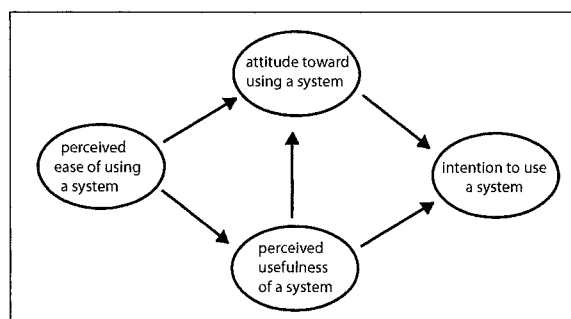
Figure 5.2: The Technology Acceptance Model (Davis et al., 1989)

According to TAM, intentions to use a system are determined by (1) the attitude toward using the system, and (2) the perceived usefulness of the system. Furthermore, the attitude variable is influenced by the perceived usefulness and perceived ease of use of the system while the perceived usefulness construct is determined by perceived ease of use (Davis et al., 1989). When applying TAM to an online setting, the website represents the system (Moon and Kim, 2001).
This argumentation was also used by Pavlou (2001). In his research, Pavlou was interested in the two TAM variables: perceived ease of use and perceived usefulness. More specifically,

Pavlou investigated the direct impact of the perceived ease of using a retail website and the perceived usefulness of using a website to shop, on the intention to transact. The intention to transact was defined as "consumers' intent to engage in any exchange of value" (p.817). Based on the work of Jarvenpaa et al. (2000) and Moon and Kim (2001), perceived risk was also considered as an intention determinant. Although an explicit definition was not provided, the use of references reveals that perceived risk is similar to the construct as used by Jarvenpaa et al. (2000).

In addition to the three direct determinants, several second order effects were integrated. Perceived trust was added as a determinant of perceived risk (derived from and similar to the construct as used by Jarvenpaa et al., 2000). Pavlou extended the examination by including determinants of trust. Based on Doney and Cannon (1997), security and privacy perceptions were selected as trust determinants. Privacy perceptions were defined as "the subjective probability with which consumers believe that the collection and subsequent access, use, and disclosure of their private information by Web retailers is consistent with their expectations" (p.818). Security perceptions were interpreted as: "the subjective probability with which consumers believe that their private information will not be viewed, stored, and manipulated during transit and storage by inappropriate parties in a manner consistent with their confident expectations"(p.818).

All relationships described so far resulted in the following conceptual model:
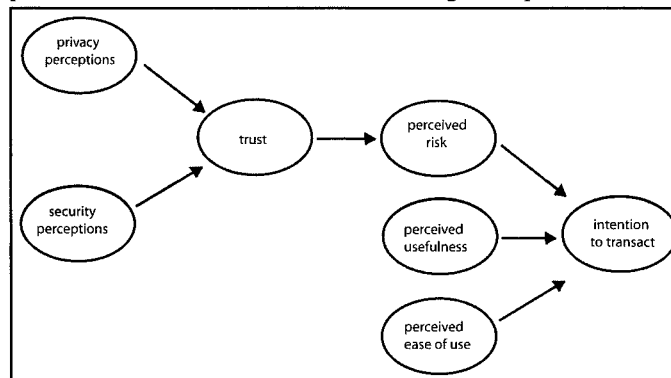
Figure 5.3: The conceptual research model of Pavlou (Pavlou 2001, p.817)

The model was operationalized by an experimental survey. Undergraduate students (n = 52) were asked to visit the website of Amazon.com for 10 minutes and fill in a questionnaire afterwards. Most of the students were already aware of this online retailer before joining the experiment (e.g. 54% had a purchase history at Amazon.com). After measurement validation and a reliability analysis, regression analysis was used to compute the parameters for the three equations integrated in the conceptual model.

Table 5.2: Regression analysis results of Pavlou (2001)

Dependent variable	Independent variable	Standardized regression coefficient (beta)	Amount of variance explained
Trust	Privacy perception	.27(n.s.)	
	Security perceptions	.28	37%
	Reputation (control variable)	.25 (n.s.)	
Perceived risk	Trust	**-.42**	

	Privacy perception (control variable)	-.10 (n.s.)	39%
	Security perceptions (control variable)	-.15 (n.s.)	
	Reputation (control variable)	**-.29**	
Intention to transact	Perceived risk	**-.25**	
	Perceived usefulness	**.42**	
	Perceived ease of use	-.001 (n.s.)	
	Reputation (control variable)	**.31**	76%
	Trust (control variable)	-.29 (n.s.)	

All parameters significant at <.05 level, (n.s.) = not significant

The first equation involved trust as dependent variable and privacy perceptions, security perceptions and reputation as independent variables. Reputation, similar to the reputation construct in the work of Jarvenpaa et al. (2000), was added as control variable. Only the impact of security perceptions was significant (Beta .28).The three variables explained 37% of the trust variance.

The second equation considered perceived risk as dependent variable and trust as independent variable. Reputation, privacy perceptions and security perceptions were included as control variables. The findings showed a significant standardized coefficient (beta) of -.42 for the trust→ perceived risk relation and a significant -.29 (standardized) for the control variable reputation→ perceived risk. The control variables privacy perceptions and security perceptions did not have a significant effect. Together, the independent variables accounted for 39% of the perceived risk variance.

Finally, to explain purchase behavior, the constructs perceived risk, perceived usefulness and perceived ease of use were regressed on the intention to transact together with the control variables reputation and trust. These variables explained 76% of the intention to transact variance. Only the effects of perceived risk, perceived usefulness and reputation were significant. The standardized coefficients were -.25, .42 and .32 respectively.

5.3 Integrating information presentation mode and online purchase behavior

The research of Jarvenpaa et al. (2000) and Pavlou (2001) focused on the influence of trust on the intention to buy at an online store. In addition to this so called trust perspective, Chau, Au and Tam (2000) investigated the behavioral impact of an interface related webstore characteristic: the *information presentation mode*. They aimed, in particular, to answer the question as to whether information presentation modes have an effect on user perceptions and shopping effectiveness (p.7). To answer this question, the authors introduced a framework relating presentation modes to the attitude and intention to use online shopping services, mediated by website ease of use and website usefulness. Based on this framework, Chau et al. decided to focus on the relation between presentation mode on the one hand and perceived website ease of use and website usefulness on the other hand. Furthermore, the effect of presentation mode on shopping process measures was also examined. We will discuss the most important findings below. We will start with a brief consideration of the most important underlying (theoretical) foundations.

As a starting point, Chau et al. focused on the content of commercial websites. According to the authors, content can be described as a "key-factor in determining the uniqueness of an

online shop" (p.2). The authors suppose that the presentation of this content is at least equally important. In the context of their research, content refers mainly to the *way product information is presented*. This is called the *presentation mode*. The presentation mode "addresses how easy product information can be comprehended to facilitate the shopping process" (p.5-6). This mainly depends on the form of the presented content, which may be either textual or graphical. To acquire product information, a consumer might (a) browse through a site, or (b) use search facilities.

Chau et al. explicitly focused on presentation modes as perceived while browsing. The impact of information presentation modes obtained by search facilities was not investigated. To link these modes to behavioral responses, the authors used the Technology Acceptance Model of Davis (1989) as described in our consideration of the work of Pavlou (2001). Chau et al. stated that presentation modes affect the TAM constructs (a) perceived usefulness, and (b) perceived ease of use. As far as the expected nature of the impact is concerned, the authors refer to several related works that consider the impact of text versus graphics on the decision-making process (e.g. Benbasat and Dexter, 1985; Benbasat and Dexter, 1986, MacKay and Villarreal, 1987; Jarvenpaa and Dickson, 1988; Umanath, Scamell and Das, 1990). In general, the results "suggest that product information in the form of pictures will facilitate a quicker and more accurate comprehension of product information than in the form of text" (p.7). Translated to central research questions, Chau et al. aimed to examine whether differences in graphical and textual product information presentation modes affect user perceptions of usefulness, ease of use and navigation, as well as the shopping process itself.

An experimental design was used to gather data. In the context of a larger experiment to design and develop online supermarket prototypes in Hong Kong (1998), Chau et al. investigated whether there were differences in user perceived usefulness or ease of use between prototypes with different on screen product information modes. The prototypes as developed consisted of the same hierarchical structure.When entering the online supermarket, users first saw an opening screen. Next, users entered level one, which consisted of an overview of all product categories (e.g. soft drinks, dairy products). When selecting one of the categories, users arrived at the sub-category level (e.g. cola, lemon soda). Finally, the third and last level contained the final products (e.g. Cola light, Pepsi).
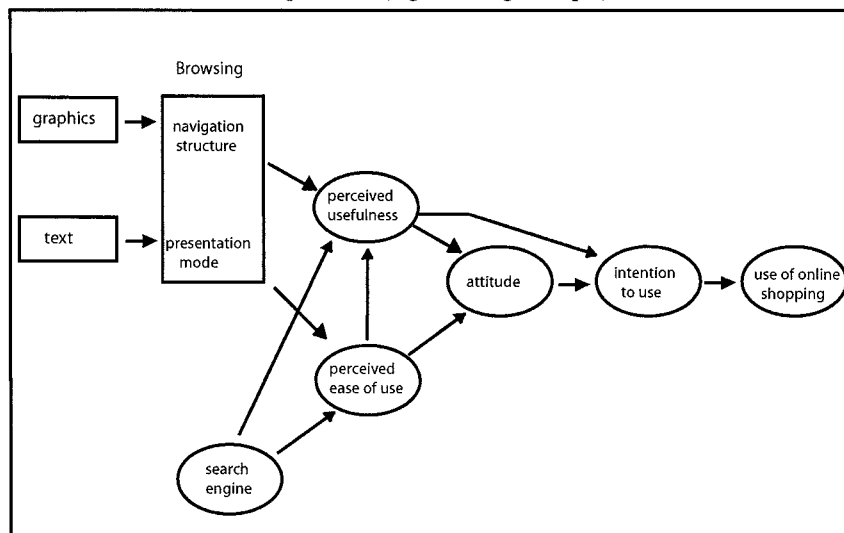
Figure 5.4: The research framework of Chau et al. (2000, p.5)

To examine the impact of the information presentation mode Chau et al. decided to differentiate the prototypes by manipulating the way the content of each of the three levels was represented. In their experiment, a single level contained textual or graphical content. When applied to the three levels this resulted in nine combinations. Only four online supermarket prototypes entered the final test (from highest to lowest level): pictures-pictures-pictures (PPP), picture-picture-text (PPT), pictures-text-text (PTT) and text-text-text (TTT). Other combinations were not examined because Chau et al. or the participants of a particular focus considered them to be too confusing.

The respondents were undergraduate and MBA students, teachers and business executives (n=95). They were divided into four groups, each using one of the four presentation modes. The participants were asked to perform a shopping task. Each of them had to purchase two lists of nine shopping items by using the prototypes they were assigned to. One shopping list consisted of popular items (items the participants frequently purchase) while the second contained unfamiliar (uncommon) items. After the shopping task, the participants completed a questionnaire to provide feedback on the prototype used. The feedback consisted of questions concerning the perceived ease of use, perceived usefulness and perceived navigation (logical, easy navigation) of the system. Furthermore, log files mapped the movements of the respondents during the shopping tasks in order to map the shopping process itself. These files logged four shopping process aspects: time spent, switches between the three levels, switches between pages and correct purchases (did the respondents purchase the products as specified on their shopping list).

The results led to the following conclusions. First, none of the four prototypes was significantly superior in terms of perceived ease of use, perceived usefulness and perceived ease of navigation. According to Chau et al. this leads to the conclusion that "presentation mode for product information does not affect the participant's evaluation of the system" (p.15). As long as the system quality was acceptable, participants used it without caring about whether the information was presented in pictures or text (p.15). Second, when focusing on the shopping process, the number of correct purchases differs significantly between the different prototypes. The more the levels of the prototype consisted of pictures, the higher the number of correct purchases. This observation applied to both shopping lists. However, a different pattern emerged when focusing on the time spent, switches between levels, and switches between pages. Only the task applied to the shopping list for familiar items resulted in significant differences between text and picture presentation modes (i.e. less time spent; less switches between both levels and pages). According to Chau et al. this might be explained by the fact that for unfamiliar items one does not have a good idea of what the item looks like. Then textual information might be a better help to locate the products (p.17).

5.4 Integrating customer preference and online purchase behavior

A construct closely related to the attitude toward purchasing variable is customer preference. Customer preference can be interpreted as a relative attitude (Mathwich, Malhotra and Ridgon, 2001) that consumers develop during the alternative evaluation stage of the purchase process (see chapter two) (Muthitacharoen, 2000). Relative implies that it is formed above other options/choices (Kurniawan, 2000, p.238; Muthitacharoen, 2000). The customer preference construct has been used to predict and explain the impact of online store attributes

on consumer purchase behavior. In this context, it has mainly been utilized as a mediating variable between perceptions of online store characteristics on the one hand and purchase behavior or patronage intent on the other. This construction is, to some extent, comparable with the relationships as specified by the TRA. The most important investigations will be discussed below.

The first research to be considered is that of Muthitacharoen (2000). According to Muthitacharoen, when going through the evaluation phase of the decision-making process, consumers develop preferences with respect to their choices (p.1373). These preferences might be formed after comparing attributes or after comparing overall evaluations. The first preference is called an attribute based preference while the latter is seen as an attitude based preference (Mantel and Kardes, 1999). Based on rational choice theory, the author argues that attribute based preferences affect the attitude based preferences, which finally determine the behavior (p.1374).

Muthitacharoen applied the above preference relation to the consumer decision process to choose between two sales channels in general: the Internet and conventional stores. Derived from the literature (e.g. Jarvenpaa and Todd, 1996; Alba, Lynch, Weitz, Janiszewski, Lutz, Sawyer and Wood, 1997) shopping hour, product and social interaction were selected as store attributes under consideration.

The constructs were measured by measurement scales ranging from one (conventional store is highly superior) to 6 (Internet store is highly superior). Based on a sample of 89 students, structural equation modeling was used to investigate the interrelationships. All questions involved Internet stores and conventional stores in general. The outcomes revealed a model with an acceptably good fit (GFI = .96, NFI = .94, RMR = .37). The standardized loadings between product preference, time preference and social experience preference with attitude based preference were .22, .30 and .47 respectively. This implies that the attitude based preference for one of the channels under consideration is positively related to the attribute preferences.
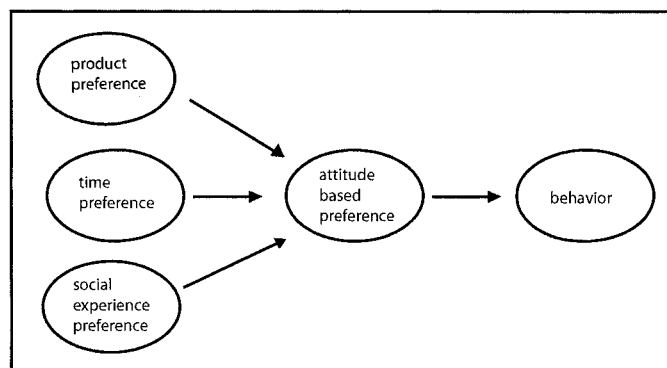
Figure 5.5:The impact of product, time and social experience preferences on the attitude based preference and behavior (Muthitacharoen, 2000)

In other words, the better the perception of one of three attributes compared to the other channel, the more positive the attitude based preference toward that channel will be. As far as the impact of the attitude based preference on behavior is concerned, a standardized loading of .66 was reported. According to Muthitacharoen, these findings confirm that "online purchase behavior is derived from the evaluation of the store's attributes" (p.1378).

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Other research into customer preferences has been conducted by Kurniawan (2000). Kurniawan investigated factors that determine customers' preferences for a particular Internet site above other sites. Here the author used a number of variables closely related to store attributes. In particular, he examined the influence of the site's appeal, the community atmosphere the site created, the convenience the online store offered, customer satisfaction and the site's entertainment. In the initial model these five variables predicted customer preference.

To gather data a questionnaire was distributed among adults who had experience with online purchasing. The questions related to the Internet retailer a customer had had experience with. In contrast to the work of Muthitacharoen (2000), the constructs were not operationalized by using a comparative scale. Instead, the items related to impressions of the single store under consideration. Customer preference was measured by a 12-item scale. The items referred to consumer's perceptions of attribute and attitude based preferences concerning the Internet retailer as well as perceptions of the intentions to purchase from the Internet retailer (see p.243 for details).

The initial research model linked all five variables mentioned above to customer preference. Structural equation modeling was used to calculate standardized path coefficients (beta). Due to poor fit measures this model was dropped from the analysis. A procedure of model modification led to a final model with an acceptable fit. Here, customer preference was directly determined by (a) entertainment, and (b) satisfaction. The path coefficients were .12 and .81 respectively. Furthermore, entertainment was explained by community involvement (p.c. = .26) and the site's appeal (p.c. = .49) while convenience (p.c. = .66) and the site's appeal (p.c. = .26) determined customer satisfaction. Together the constructs explained 73% of the variance of the customer preference construct (Kurniawan, 2000).

The last customer preference study worth mentioning is the research conducted by Mathwick, Malhotra and Ridgon (2001). Mathwick et al. investigated the impact of *experiential value* on retail preference and patronage intent for catalog and Internet shoppers. Built on former research (e.g. Holbrook, 1994; Babin and Darden, 1995; Dayton and Grayson, 1995) the authors considered experiential value as a construct reflecting perceptions of playfulness, aesthetics, customer return on investment (i.e. financial, temporal, and behavioral investments) and service excellence. Supported by the work of Holbrook and Corfman (1985) experiential value was linked to *retail preference*: "the relative attitude of respondents toward catalog, Internet and local in-store retail formats" (p.48). Furthermore, retail preference was assumed to influence *patronage intent* (based on Bolton and Drew, 1991; Dick and Basu, 1994). According to the authors, patronage intent is "the customers' willingness to consider, recommend or purchase from a retailer in the future" (p.48-49).

The final model under investigation examined the relations: experiential value→ retail preference→ patronage intent. In addition to the four components of experiential value, three demographic variables were added (age, income, and gender) as possible determinants of retail preference. The model was tested for Internet shoppers and catalog shoppers. With respect to the operationalization, all constructs referred to a specific store.

Data was collected by sending out a mail survey. A prerequisite of the sample was that the respondents were not allowed to have had previous experience with the catalog channel. All constructs were operationalized by asking for perceptions of the particular Internet retail site. Hence, a comparative scale was not applied (cf. Muthitacharoen). Structural equation analysis was used to analyze the data (n = 213). The model fitted the data (RMSEA = .061; CFI = .93). The results (standardized loadings) are shown in the figure below.
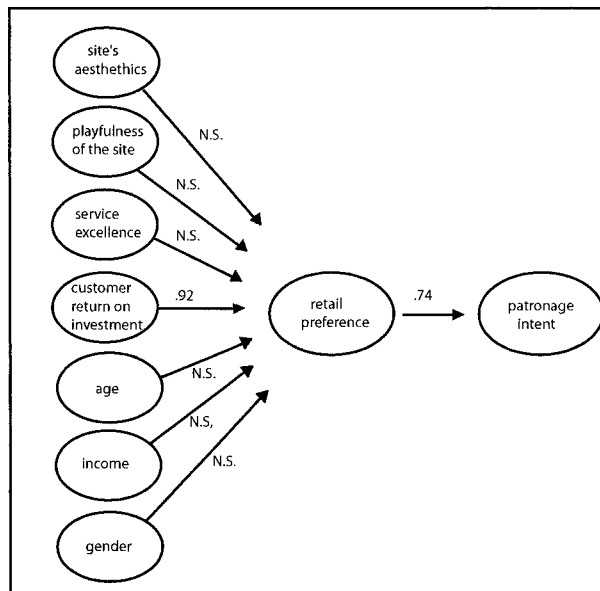
Figure 5.6: The impact of experiential value and three demographic variables on retail preference and patronage intent: results for Internet Shopper (based on Mathwick et al., 2001, p.50). Note: all loadings are standardized. N.S. refers to non-significance

Based on this figure, Mathwick et al. draw the conclusion that only the perceived return on investment significantly affects Internet retail preference (.92). Furthermore, the assumed relation between retail preference and patronage intent was also strongly supported (.74).

5.5 Related works

We conclude this empirical overview with some closely related research. Even though these studies do not focus on the impact of the perceptions of online store attributes on the intention to purchase at an online store, they add to the context of this thesis by considering the impact of online stores on consumer purchasing. We will briefly discuss the work of Spiller and Lohse (1997), Lohse and Spiller (1999), Swaminathan et al. (1999), Bruner (2000), Liao and Cheung (2001) and Grandon and Ranganathan (2001).

We start with the work of Spiller and Lohse (1997). In "A classification of Internet Retail Stores" (1997), the authors described an empirical method for classifying online retail stores. Based on paper catalog design studies, human computer interface research and traditional store image literature, a set of observable online store attributes and online store features was selected.

One of the weaknesses of their research, as well as of related e-commerce research, is that both terms have not been defined and are used interchangeably. Building upon traditional retailing (see chapter four), online store attributes refer to functional and psychological online store characteristics. On the other hand 'online store features' can be described as the noteworthy properties of the online shopping system that serve a particular function (based on

webopedia.com; geek.com). Compared to attributes, the term 'feature' is more rooted in technology rather than in retailing and refers to concrete functionalities.

After the selection of online store attributes and features, Spiller and Lohse clustered the set of online store attributes and features and mapped them to the key retail store variables as identified by Lindquist (1974). The decision to apply traditional store image variables online was justified by the statement that "electronic shopping incorporates many of the same characteristics as normal shopping" (p.32). The research resulted in a classification of five online retail store types: superstore, promotional store, plain sales store, one-page store and product listing store. *Superstores* are large online stores in terms of number of products and pages, containing extensive (additional) information, appetizers, customer care programs and access to sales representatives (p.40). *Promotional stores* provide extensive information and have appetizers but their range of products is more limited. The focus of promotional stores is rather the promotion of general company awareness instead of sales generation (p.40). *Plain sales stores* were described as online stores with extensive product ranges but without additional information, links, appetizers or further customer service. Plain sales stores usually use graphics for product display because the products they sell do not require lengthy explanations (p.40-41). *One-page stores* are very small online stores that do not feature extra information, links or appetizers (p.41). They are characterized by the fact that there are very few levels between the (usually large) home page and product pages. Finally, *product listings* are online stores containing large numbers of products on end-product pages and a large page length. Furthermore, there are few extra information and navigation tools (p.41). Although the exploratory investigation did not relate store image to any behavioral construct, the online application of the traditional store image construct is worth mentioning.

Lohse and Spiller extended their earlier research in the publication: "*Internet retail store design: How the user interface influences traffic and sales*" (1999). They related the characteristics of an online retail store to online store traffic (monthly number of sessions) and sales (monthly sales in dollars) by focusing on one of the online retail stores identified in their 1997 study: the superstore. Based on Lindquist's taxonomy (1974) and the Internet catalog classification of his former study, a list of 36 variables was constructed to locate the presence of superstore attributes. The variables included were part of the following categories: merchandise, service, promotion, navigation and interface. Based on a sample of 28 superstores, the independent variables were regressed on two dependent variables: store traffic and sales. First, by using stepwise regression the number of independent variables was diminished. Next, the 13 remaining variables were used for the final regression analysis on the traffic and sales variables.

The results revealed that the store variables explained 88% of the traffic variance and 76% of the sales variance. Table 5.3 shows which variables and categories accounted for the variance.

Table 5.3: Categories and variables explaining online store traffic and online store sales variance (adapted from Lohse and Spiller, 1999)

Category	Percentage of traffic variance	Percentage of sales variance
Service		
Product related FAQ section (45%)	45%	(n.s.)
Feedback section (9%)	9 %	1%.
Merchandise		
Number of products (17%)	17%	(n.s.)
Appetizers	(n.s.)	(n.s.)
Number of levels between home page and product page	(n.s.)	(n.s.)

were		
Navigation		
Number of store entrances from other online locations(7%)	**7 %**	**10%**
Shopping modes (i.e. the way the store is organized in order to find products; e.g. organized by product category, prices level etc.) (1%)	**1%**	(n.s.)
Product lists with buttons and pictures	**4%**	**58%**
Product lists with buttons (3%)	(n.s.)	**3%**
Product lists with pictures (4%)	**4%**	(n.s.)
Interface		
Consistent menu bars	(n.s.)	(n.s.)
Promotion		
Hours of promotion (1%)	**1%**	**4%**
Number of featured products	(n.s.)	(n.s.)

(n.s.) = not significant at p<.05 level

Several observations can be made based on this table. First, the results show that store traffic variance was explained by all categories. Together, service and merchandise accounted for 71% of the store traffic variance while the contribution made by promotion was negligible. In contrast, online store sales were only explained by three categories: navigation, promotion, and service. Here navigation accounted for most of the variance (61%). Four variables did not have a significant effect on any of the dependent constructs: appetizers, consistent menu bars, number of products featured, number of levels between home page and product page. The nature of the impact is not given in the table above. All significant relations were positive with the exception of the 'availability of the feedback section' and 'shopping modes' variables. Both had a negative effect on store traffic.

Based on the outcomes, one might conclude that the online store features mentioned above have an obvious effect on online store traffic and online store sales. However, according to Lohse and Spiller, there are several limitations in the research that must be taken into account. First, the sample of 28 stores would appear to be too small for parameter estimation. Second, the examination does not make a distinction between product types. The impact of online store features might be different depending on the products to be sold. Third, the results should not be extrapolated since online stores change over time. Finally, the results do not imply any causality (Lohse and Spiller, 1999, p.12).

Second, we would like to mention the work of Swaminathan et al. (1999). In their research Swaminathan et al. (1999) examined some antecedents of electronic shopping in an online context. They focused more specifically on the impact of *vendor characteristics, security of transaction, concern for privacy* and *customer characteristics* on the likelihood of electronic exchange.

In order to examine the effect of the four variables on the likelihood of electronic exchange, Swaminathan et al. used secondary data from the Georgia Visualization and Usability Center. Here, data was collected in an e-mail survey. The questionnaire included questions

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concerning the perception of the four variables as well as indicators for actual purchase behavior.

The vendor characteristics were measured by asking for perceptions of World Wide Web vendors in general. The perceived security of transactions and concern for privacy measurement scales related to general impressions of (purchasing on) the Internet. The customer characteristics variable was split up into two consumer shopper type variables: convenience oriented shoppers and shoppers seeking social interaction. They were measured by asking for reasons for shopping on the Web or not. Finally, two electronic exchange measures were used. The first asked respondents how frequently they shop (i.e. purchase) online. The second asked for the total amount of money spent on the Web over the last six months.

Based on the results of an initial Factor Analysis, the authors decided to split the privacy construct up into 5 variables: use of information, anonymity, perception of direct marketing, privacy laws, and control over information.

During the final analysis, the independent variables were regressed on two independent variables: the frequency of online purchasing (in general not during a specific period of time) and the total amount of money spent online over the last six months. The results are shown in table 5.4:

Table 5.4: Regression statistics for (a) the frequency of online purchasing, and (b) the total amount of money spent (Swaminathan et al. 1999, p.14)

Variable	Y= frequency of online purchasing	Y = total amount of money spent online over the last 6 months
Vendor characteristics	**.219**	.097 (n.s.)
Perceived security	-.089(n.s.)	-.024 (n.s.)
privacy 1: use of information	.018 (n.s.)	-.130 (n.s.)
privacy 2: anonymity	.003 (n.s.)	.064 (n.s.)
privacy 3: perception of direct marketing	.067 (n.s.)	-.064 (n.s.)
privacy 4: concern about privacy laws	.037 (n.s.)	**.126**
privacy 5: control over information	.066(n.s.)	.040 (n.s.)
social interaction orientation	**.476**	**.639**
convenience orientation	**.552**	**.552**

all (unstandardized) parameter estimates significant at p<.01 level, (n.s.)= not significant

As far as the frequency of online purchasing is concerned, the variables explained 12% of variance of the frequency of online purchasing. Only the vendor characteristics, social interaction orientation and convenience orientation had a significant effect (p<.01).
With respect to the total amount of money spent, 15% of the variance was explained by the independent variables. Concern about privacy laws, social interaction orientation and convenience orientation (b=.552) significantly (p<.01) affected this construct.

Third, we refer to the work of Bruner (2000). As part of an advertising hierarchy-of–effects study, Bruner investigated the relation between *attitude toward the website* and purchase intention. In the examination, the website was an online store which implies that the attitude toward the website equals the attitude toward the online store. Several authors state that the attitude toward a store is rather similar to the perceived image of the store (see chapter four). Since store image is derived from the perceptions of the store's attributes (see chapter four),

this is also likely to apply to the attitude toward the store. In this context, it is interesting to observe the effects of the attitude toward the website on the purchase intention because it indicates what the impact of the perception of the online store on purchase behavior might be. Bruner conducted an experiment in order to investigate the attitude toward the website→ purchase intention relationship. A website of a real state lottery was modified to construct three different versions. The pages differed in the number of dynamics and other stimuli. Finally, 95 subjects took part in the experiment. After a procedure that was based on a specific instruction list, the respondents completed a questionnaire. With respect to the relation between the attitude toward the website and purchase intention, a significant correlation coefficient of .37 (p<.01) was found.

As fourth examination we refer to the publication "Internet-based e-shopping and consumer attitudes: an empirical study" by Liao and Cheung (2001). The authors examined the impact of seven variables on the initial willingness to e-shop on the Internet. Since some of these variables are store attribute related, we will briefly examine the findings.
Based on a literature study (for details see p.300-301) Liao and Cheung selected the following variables: *perceived risks associated with transactions security in Internet based e-shopping, level of education and training in computer applications, representative retail price on the Internet e-market, consumer perceptions of the relative live content of Internet based e-shopping, perceived quality of Internet e-vendors, level of Internet usage* and *network speed* (p.302).
Data was gathered by employing a survey on Singaporean consumers who used the Internet. The data obtained was analyzed by applying regression analysis. With the exception of network speed, all independent variables loaded significantly (p<.01) on the initial willingness to e-shop on the Internet. The beta's (standardized coefficients) for the rest of the model were: perceived risks associated with transaction security in Internet based e-shopping: -.16, level of education and training in computer applications: .17, representative retail price on the Internet e-market: -.05, consumer perceptions of the relative live content of Internet based e-shopping: -.31, perceived quality of Internet e-vendors: .22, level of Internet usage: .22. Together the variables accounted for 0.9 of the adjusted variance of the initial willingness to e-shop on the Internet.

We will conclude this empirical consideration with the work of Grandon and Ranganathan (2001), who investigated the impact of Website content and design features on online sales. More specifically, the authors examined the relationship between the *presence* of website content and design features on webstore revenues.
Website content refers to the information, features or service offered on a website (Huizingh, 2000). To measure website content Grandon and Ranganathan selected six variables that describe the content of a website: presence of decision aids, information on products and services, information on the firm, frequent update of content, Frequently Asked Questions and company contact information.
Website design is the way in which the content of a website is presented (Huizingh, 2000). The authors selected five design variables to describe the design features of a website: complexity of navigation, presence of help index/help function, use of multimedia, frame/no frame versions and search function.
The selected content and design variables were integrated in the research model shown in figure 5.7.
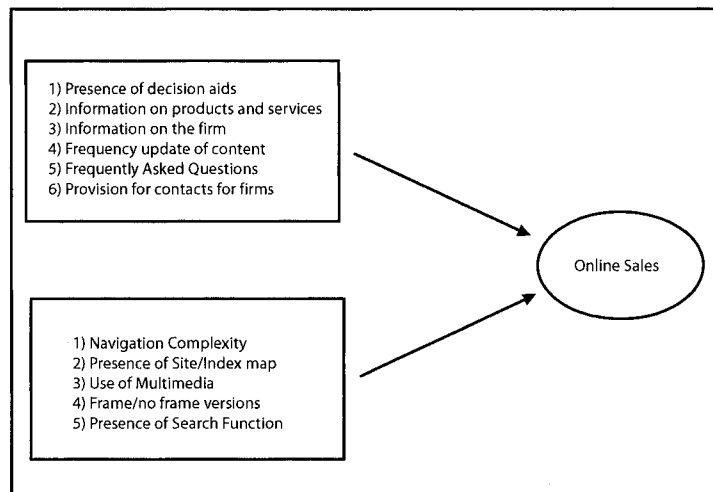
Figure 5.7: The research model of Grandon and Ranganathan
(Grandon and Ranganathan, 2001, p.922)

To gather data, Grandon and Ranganathan used secondary data from *Internet 500* as provided by ZDNet Interactive week. This list estimates online revenues for the year 2000. In this context sales are sales of goods and services over the Internet, an extranet, electronic data interchange or other online systems. Payment can be be made either online or offline. Based on a questionnaire with questions about the presence of the eleven variables as shown in figure 5.9 (e.g. is there a search function? 0= no 1= yes) 94 websites were analyzed. Regression analysis was conducted with the logarithm of online sales as dependent variable. The results showed a clear pattern. Only the presence of decision aids (beta = .21), frequent update of content (beta = .33) and complexity of navigation (beta = -.27) are significant below the .05 level.

5.6 Discussion and conclusion

In this chapter we looked at research concerning the impact of online store attributes on consumer purchase intentions. Here, several research examples relating online store attributes to attitudes toward the behavior, behavioral intentions or related purchase behavior constructs were discussed.

Based on this empirical exploration, several observations can be made.
First, both parameter estimates and explained variance indicators show that perceptions of online store attributes affect consumer intentions to purchase online. Significant relations with (1) the attitude toward purchasing at a specific online store, (2) the attitude related construct of attitude based preference/retail preference, and (3) the intention to purchase from a specific online store have also been found. Direct relations with the consequences of online purchase behavior have also been located (e.g. online store sales). Although some investigations considered the presence of webstore attributes and features (e.g. Lohse and Spiller, 1999; Grandon and Ranganathan, 2001), the majority considered these as perceived by respondents. This leads to the conclusion that when explaining and predicting online purchase behavior in

general, and consumer purchase intentions in particular, the perception of online store attributes can be seen as an important determinant. Statements in the literature lead to similar conclusions. For example, based on the results of his own research Muthitacharoen (2000) argued, "the study confirms that online purchasing behavior is derived from the evaluation of a store's attributes" (p.1378). Moreover, at the end of their examination, Crisp et al. (1997) assumed: "the current results suggest that improving the store fronts, and thereby consumers' beliefs about Web shopping, should be a greater concern for retailers than simply waiting for Internet Shoppers (and therefore customer attitude and intention) to mature" (p.10).
A second observation is related to the nature of the effects of online store attributes. Both direct and indirect (mediated by the attitude or customer preference) effects of online store attributes on purchase intentions, have been observed. This leads to the conclusion that store attributes may well be indirect or direct determinants of online purchase intentions.

However, both conclusions mentioned above have to be interpreted with care since not all studies include the same target specificity. Bruner (2000), Jarvenpaa et al. (2000), Kurniawan (2000), Pavlou (2001) and Mathwick et al. (2001) looked at the variables at an individual store level. In contrast, Chau et al. (2000), Muthitacharoen (2000) and Liao and Cheung (2001) considered the attitude toward the behavior and/or the behavioral intention at a rather general level (Chau et al., 2000: online shopping services in general; Muthitacharoen, 2000: preference for the Internet channel; Liao and Cheung, 2001: e-shop on the Internet). Furthermore, differences between the operationalization of the attitude and customer preference constructs have to be taken into account. Although customer preference seems to be closely related to the attitude toward the behavior, minor differences do exist. This hampers comparisons between research using the attitude or the customer preference construct.
Finally, current research is insufficient to generalize the findings of a short meta study. This observation is supported by Chau et al. (2000) who assumes that "there is a gap between the proliferation of online shops and the development of behavioral research in this area" (2000, p.2). According to Grandon and Ranganathan (2001), "Though the problems in luring consumers to make online purchases is well acknowledged, only limited empirical research has tried to address this issue" (p.920).

Based on our observations we arrive at a preliminary conclusion: online store attributes are likely to influence the attitude toward purchasing at an online store (or the related preference construct) and the intention to purchase at an online store. The effects may be either indirect and/or direct. However, due to the reasons mentioned above it is obvious that more research is needed to generalize these conclusions. In this context, the following two chapters can be interpreted as an initial attempt.

Chapter 6: Empirical explorations: the impact of trust, perceived risk, ease of use and usefulness on the intention to purchase

6.1 Introduction

The previous chapter revealed that there is limited empirical research relating online store attributes to the attitude towards purchasing at an online store and the intention to purchase at an online store. In this chapter we will present research[2] that can be seen as an attempt to contribute to this little investigated research field. Based on the models of Jarvenpaa et al. (2000) and Chau et al. (2000), we examine the effect of online store attributes that are either related to *trust in the store* or *the website as online shopping system*. The first attribute group comprises the variables 'trust in the store', 'perceived size', 'perceived reputation' and 'perceived risk' while the latter consists of the online store attributes 'website ease of use' and 'website usefulness' Both advantages and disadvantages of research concerning these attribute groups will be discussed. Next, we will combine both models in one single study. Based on an empirical setting of online shoppers, the impact (direct and/or indirect) of these variables on the attitude towards purchasing at an online store and the intention to purchase at an online store, will be explored.

The content of this chapter is as follows: First, in section 6.2 we will set out the research objectives and discuss the contributions of research concerning trust and online shopping system attributes in the context of online purchasing. Our research model will be introduced and hypotheses formulated. Next, section 6.3 will focus on the research design. In section 6.4

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[2] Parts of this research have been published in: Heijden, H.v.d., Verhagen, T. and Creemers, M. "Predicting online purchase behaviour: replications and tests of competing models", Proceedings of the 34 Hawaiian International Conference on System Sciences (HICSS), January 2001 (Best Paper Award Nominee) and Heijden, H.v.d., Verhagen, T.and Creemers, M.R.., "Understanding online purchase intentions: contributions from technology and trust perspectives", *European Journal of Information Systems*, 2003, forthcoming.

the results of the analysis are presented. Finally, section 6.5 sets out the results and the conclusions.

6.2 Objectives and research model

The objective of this examination is to explore and examine the effects of online store attributes that are related to either *trust in the store* or the website as *online shopping system*. As considered in chapters one and two, it is evident that online consumer behavior can to a large extent be studied using frameworks from "offline", or "traditional" consumer behavior. General frameworks that capture the decision-making processes of consumers also apply to online consumer behavior because they are relatively abstract and do not consider the *means* of purchasing (see e.g. O'Keefe and McEachern, 1998).

Trust influences consumer decision-making in both offline and online settings. As governance mechanism, trust concerns aspects of uncertainty, vulnerability and dependency of exchange relationships (Jarvenpaa et al., 2000). However, due to the lack of physical presence these aspects result in different meanings in an online setting. To assess trustworthiness, consumers have to rely on perceptions of the online store. Traditional consumer behavior models have not covered this difference as well as its impact on consumer decision-making.

Furthermore, in an online setting consumers have to interact with the website as *online shopping system* to purchase the goods and services they need. The physical shop environment is replaced by an electronic shopping environment, or, to put it in less fashionable terms, by an information system. Because an information system is introduced into the consumer decision process, this gives rise to all sorts of technical complications that have traditionally been the domain of information systems and HCI researchers (O'Keefe et al., 2000). Traditional consumer behavior models devote little if any attention to these issues. Given these differences, research in online consumer behavior can benefit from models that have been developed to study trust and online shopping system attributes in particular. We will examine the contributions of research considering these online store attribute groups in more detail below.

Contributions from trust research

Research focusing on trust has gained momentum after the introduction of wide-scale electronic commerce. There are increasingly many definitions of trust, but the one that we will adopt in this investigation is "the willingness of a consumer to be vulnerable to the actions of an online store based on the expectation that the online store will perform a particular action important to the consumer, irrespective of the ability to monitor or control the online shop" (cf. the more general definition from Mayer et al., 1995 in chapter five). In the context of online purchasing behavior, most trust research maintains that *perceptions of trust in the store* influence the intention to purchase at a specific website. This relationship was investigated by Jarvenpaa et al. (2000) and Pavlou (2001) who examined the impact of trust on online purchase intentions, mediated by the *attitude towards purchasing* and/or *perceived risk*. Also determinants of trust, including *perceived size, perceived reputation* (Jarvenpaa et al.), *privacy perceptions* and *security perceptions* (Pavlou), were considered (see section 5.2 for details).

The contributions from the trust research towards explaining online purchase intention are significant. It highlights the importance of trust, and seeks to identify various trust drivers. It

highlights the importance of trust in the store, perceived risk, perceived size and reputation. However, trust research provides necessary conditions, not sufficient ones to explain purchase intentions. Very few consumers will purchase something online simply because they trust the shop owner.

Contributions from research concerning the website as online shopping system

Research concerning the website as online shopping system mainly focuses on the consumer's assessment of the technology required to conduct a transaction online. This technology equals the website as online shopping system that the firm operates to market and sell its products. While it can also refer to other types of technology-based shopping, such as web-TV, mobile commerce, and the like, we will confine ourselves to websites.

A well-known representative theory considering online store attributes of the website as online shopping system is the TAM of Davis (1989, Davis et al., 1989) as discussed in the previous chapter. Based on the TRA, TAM integrates two key beliefs that specifically account for information system usage: *perceived usefulness* and *perceived ease-of-use*.

Extrapolating this line of argument to electronic commerce websites, one could posit that the more useful and the easier to use an e-commerce website is, the more it will be used. A similar theoretical extrapolation was conceptualized by Chau et al. (2000).

The contributions of TAM and other, similar models in an online shopping context are evident. They explain why websites are used for transactions from an information system point of view, and highlight the importance of website usefulness and the usability of the website. However, there are also a number of problems associated with this approach.

First, the constructs in TAM may be too general to provide more than a superficial explanation of purchasing attitudes and intentions. Originally, TAM was introduced to explain the user acceptance of technology. This is a much broader concept than a consumer's intent to purchase a product online *at a specific website*. Likewise, the "usefulness" and "ease-of-use" antecedents are fairly general beliefs that call for context-specific operationalization when applied to a specific technology. Indeed, to theorize that a website needs to be useful in order to be used is bordering on tautology. More research is needed to operationalize these antecedents and make the TAM model less reductionist and more useful.

A second criticism is the causality suggested by the model. In the context of online purchasing, TAM predicts that – all other things being equal - increased usefulness or increased ease-of-use will lead to increased shopping intentions. In more straightforward terms: if the website improves, then – inevitably -- the willingness to purchase will increase. We argue that under conditions of rational consumer decision-making, this simple proposition is not always tenable. The website is the means to purchase a product, and when the means improves, the intention to purchase the product online will *not necessarily* increase.

A summary of the contributions of research considering the website as online shopping system and trust is given in Table 6.1.

Table 6.1: Summary of contributions from research focusing on online shopping system and trust attributes

Website as online shopping system		Trust	
+	Explains why online transactions are conducted (or not conducted) from a technological point of view	+	Explains why online transactions are conducted (or not conducted) from a trustworthiness point of view
+	Argues that online shoppers require a positive attitude toward the website before making their purchase	+	Argues that online shoppers require a positive attitude toward the web store before making their purchase
+	Highlights the importance of website usefulness and website ease of use	+	Highlights the importance of trust in the store, perceived risk, reputation and perceived size
−	Antecedents may be too generic and will require context-specific operationalization	−	Provides necessary conditions but not sufficient ones to explain an online purchase
−	Provides necessary conditions but not sufficient ones to explain an online purchase		

Model to be tested

In order to examine the impact of trust- and online shopping system variables on online purchase intentions, we built on the models of Jarvenpaa et al. (2000) and Chau et al. (2000). We are especially interested in the joint influence of the perception of the trust and online shopping system attributes that are part of these models. Specifically, we will focus on the effects of perceptions of trust, risk, size, reputation (the trust related variables as used in Jarvenpaa et al., 2000), ease of use and usefulness (the online shopping system variables as used in Chau et al., 2000) on the attitude towards purchasing at an online store and the intention to purchase at an online store. Since both models share the same underlying purchase intention predicting structure, consisting of the attitude→ intention relationship as introduced in the TRA (see chapter three), they can be combined as follows:
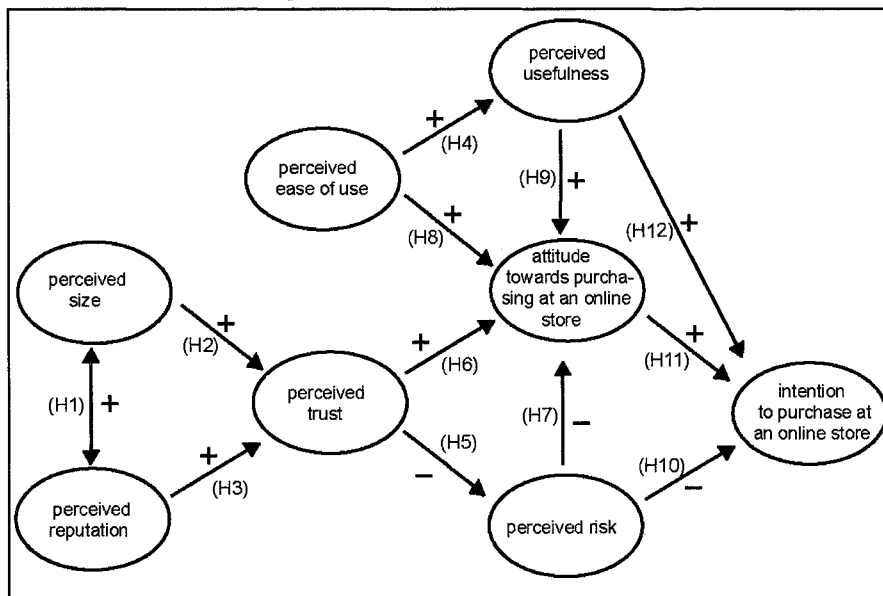
Figure 6.1: Model to be tested (based on Jarvenpaa et al., 2000 and Chau et al., 2000)

All relationships in the model, including the nature of the effects (negative/positive) are based on literature as discussed in chapter five. Based on these relationships the following hypothesizes can be formulated:

H1:   Perceived size of the store is positively associated with perceived reputation of the store

H2:   Trust in the store is positively influenced by perceived size of the store

H3:   Trust in the store is positively influenced by perceived reputation of the store

H4:   Perceived website usefulness is positively influenced by perceived website ease of use

H5:   Perceived risk of purchasing at the online store is negatively influenced by trust in the store

H6:   Attitude towards purchasing at the online store is positively influenced by trust in the store

H7:   Attitude towards purchasing at the online store is negatively influenced by perceived risk of purchasing at the online store

H8:   Attitude towards purchasing at the online store is positively influenced by perceived website ease of use

H9:   Attitude towards purchasing at the online store is positively influenced by perceived website usefulness

H10:   Intention to purchase at the online store is negatively influenced by perceived risk of purchasing at the online store

H11:   Intention to purchase at the online store is positively influenced by the attitude towards purchasing at the online store

H12:   Intention to purchase at the online store is positively influenced by perceived website usefulness

6.3 Research design

Measurement instrument

To test the hypotheses derived in the previous section we designed two surveys based on prior research. The first questionnaire contained demographic variables such as age, sex, Internet experience, and experience in online purchasing. The second questionnaire contained question items about one specific online store.

In order to increase reliability, each construct was operationalized with multiple items. The operationalizations for the constructs were taken directly from Jarvenpaa et al. (2000) and Chau et al. (2000). The latter are based on Davis (1989). We did make some modifications. Most of them were adaptations to make the items more suitable in a Dutch context, others were substantial. In particular, we replaced the word "Internet" with "This website" in the attitude construct to reflect the TRA. Also, in the 'intention to purchase at the online store' construct, we changed the specific time horizons ("three months" and "the next year") to broader terms ("short term" and "the longer term") since the former is an arbitrary operationalization of the latter. Finally, we changed the wording of the 'ease of use' and

'usefulness' items to make them more suitable for e-commerce websites. The resulting items can be found in Appendix A.

Sample

Our sample consisted of a group of undergraduate students who took the course "Information systems" at the Vrije Universiteit Amsterdam during Spring 2000. As an incentive to participate, we offered them a bonus grade after successfully taking part in the research. We programmed the surveys with JavaScript, VBScript and ASP and published them on the Internet, cf. Dillman (2000).

Data was collected from the 12th up to and including the 22th of May 2000. Each student was notified in class of the URL to the web-based questionnaires, so they could complete them both at home or on campus. It was also possible to print out the survey and return them hand-written. The students were asked to complete the second survey four times for each of four websites, in any order of their own liking. The websites were selected to provide different experiences in size, reputation, trust an perceived risk. These websites, as well as their characteristics, are shown in the following table

Table 6.2: Websites and companies under study

	URL	*Products*	*Notes*
Free Record Shop	www.freerecordshop.nl	CDs	A large and widely known CD retail chain in the Netherlands
Hot-Orange (music department)	www.hot-orange.nl	CDs	A small and relatively unknown Dutch start-up company who sells solely over the web
Ineas	www.ineas.nl	Retail insurances	A small and relatively unknown European start-up company who sells insurances solely over the web
Ohra	www.ohra.nl	Retail insurances	A large and widely known retail insurance provider in the Netherlands

6.4 Results

Sample

Eventually, 227 students took part in the survey. 163 (71.8%) were men, 64 (28.2%) were women. The Figure below presents the age distribution across the sample population.
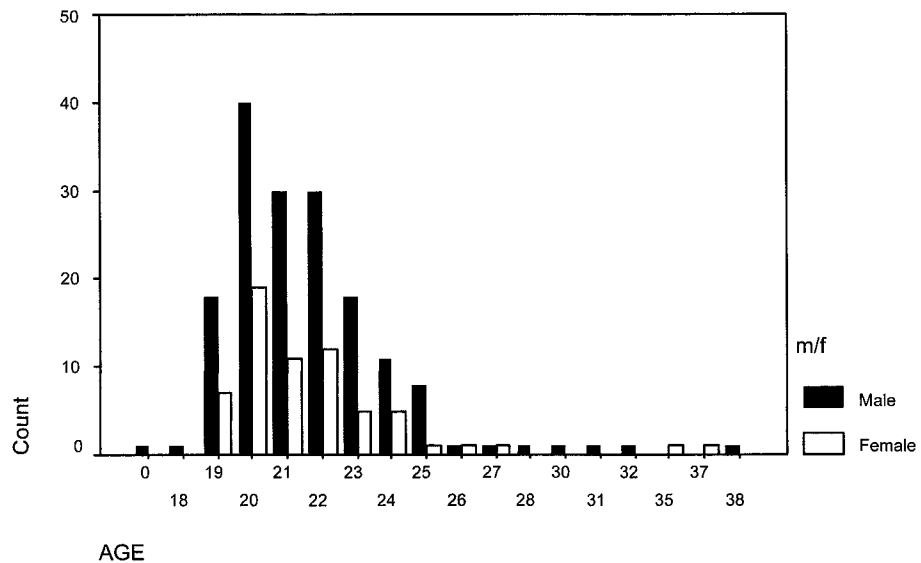
Figure 6.2: Respondent Demographics

In terms of Internet experience, 152 (67.1%) had Internet access at home, 75 (32.9%) used Internet at the university campus. The figures below indicate how many years of experience each respondent had in using the Internet and purchasing a product.
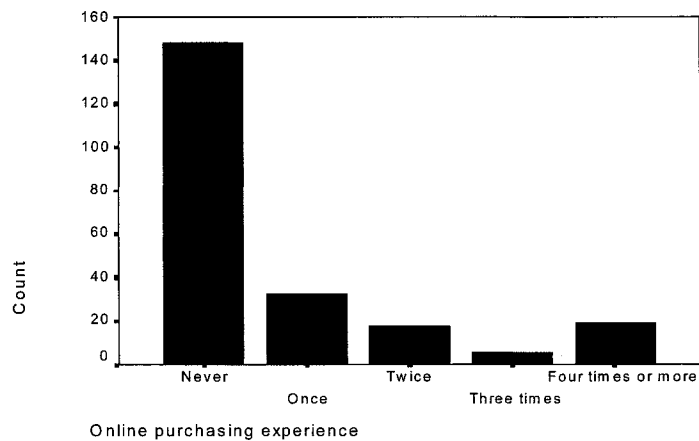
Figure 6.3: Respondents experience in online purchasing
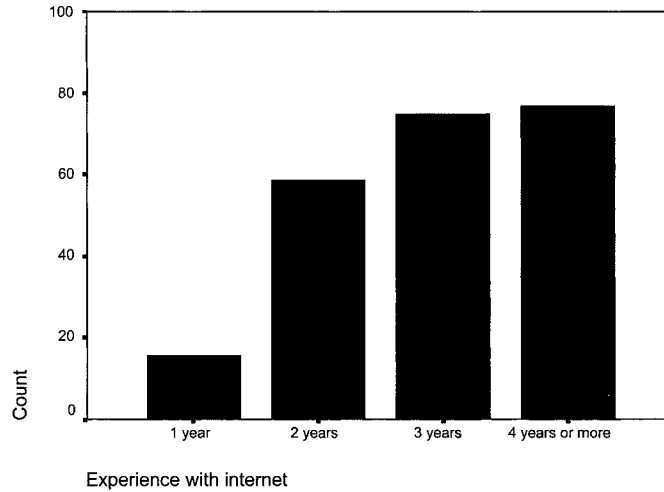
Figure 6.4: Respondents experience with Internet

The demographics of the student population demonstrate that the vast majority are experienced Internet users. In sum, this implies that the study is biased towards young, college educated, experienced Internet users. On the other hand, 149 (64.4%) of them have never bought online, while 20 (8.8%) have bought on the Internet four times or more. Consequently, the results of the study are biased towards *initial* purchase intention as opposed to *repeat* purchase intention.

Reliability

As a test for reliability of construct measurement, Cronbach's alpha is usually used (Nunnally, 1978). The following table displays the alpha coefficients for each of the constructs, and for all the websites that were evaluated.

Table 6.3: reliability of measurement scales (Cronbach's alpha)

Construct (nr of items)	Hot Orange (n = 218)	Free Record shop (n=217)	Ineas (n=214)	Ohra (n=215)
Perceived reputation (3)	0.69 (adjusted 0.82)	0.68 (adjusted 0.93)	0.59 (adjusted 0.51)	0.75 (adjusted 0.82)
Perceived size (3)	0.80	0.62	0.82	0.80
Trust (7)	0.61 (adjusted 0.65)	0.69 (adjusted 0.76)	0.63 (adjusted 0.64)	0.68 (adjusted 0.74)
Ease of Use (5)	0.87	0.95	0.94	0.94
Usefulness (3)	0.80	0.83	0.85	0.88
Attitude (3)	0.92	0.94	0.95	0.90
Intention (4)	0.91	0.92	0.88	0.86
Perceived Risk (4)	0.76	0.76	0.84	0.82

All constructs demonstrate acceptable levels of reliability (> 0.60, cf. Hair, Anderson, Tatham and Black, 1998), except for 'perceived reputation' with respect to the Ineas site. In particular, the dependent variables 'attitude towards purchasing at the online store' and 'intention to purchase at the online store' have strong levels of reliability. In terms of the other constructs of this study, the Cronbach's alphas of the 'reputation' and 'trust' constructs are relatively disappointing. The exclusion of some indicators (in line with Jarvenpaa et al., 2000) does improve the reliability somewhat.

Validity

To assess construct validity, we tested for unidimensionality and nomological validity. Unidimensionality can be defined as the existence of one construct underlying a set of items (Steenkamp and van Trijp, 1991, p.286). It is one of the most critical and basic assumptions of measurement theory (Hattie, 1985,p.139). Exploratory factor analysis can be used to assess undimensionality (Steenkamp en van Trijp, 1991, Hair et al., 1998) by observing if the scale items load on the same underlying factor and by verifying if corresponding factor loadings are of an acceptable level (preferred: >.30, Hair et al., 1998). All items that were part of our measurement scales loaded on the same factor and exceeded the guideline of .30. "Nomoligical validity is the extent to which the scale correlates in theoretically predicted ways with measures of different but related constructs" (Malhotra, 1999, p.283). Structural equation modeling can be used to assess nomological validity (for a comprehensive overview see Bollen, 1989) because it functions as test for the theoretical structure of the model with its measures. Because the goodness of fit indices of structural equation modeling are usually heavily influenced by the measurement part of the model (cf. the structural part) the fit indices are good indicators of nomological validity (Steenkamp and van Trijp, 1991). For our analyses we used Amos 4.01 with maximum likelihood estimation (Arbuckle and Wothke, 1999). We tested the research model (figure 6.1) for all four websites and examined the measures of fit with the data. The values on generally accepted measures of fit are shown in Table 6.4

Table 6.4: Fit of the research model for all four websites

	Norm	Hot-Orange	Free Record Shop	Ineas	Ohra
Absolute fit measures					
Chi Square (df)	Non-signifcant	484,18 (310), p=0.000	473.155 (310) p = 0.000	493.227 (310) p =0.000	470.723 (310) p = 0.000
RMSEA (90% CI)	<0.08	0.051 (+/- 0.09)	0.049	0.053	0.049
GFI	>0.9	0.86	0.861	0.860	0.861
Incremental fit measures					
Tucker Lewis Index (or NNFI)	>0.9	0.94	0.99	0.987	0.989
NFI	>0.9	0.86	0.976	0.972	0.975
AGFI	>0.9	0.83	0.830	0.829	0.830
Parsimony-adjusted fit measures					
Normed Chi-Square	Between 1 and 2	1.56	1.526	1.591	1.518

(ChisSquare/df)					
Parsimony GFI	n/a	0.71	0.706	0.705	0.706
Parsimony NFI	n/a	0.76	0.80	0.797	0.799

None of the models pass absolute Chi Square tests. However, this statistic is sensitive to large samples and favors complex models over simpler ones, and therefore, other fit measures should be taken into account (Hair et al., 1998). When adjusted for degrees of freedom, all Chi Square tests are acceptable. Other fit measures, such as the RMSEA are acceptable as well (cf. norms as supplied in Hair et al., 1998). Therefore, we may conclude with some reservation that the model is a valid representation of the data.

Estimation of the path coefficients

The research model (figure 6.1) was tested for the online CD stores (Hot-Orange and Free Record Shop) and the online retail insurances stores (Ineas and Ohra). The latent path diagrams are shown in the figures below (for additional details see Appendix D):
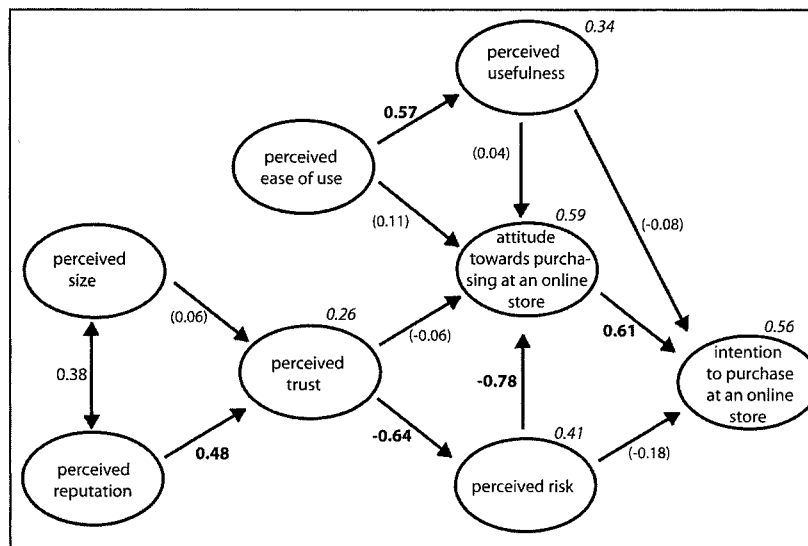
Figure 6.5: Hot-Orange (CD): standardized path coefficients and explained variance for the tested research model. Bold path coefficients are significant at p< .05 level. Path coefficients between brackets are not significant. Italic parameters above the constructs refer to the amount of variance explained.
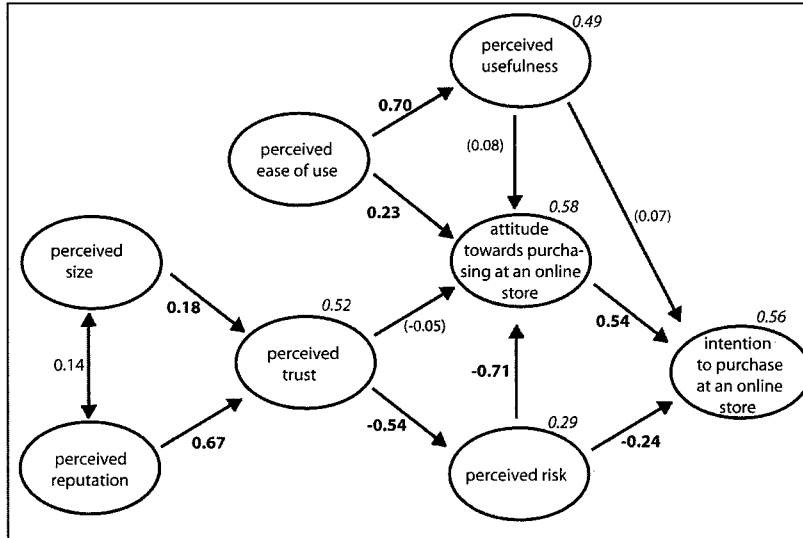
Figure 6.6: Free Record shop (CD): standardized path coefficients and explained variance for the tested research model. Bold path coefficients are significant at p< .05 level. Path coefficients between brackets are not significant. Italic parameters above the constructs refer to the amount of variance explained
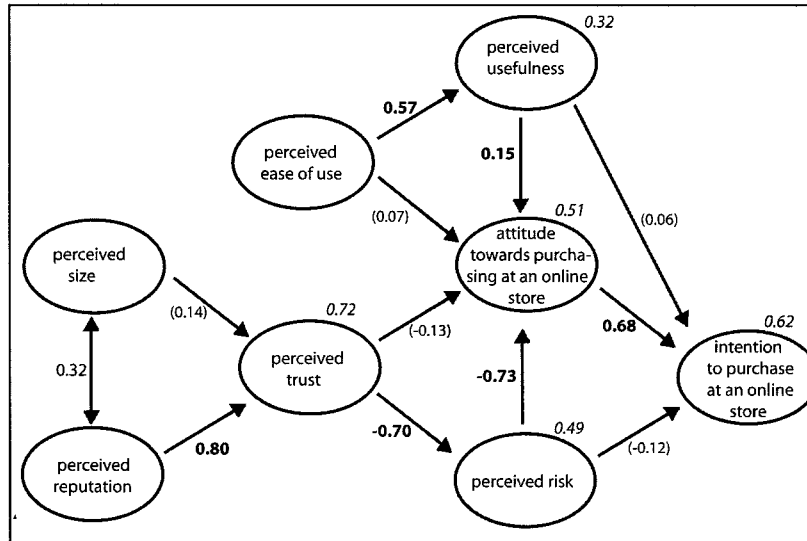
Figure 6.7: Ineas (retail insurances): standardized path coefficients and explained variance for the tested research model. Bold path coefficients are significant at p< .05 level. Path coefficients between brackets are not significant. Italic parameters above the constructs refer to the amount of variance explained
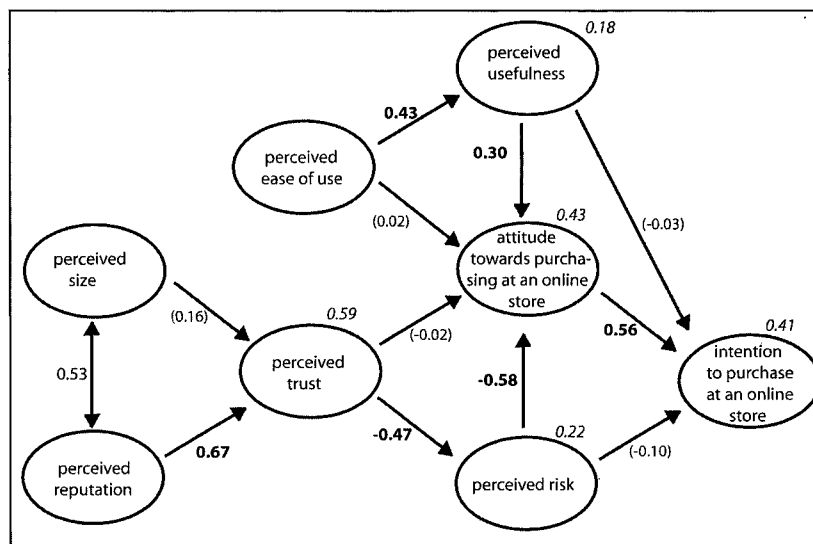
Figure 6.8: Ohra (retail insurances): standardized path coefficients and explained variance for the tested research model. Bold path coefficients are significant at p< .05 level. Path coefficients between brackets are not significant. Italic parameters above the constructs refer to the amount of variance explained

Based on the figures, several important observations can be made. First, the results show that the intention to purchase at an online store is strongly determined by the attitude towards purchasing at the online store. The standardized path coefficients are 0.54 or stronger.

Second, the data shows that the attitude towards purchasing at the online store is the only *direct* determinant of the intention to purchase at an online store. Perceived risk and perceived usefulness do not have a direct significant effect on the behavioral intention, except for the Free Record Shop (significant effect of perceived risk). Together, the three variables explain between 41 and 62% of the behavioral intention variance.

Third, with respect to the determinants of the attitude towards the store, our data clearly reveals that perceived risk is the most important factor for all online stores. The standardized effect on the attitude exceeds the -0.70 for three of the four webstores. Only the Ohra site shows a standardized coefficient of -0.58, which is still remarkably strong. Perceived trust in the online store does not have a significant influence on the attitude for any of the online stores. A similar observation is made with respect to perceived ease of use. Except for the Free Record Shop (0.23), no significant effects are observed. When looking at perceived usefulness, the results are less unequivocal. For the online CD stores examined, perceived usefulness does not have a significant effect on the attitude. In contrast, both retail insurance sites show a moderate significant impact (Ineas: 0.15; Ohra: 0.30). Together, perceived risk, perceived trust, perceived ease of use and perceived usefulness account for 43 to 59% of the attitude variance.

Fourth, when focusing on the interrelationship of two TAM-related constructs, we observe that perceived ease of use has a clear significant influence on perceived usefulness for all online stores. The standardized estimates vary from 0.43 (Ohra) to 0.70 (Free Record Shop). As such, perceived ease of use explains 18 to 49% of the usefulness variance.

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Fifth, we notice an unambiguous negative effect of perceived trust on perceived risk. The impact varies from -0.47 for the Ohra site to even –0.70 for Ineas. Here, trust explains a substantial part of perceived risk variance (22 to 49%).

Finally, when examining the two trust determinants, perceived size and perceived reputation explain 29 to 72% of the perceived trust variance. For all online stores, the effect of perceived reputation on perceived trust is significant and can be described as strong (varying from 0.26 to 0.72). Perceived size only affects perceived trust significantly for the Free Record Shop data, although the impact is moderate (0.18). In addition to the theoretically assumed influence of perceived size and perceived reputation on perceived trust, the results show that both variables are associated with each other. The correlation coefficient varies from 0.14 for the Free Record Shop to 0.53 for Ohra.

6.5 Discussion and conclusion

The results described in the previous section convey a number of important findings. First, the intention to purchase at an online store is strongly determined by the attitude to purchase at the online store. Second, perceived risk strongly influences the attitude. Trust in the store does not influence attitude directly, but indirectly through its impact on perceived risk. Third, perceived reputation affects trust, whereas perceived size does not. Fourth, website ease of use strongly and positively determines website usefulness. Finally, website ease of use does not significantly influence the attitude towards purchasing at an online store, while contradictory results are found concerning the impact of website usefulness on the attitude. Each of these findings will now be discussed in more detail.

Our research confirms that the *intention to purchase at an online store is primarily determined by the attitude towards purchasing at an online store*. Relationships between the intention and two other predictors, perceived risk and perceived usefulness, were not significant. This supports hypothesis 11 while hypotheses 10 and 12 are rejected. These findings verify the applicability of the TRA in the context of e-commerce websites. According to the TRA, only the attitude is a direct antecedent of the behavioral intention (as discussed in chapter three).

The only exception to these findings is the significant effect between perceived risk and the behavioral intention for the Free Record Shop. A possible explanation concerns *retail familiarity effects*. The Free Record Shop is a relatively well known CD shop in the Netherlands with a extensive network of physical stores. It is very unlikely that the respondents have never visited a physical Free Record Shop store. Due to the familiarity with the offline retail format, it is conceivable that perceptions of risk are not only formed by impressions of the online store but are also affected by their experience with and knowledge about the physical outlet(s). Research has demonstrated that these two (external) variables might have a direct affect on behavioral intentions (see chapter three). Based on the argument that perceived risk also reflects perceptions of experience with and knowledge about the offline outlet(s), this explains why perceived risk is likely to have a direct impact on the intention to purchase at the Free Record Shop site.

A second finding is that *perceived risk strongly influences the attitude, and that perceived risk functions as mediator between attitude and trust. A direct impact of trust on the attitude was not detected.* In other words, respondents form their attitude towards purchasing at the online

store primarily by considering the perceived risk of purchasing at the website. This, in turn, is determined by their perceptions of trust in the store. This leads to the rejection of hypothesis 6, while hypotheses 5 and 7 are supported. This finding is in contrast with the Jarvenpaa et al. (2000) study, which did find a significant relationship (0.59) between trust and attitude, and a less strong relationship (-0.37) between perceived risk and attitude. There is the possibility that our adaptations of the items of the attitude construct may have led to differences. Jarvenpaa et al. questioned attitude regarding online shopping *in general*, and perceived risk regarding online shopping *for a specific website*. It is conceivable that the general attitude construct is less vulnerable to changes in the perceived risk and trust constructs, because high risk at an 'untrusted' site may not influence a person's overall attitude about online shopping.

Third, with respect to the variables that impact on trust, our findings demonstrate that *perceived reputation does influence trust, whereas perceived store size does not.* In other words, whether the respondents trusted the store or not was not dependent on their perceptions of size of the store but on the perception of the store's reputation. This implies that hypothesis 2 is rejected while hypothesis 3 is supported. The Jarvenpaa et al. study found a similar, insignificant relationship in the case of books, but they did found a significant influence of perceived size on perceived trust in the case of flight tickets. An explanation for this result could be that respondents intuitively seek out multiple "drivers" of trust when the good or service bought requires higher levels of trust. Small, low-value goods such as books or CDs require less trust in the store than high-value goods and services such as intercontinental flights. Therefore, reputation alone may be a sufficient trust driver for books and CDs, but not for flights. Consumers may demand extra guarantees for flights, and therefore also consider the size of the company. If this explanation is correct, an interesting area for further research would be to investigate whether different trust drivers such as size and reputation, and the degree to which they help, build trust. Products and services could be classified according to their trust requirements, and matched against the available trust drivers. A possible way to think about a trust requirements classification is to apply the convenience, shopping, and specialty goods classification of Copeland (1932). Different trust requirements can be specified depending on the product type. In addition, the specification of shopping goods into homogeneous and heterogeneous products is also likely to be of particular interest.
As far as the interrelationship of the trust determinants is concerned, the results show that perceived reputation and perceived size are related to each other, which confirms hypothesis 1. The study by Jarvenpaa et al. reported similar results. According to Jarvenpaa et al. this can be explained by the fact that large stores are likely to be perceived as more reputable because they might have been around for longer. This increases the chance that consumers have some experience with the store, which in itself leads to a positive affect resulting in a favorable perceived reputation. The other way around, reputable stores might attract more business. Over time this might contribute to substantial store growth (i.e. store size), which is likely to be perceived similarly by consumers.

In terms of the online store as shopping system, our model confirms that *perceived ease of use is a strong influencer of perceived usefulness,* and hereby does not reject hypothesis 4. This is in line with the later versions of the Technology Acceptance Model (Taylor and Todd, 1995; Venkatesh and Davis, 2000). In earlier versions (Davis, 1989), ease of use was not directly linked to usefulness. Our research suggests that these TAM constructs are also valid in an online store context.

Another finding is that, in general, *perceived ease of use is not significantly related to the attitude towards purchasing at the online store.* This leads to the rejection of hypothesis 8.

Several aspects might explain this outcome. First, the dependent variables of our study are to a certain extent dissimilar to the ones commonly found in TAM models. TAM models typically focus on usage intention of the technology (see e.g. Delone and McLean, 1992), as opposed to the intention to purchase at an online store. In an e-commerce context, usage intention is both smaller and broader in scope than intention to purchase at an online store. It is smaller in scope because online purchasing invokes other non-technological drivers. It is also broader in scope because a person may use an e-commerce website not only to purchase, but also to learn about products and services. So, for the TAM model to work in an e-commerce context, we suggest perceived ease of use and perceived usefulness be linked to the attitude towards visiting an online store and intention to visit the online store. A second explanation of our finding may be that we did not a priori select websites where ease of use would be a controversial topic. Clearly, all online stores were well-designed and offered efficient online purchasing facilities. For instance, for the Hot-Orange website mentioned above, the mean and standard deviation of the first Ease of Use item ("Learning to use the website is easy") were 6.21 and 0.88. The other items showed equally high scores. It is conceivable that ease of use is a "hygiene factor" in the sense that it only influences online purchasing behavior when it is absent from a website. Therefore, as an area for further research we would suggest researchers experiment with "bad" websites and see what the effects are on online purchase intentions.

Again, the only exception to our finding is the Free Record Shop. We believe the significant effect between perceived ease of use and the attitude is related to retail familiarity effects. As mentioned above, the Free Record Shop is well established in physical retailing. Probably, respondents perceptions are blurred by their experience with and/or knowledge about physical outlets of the Free Record Shop. It is likely that the significant relationship between ease of use and the attitude towards purchasing not only reflects perceptions of the online store but is also based on these offline impressions. Possibly, the ease of use of the Free Record Shop site significantly affects the attitude because respondents perceive using the site as being much easier compared to similar activities at the offline store. Another explanation is that the presence of the electronic channel has an additional effect because it adds something to the offline store. In this context, perceptions of ease of use not only represent impressions of the online store but also the ease of using the site on top of to the physical store.

Finally, the research results indicate contradictory findings concerning the impact of *perceived usefulness on the attitude towards purchasing at the online store*. The data for the two online CD stores does not reveal any significant effect, which leads to the rejection of hypothesis 9. The two statements as discussed in the context of the ease of use construct, might explain this finding. Moreover, an additional explanation may be that online store usefulness is inadequately operationalized. Although "speed" and "convenience" are included in the items, "price" is not. However, an important usefulness characteristic of online stores is that it facilitates lower prices. A more detailed assessment of the usefulness of e-commerce sites may reveal more advantages. We will pay more attention to this aspect in chapter seven. In contrast, the results of both retail insurance sites clearly indicate there is a significant effect between perceived usefulness and the attitude. This implies that hypothesis 9 should be supported. When considering online retail insurance stores, theoretical models as proposed by Chau et al.(2000) apply well. A possible explanation for the difference with the CD sites might be related to the status of selling and purchasing of both products online. Even though online purchasing is a relatively new phenomenon, CDs have been sold online for years. The characteristics of the product probably makes them suited for transactions via website as shopping systems. In this context, consumers are likely to recognize the usefulness of the online shopping system for purchasing CDs. Combined with the fact that sellers have gained

experience to construct adequate online CD stores, the usefulness of the website becomes a "hygiene factor". Only if the online store fails to meet a certain threshhold, does perceived usefulness affect the attitude. Online transactions of insurance, on the other hand, do not have this brief history. Probably due to the complexity of the product, selling insurance online is less well developed. Consumers are less aware of the usefulness of online stores to purchase these products and sellers lack experience to structure webstores to useful transaction systems. With respect to online retail insurance stores, the term "hygiene factor" might not yet be applicable. Consequently, the perception of the usefulness of an online store to purchase insurance affects the attitude to purchase at the particular online store.

Table 6.5: An overview of hypothesizes supported and rejected

Hypothesis	Description	Result
H1	Perceived size of the store is positively associated with perceived reputation of the store	Supported
H2	Trust in the store is positively influenced by perceived size of the store	Rejected
H3	Trust in the store is positively influenced by perceived reputation of the store	Supported
H4	Perceived website usefulness is positively influenced by perceived website ease of use	Supported
H5	Perceived risk of purchasing at the online store is negatively influenced by trust in the store	Supported
H6	Attitude towards purchasing at the online store is positively influenced by trust in the store	Rejected
H7	Attitude towards purchasing at the online store is negatively influenced by perceived risk of purchasing at the online store	Supported
H8	Attitude towards purchasing at the online store is positively influenced by perceived website ease of use	Rejected
H9	Attitude towards purchasing at the online store is positively influenced by perceived website usefulness	Rejected (CD) Supported (Insurance)
H10	Intention to purchase at the online store is negatively influenced by perceived risk of purchasing at the online store	Rejected
H11	Intention to purchase at the online store is positively influenced by the attitude towards purchasing at the online store	Supported
H12	Intention to purchase at the online store is positively associated with perceived website usefulness	Rejected

Our work is also subject to a number of limitations.
First of all, we used student samples, which affects the credibility with respect to the broad applicability of our findings. The results of our empirical explorations are biased towards

young, highly educated people, most males, who are rather experienced with the Internet. The implications of this limitation will be discussed in section 8.5.

Second, our work may have suffered from measurement problems pertaining to website usefulness, as discussed earlier.

Third, just like the Jarvenpaa et al. (2000) study, the constructs perceived size, perceived reputation and perceived trust relate to the store instead of the online store. Although the store equals the online store for pure online players like Hot-Orange and Ineas, it is possible that this difference influenced the results of the Free Record Shop and the Ohra sites. Even though a visual inspection of the path estimates does not reveal any sign that this affected answering our research hypotheses, we mention it for consideration purposes.

Fourth, the respondents did not really engage in online purchasing. In true purchasing situations, the effects of online store attributes might be different. Further research might pay attention to this limitation by focusing on more realistic purchase situations.

Chapter 7: Empirical explorations: measuring and assessing the impact of online store image

7.1 Introduction

In chapter six, we reported and discussed research concerning the effects of online store attributes related to trust in the store or the website as online shopping system. Although both issues affect shopping intentions in general, they specifically influence online purchase intentions. Our research demonstrated that both attribute groups accounted for a substantial part of the online purchase intention variance, but certainly did not explain all of it. Obviously, when predicting and explaining intentions to purchase at an online store other aspects have to be taken into account. Next to characteristics distinguishing for online shopping environments like trust and electronic shopping system attributes, online stores contain many characteristics similar to physical outlets. These characteristics were not included in our first analysis.

In this chapter we will extend our investigation by focusing on the impact of the perception of more 'traditional' store characteristics. We will present research[1] relating the overall impression of online store attributes to the intention to purchase at a particular online store. The impact of this overall impression, also known as *online store image*, indicates to what extent the online store "matters" when explaining online purchase intentions. As discussed in chapter four, store image is built on the perception of its components. By specifying and estimating the contribution of these components, the impact of online store image can be assessed.

Due to the unavailability of a reliable and valid online store image measurement instrument, we begin with the adoption of the instrument development process as put forward by

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Churchill (1979). This process results in a decomposition of the online store image concept into seven reliable and valid measurement constructs, as will be discussed in detail later. Next, based on an empirical setting of online shoppers, we will relate the online store image components to the intention to purchase at two online bookstores, mediated by the attitude towards purchasing at the online store.

The content of this chapter is as follows: First, in section7.2 we will present the research objectives, introduce our research model and formulate research questions. Next, in section 7.3 we will enter the process of measurement instrument construction, resulting in seven online store image components. Based on the constructs we will investigate the impact of the online store in section 7.4. Finally, section 7.5 sets out the results and the conclusions.

7.2 Objectives and research model

The objectives of this research are: (1) to develop reliable and valid measures for the components (dimensions) that form *online store image*, and (2) to examine the influence of these components on the intention to purchase at an online store.

As mentioned at the beginning of this thesis, generating revenue using an online store is one of the key issues facing electronic commerce practitioners today. For this reason, there is a need to explore the factors that influence online purchase intentions. The few investigations have, so far, focused mainly on factors such as trust, perceived risk, website usefulness and ease of use (cf. chapter six). However, relatively little attention has been given to the *image* of the online store. As discussed in chapter four, consumers perceive stores along a number of dimensions, usually called *store attributes*, which collectively go to make up the store image. Despite the lack of attention, we propose that online store image is an important predictor of online purchase intentions. In traditional empirical marketing studies, store image has been researched when it comes to "traditional" stores. A few researchers (e.g. Nevin and Houston 1980; Grewal et al., 1998) even linked this multi-faceted construct, or its components, to the intention to purchase (see chapter four for details).

However, in an online environment the existing measures of this construct are no longer adequate. For example, they contain inappropriate items such as "shop cleanliness" and "shop crowdedness". Neither are items that would be important in an online store such as logistical settlement, privacy and security issues included. Therefore, to obtain a meaningful measurement instrument for online store image, there is a need to adapt the existing measurement instruments of "traditional" store image.

Contributions from research measuring store image

To develop an appropriate measurement for online store image, we rely on the relatively established literature on "traditional" store image (chapter four) and the emerging electronic commerce literature that seeks to discover the antecedents of online purchase intentions (chapter five). Despite the availability of several measurement techniques (e.g. Likert scales, open ended questions) the vast majority of store image researchers have used the semantic differential scale (Golden, Albaum and Zimmer, 1987): usually a seven point rating scale with end points associated with bipolar labels (e.g. *high quality* products – *low quality* products) (Malhotra, 1999, p.272). The semantic differential scale has been used to (1) describe images, (2) relate image to other variables, (3) determine the importance of image attributes, and (4) investigate various approaches to measurement. In general, researchers use the semantic

differential scale to focus on specific attributes representing 'component parts' of image rather than the 'whole image' (Zimmer and Golden, 1988, p.267). Kelly and Stephenson (1967) were among the first to explicitly develop and use this measurement instrument for retail store image. They developed 51 items with the following dimensions: general, physical, convenience, products, prices, personnel, advertising, and opinion of friends. Based on this and other work, Lindquist identified nine factors in his seminal work on the meaning of image (Lindquist 1974; for details see chapter four). Dickson and Albaum (1977) refined both instrumentations for retail store image, and they ultimately arrived at the following components: prices, products, store layout and facilities, service and personnel, promotion and "others". An instrument comprising 29 items (also semantic differentials) was developed and analyzed according to reliability and validity. Since then, retail image has grown in popularity as a predictor for numerous variables, including the attractiveness of a shopping area (Nevin and Houston, 1980) and purchase intention (Grewal et al., 1998).

In an online context, store image has been operationalized by Spiller and Lohse (1997) and Lohse and Spiller (1999). Based on the classification of Lindquist (1974), the work of Arnold et al. (1978) and research on paper catalog design (e.g. Lewis, 1992), the following online store image categories have been identified: merchandise, service, promotion, navigation, and user interface. However, the instrument of Spiller and Lohse (1997) and Lohse and Spiller (1999) measures the absence/presence of online store attributes (cf. figure 5.1). Since we focus on the *perception* of online store components, the scale is inappropriate for our investigation.

Model to be tested

The antecedents of an individual's intention to purchase at an online store are expected to contain elements that are related to the image of the online store. As discussed in the two preceding chapters, the perception of online store related aspects such as trust and risk (Jarvenpaa et al., 2000; Heijden et al., 2001), usefulness (Pavlou 2001), reputation (Pavlou, 2001), satisfaction (Kurniawan, 2000) and reliability, convenience and price competitiveness (Swaminathan et al. 1999) significantly affect the intention to purchase online (or closely related constructs). In general, the results demonstrate that these relationships are likely to be mediated by an attitudinal component, which confirms the way Ajzen and Fishbein (1980) linked external variables to the TRA. Studies extending this relationship by integrating subjective norms (cf. TRA) or perceived behavioral control (cf. TPB) as mediating variables have not been found. Together, these findings support the construction of the following research model:
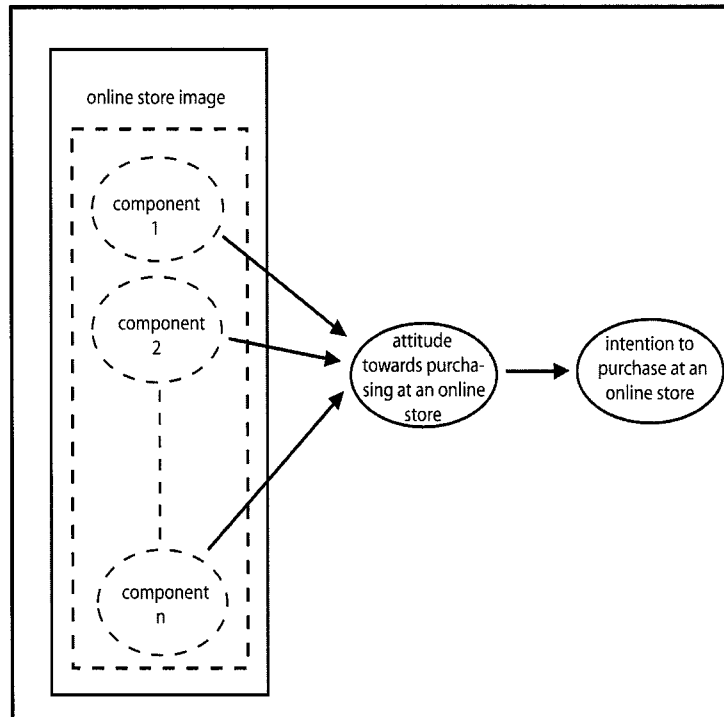
Figure 7.1: Research model

Based on this model, we will investigate the extent to which online store image components affect the intention to purchase at an online store, mediated by the attitude towards purchasing at an online store. Because the online store image components have to be identified first, the part of the research model relating these dimensions to the attitude is rather conceptual. Depending on the dimensions identified during the process of measurement scale construction, the final relationships between these elements will be specified and estimated.

In order to attain our research objectives, the following research questions are formulated:

1. What are the conceptual dimensions (components) of online store image?
2. What items can be used to measure each of these conceptual dimensions?
3. Are the measurement instruments of the online store image components reliable and valid measures?
4. What online store image components significantly affect the attitude towards purchasing at an online store?
5. How strong are the relationships between the components of online store image and the attitude towards purchasing at an online store?
6. How strong is the relationship between the attitude towards purchasing at an online store and the intention to purchase at an online store?

7.3 Research Design

Construction of an online store image measurement instrument:

Following calls from (Straub, 1989) and (Boudreau, Gefen and Straub, 2001) to increase efforts on the reliability and validation of the instruments used in IS research, we have adopted the well-known process of instrument development as put forward by Churchill (1979). Table 7.1 illustrates the eight steps used in this process.

Table 7.1: Measurement development process (Churchill, 1979)

Step	Description
1	Specify domain of construct
2	Generate sample of items
3	Collect data
4	Purify measure
5	Collect data
6	Assess reliability
7	Assess validity
8	Develop norms

First, we specified the construct under investigation by defining online store image as: the overall impression of an online store, based on the perception of both functional and psychological online store attributes (based on: Lindquist, 1974; Houston and Nevin, 1981; Zimmer and Golden, 1988). Next we gathered a sample of items with potential validity concerning retail store image from existing research (cf. Marks, 1976). As a starting point we took the 29 item "retail image" construct from Dickson and Albaum (1977) which has been tested for validity and reliability (Cronbach's alpha .91). This measurement instrument is based on both in-depth interviews and an extended literature search (e.g. Lindquist, 1974), which indicates that the most important items are captured. To ameliorate scale completeness even further, eleven related store image items were added. These items were derived from reliable store image scales (Kelly and Stephenson, 1967; Stephenson, 1969; McDougall and Fry, 1974; Bruner and Hensel, 1992; Golden et al., 1987; Grewal et al, 1998) and were part of several store image measurement instruments. We then undertook a series of focus group sessions with a sample of 10 people. Three of the participants were electronic commerce practitioners. The remaining seven included IS faculty (two) and marketing faculty (five) from an academic institution. In the focus groups, the participants were asked to comment on the applicability of the store image items in an electronic commerce context, and to suggest new items that would apply to the image of an online store. This resulted in a draft questionnaire containing 38 items. Next, the items were translated into Dutch and presented to a group of three students who were asked if all the items were unambiguous. Based on their feedback and comments the final questionnaire was constructed.

The third and fourth steps of Churchill's process consist of the collection of data to refine the measure. A sample of 61 respondents (friends and colleagues) were personally approached for a pilot test of the instrument. They were asked to study the Dutch version of the online bookstore BOL (located at URL: www.nl.bol.com). BOL was chosen because, according to several e-commerce trade magazines, BOL is the market leader in online book selling in the Netherlands, with a market share of 50% (October 2000). After the subjects had studied the bookstore, they were asked to fill in the pilot test survey. The survey also included

measurement scales for the attitude towards purchasing at an online store and the intention to purchase at an online store. We took the scales for the behavioral attitude and intention from Heijden et al. (2001), who slightly modified the scales from Jarvenpaa et al. (2000).

Using the data from the opportunistic sample, we studied the reliability and validity of the measurement scales to "purify the measures" (step 4 in Churchill's process). Exploratory factor analysis (common factor analysis with maximum likelihood, and oblimin rotation) was carried out to test for unidimensionality by verifying whether every component measured one and only one construct.

If this was not the case we split the scales into the number of identified factors. We then computed Cronbach's alphas for each of the measurements. The resulting components were named as follows: "online store usefulness" (6 items), "online store enjoyment" (3 items), "online store ease of use" (3 items), "online store style" (5 items), "enterprise image" (5 items), "logistical settlement performance" (5 items) and "financial settlement performance" (3 items). All measures are unidimensional and contain acceptable alphas (>0.60, cf. Nunally, 1978). 7 items were dropped.

Sample

For the second round of data collection (Step 5 in Churchill's process), we conducted a lab experiment with a student sample. This sample consisted of 312 undergraduate students taking the mandatory core information systems course in the economics curriculum. The experiment was conducted from the 8th up to and including the 10th of May 2001. Each student had to study two websites. One was the Dutch version of the online bookstore BOL (www.nl.bol.com), and the other one was the online bookstore Proxis from Belgium (www.proxis.be). All computer systems, monitors, resolution and Internet browsers were identical. After the student had studied a website, he or she had to complete the questionnaire, and move on to the next site. 50% of the students started out with BOL and then moved to Proxis, 50% started out with Proxis and then moved to BOL. All respondents were monitored by a supervisor in the lab. Both websites, as well as their characteristics, are shown in the following table.

Table 7.2: Websites and companies under study

	URL	*Products*	*Notes*
BOL	www.nl.bol.com	Books	A large, relatively well-known Dutch version of a German retail chain that sells solely on the web (mainly books and CDs).
Proxis	www.proxis.be	Books	A small and relatively little-known Belgian retail store that sells solely over the web (mainly books and CDs).

7.4 Results

Eventually, 312 students took part in the survey. 202 (64.7%) were men, 110 (35.3%) were women. The figure below presents the age and gender distribution across the sample population.
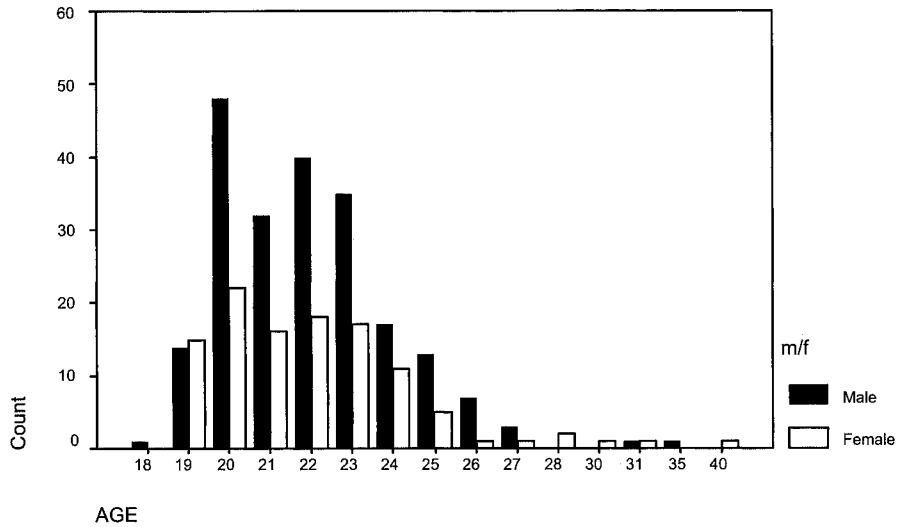
Figure 7.2: Respondent demographics

In terms of perceived experience with the Internet, 231 (71%) considered themselves to be experienced/very experienced, while only 11 (3.7%) respondents assessed themselves as inexperienced or very inexperienced. The figures below indicate how many times respondents have made purchases online and how many years of experience each respondent had in using the Internet and purchasing a product.
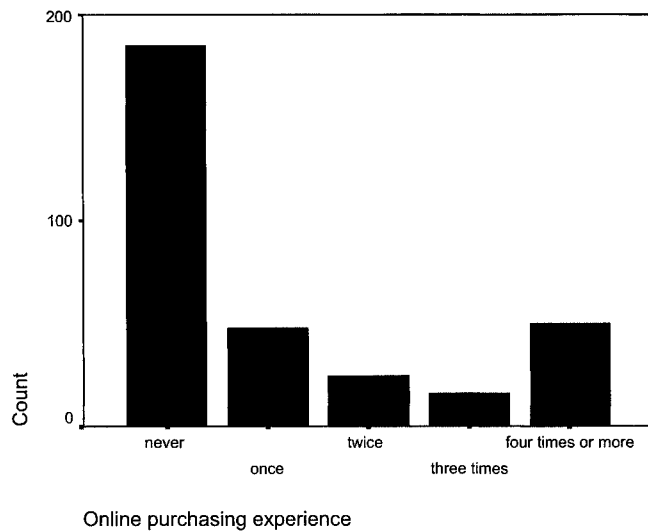
Figure 7.3: Respondents' experience with online purchasing

200

100

Count

0

one year or less   two year   three years four years or more

Experience with internet
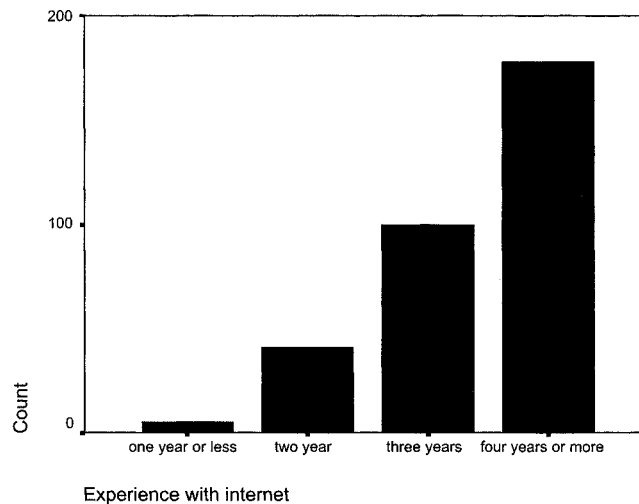
Figure 7.4: Respondent's experience with Internet

The demographics of the student population demonstrate that the vast majority are experienced Internet users. In sum, this implies that the study is biased towards young, college educated, experienced Internet users. On the other hand, the vast majority of them have never bought anything online. Consequently, the results of the study are somewhat biased towards *initial* purchase intention as opposed to *repeat* purchase intention.

We then went on to assess the reliability and validity of the measures (steps six and seven in Churchill's process). Exploratory factor analysis was used to explore once again whether every component measured one and only one construct. For most of the constructs, we dropped one or two items to improve reliability. Somewhat surprisingly, we had to drop "high price / low price" from "Store usefulness" to keep its reliability acceptable and the scale unidimensional. This item also had no correlation whatsoever with the attitude towards purchasing at an online store ($R^2 = 0.00$). Perhaps this can be explained by the general notion that book prices are very similar throughout bookshops. Consequently, people may not be overly price-sensitive in their decision where and how to purchase.

An exploratory factor analysis on "enterprise image" revealed that this construct was best split into two scales. We named them "online store familiarity", defined as the extent to which the online store is perceived to be well known, and "store trustworthiness", defined as the extent to which the online store is perceived to be a reliable business partner.

"Financial settlement performance" was our worst performing construct (the original alpha was 0.56). We obtained acceptable measurements by grouping the items for "logistical performance" and "financial performance" (as, incidentally, we had originally intended). We validated the resulting components with the data from the Belgian bookshop using exploratory factor analysis. This confirmed that all our measures were now unidimensional. Table 7.3 displays the Cronbach's alphas for both data sets, which are all above the 0.60 threshold for exploratory research (Nunally, 1967). Except for the "online store usefulness" value for the Belgian online bookstore, all Cronbach's alphas even exceeded the 0.70 threshold for more established research as proposed by Hair et al. (1998). The translated instrument is provided in Appendix F.

Table 7.3: Cronbach's alphas for each measure (n = 312), for two websites

Component name	Number of items	Value for Dutch online bookshop	Value for Belgian online bookshop
Online store usefulness	6 (one dropped)	0.71	0.68
Online store enjoyment	3 (one dropped)	0.91	0.90
Online store ease of use	6	0.83	0.86
Online store style	4 (two dropped)	0.71	0.78
Online store familiarity	3 (one dropped)	0.76	0.85
Online store trustworthiness	3	0.78	0.70
Online store settlement performance	8 (combined)	0.75	0.79
Attitude towards purchasing at an online store	3	0.91	0.93
Intention to purchase at an online store	4	0.86	0.89

Based on the outcomes of the reliability and validity tests and the appointment of the online store image dimensions, our research model can be specified as follows:
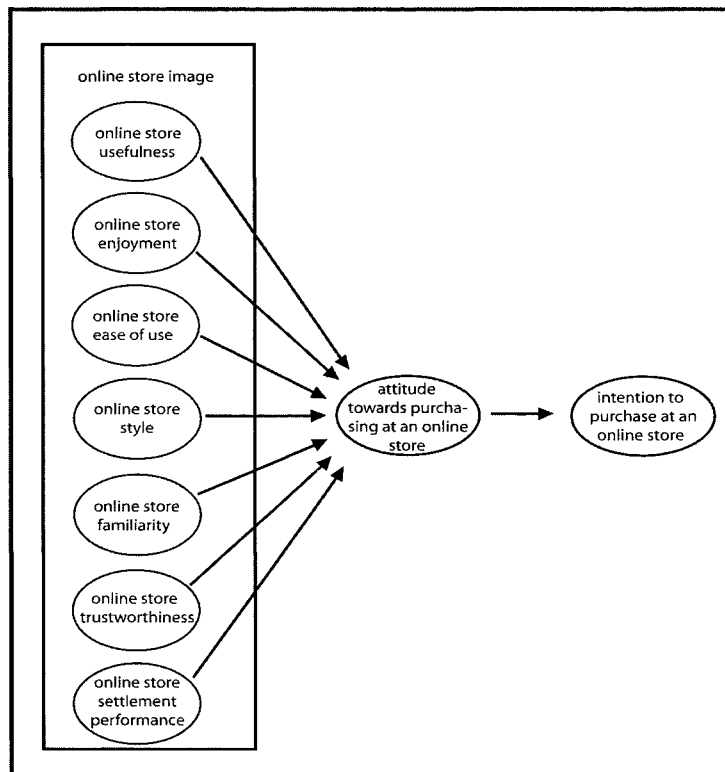
Figure 7.5: The final research model

To estimate the path coefficients and to test for predictive validity of the model, we intended to conduct confirmatory factor analysis. However, less acceptable fit measurements were obtained for either the BOL or the Proxis websites (e.g. GFI .81; AFGI .79; NFI .77). It is likely that these results are influenced by an inadequate 'sample-to-item ratio' A common rule is to have at least five times as many observations as there are variables to be analyzed. A ten-to-one ratio is more acceptable, while other researchers propose a minimum of 20 observations for each item (Hair et al., 1998, p.98-99). For our research the sample-to-item ratio was 7.8. Possibly, the number of items was too large given the number of observations. A larger sample might have resulted in more acceptable fit indices. We then decided to use multiple regression analysis to estimate the parameters. We regressed (1) the seven online store image variables on the attitude towards purchasing at the online store, and (2) the attitude towards purchasing at the online store on the intention to purchase at an online store. The regression results are shown in the table below.

Table 7.4: Multiple regression results when regressing the Image Components on Attitude, and Attitude on Intention ($n = 312$)

	BOL			Proxis		
	R^2	Adjusted R^2	Beta	R^2	Adjusted R^2	Beta
Intention = Attitude + Errors	0.60***	0.60		0.61***	0.60	
Attitude			0.78***			0.78***
Attitude = Usefulness + Enjoyment + Ease of Use + Style + Familiarity + Trust + Settlement + Errors	0.31***	0.30		0.35***	0.33	
Online Store Usefulness			0.21***			0.14 **
Online Store Enjoyment			0.15**			0.08 (n.s.)
Online Store Ease of Use			0.03 (n.s.)			0.13 **
Online Store Style			-0.09 (n.s.)			0.16 **
Online Store Familiarity			-0.07 (n.s.)			0.12 **
Online Store Trustworthiness			0.22***			0.05 (n.s.)
Online Store Settlement Performance			0.25***			.19 ***

*** $= p < 0.005$, ** $= p < 0.05$

Based on table 7.4 several observations can be made.

First, the results demonstrate that the attitude towards purchasing at an online store is a very strong determinant of the intention to purchase at an online store. For both webstores, a significant standardized regression coefficient of .78 is observed. Furthermore, the attitude towards purchasing at an online store accounts for 60% (BOL) and 61% (Proxis) of the behavioral intention variance.

Second, the online store image components explain 31 and 35% respectively of the attitude variance for the BOL and Proxis sites. These findings are less impressive compared to the trust and website shopping system research we conducted in the previous chapter.

Third, as far as the individual impact of the online store attribute groups is concerned, the results are less unequivocal. We observe important differences between the online stores. Regarding the BOL website, "online store settlement performance" (.25), "online store trustworthiness" (.22), "online store usefulness" (.21) and "online store enjoyment" (.15) significantly affect the attitude towards purchasing at the online store. For the Proxis site in contrast, "online store enjoyment" and "online store trustworthiness" do not significantly influence the attitude towards purchasing at the store. The online store image variables that do affect the attitude for the Proxis site are: "online store settlement performance" (.19), "online store style" (.16), "online store usefulness" (.14), "online store ease of use" (.13) and "online store familiarity" (.12). Just like the BOL site, "online store settlement performance" and "online store usefulness" have a significant impact on the attitude to purchase at an online store. However, "online store style", "online store ease of use" and "online store familiarity" seem to 'replace' "online store enjoyment" and "online store trustworthiness"

7.5 Discussion and conclusion

In this chapter, we focused on the relationships between online store image perceptions and the intention to purchase at an online store. In order to measure the perception of online store image, we first explored the components of the store image construct. Based on the measurement development process of Churchill (1979), we arrived at seven online store image components: "online store usefulness" (6 items), "online store enjoyment" (3 items), "online store ease of use" (6 items), "online store style" (4 items), "online store familiarity" (3 items), "online store trustworthiness" (3 items) and "online store settlement performance" (8 items). This classification answers our first two research questions (for details about the items used, we refer to Appendix F). Next, all components were tested for validity and reliability. The results reveal that all measurement scales provide satisfactory results for both measurement requirements, hereby answering our third research question.

Furthermore, we provided results that relate these components to the intention to purchase at an online store, mediated by the attitude towards purchasing at an online store. Just like our research outcomes in chapter six, the findings strongly confirm the attitude → intention relationship. This supports the applicability of this TRA relationship in an online context and provides a clear answer to our sixth research question.

With respect to the online store image components, the results are less unequivocal. "Online store settlement performance" and "online store usefulness" affect the attitude towards purchasing at the online store for *both* online stores. The results for the other dimensions are somewhat contradictory. "Online store trustworthiness" and "online store enjoyment" significantly contribute to the attitude variance for the BOL site while being not significant at all for the Proxis site. On the other hand, three dimensions that are not significant for the BOL site do have a significant effect for the Proxis site: "online store style", "online store ease of use" and "online store familiarity" We believe that there are two possible explanations for these differences.

First, the structure investigated explores the direct impact of the online store image components on the attitude towards purchasing at an online store. However, the ambiguous

outcome for five of the seven dimensions indicates that these relationships might be mediated by other variables. These intervening variables may be either the online store image constructs as introduced in this research or other variables. For example, it is defensible that the impact of "perceived ease of use" is mediated by "online store usefulness" (related to the TAM construct perceived usefulness). "Online store enjoyment" and "online store style" might also influence "online store usefulness". Furthermore, "online store trustworthiness" and "online store familiarity" might function as online store settlement determinants. Where the unincluded variables are concerned, we assume that a construct such as perceived risk might function as mediator between perceived trustworthiness and the attitude to purchase at an online store (cf. research model and outcomes chapter six). More research is needed to explore these relationships.

A second explanation refers to the number of online stores under investigation. We only investigated two websites. There is a chance that a broader investigation may reveal a clearer pattern. This point of view is supported by the research results discussed in chapter six. If we had only investigated the Hot-Orange and Free Record Shop websites we would have run into similar problems (cf. figures 6.6. and 6.7).

The outcomes imply that our fourth research question can only be partially answered. The results show that online store settlement performance and online store usefulness significantly affect the attitude. Regarding the other components, more research is needed to identify and investigate intervening variables and/or to verify their significance.

In general, the strength of the effects of the significant individual components can be described as rather modestly. The standardized coefficients vary between .14 and .25, which is not too strong. Together, the components of store image were able to explain 31% (BOL) and 35% (Proxis) of the variance of the attitude towards purchasing at an online store. These findings enable us to answer our fourth research question: the online store image components do influence the attitude towards purchasing at an online store, but their impact is modest. When comparing these results with the research findings as discussed in chapter four a remarkable similarity arises. In the shopping area image research conducted by Nevin and Houston (1980), shopping area image components explained 30% of the affect (liking a shopping area) variance. The retail area image examination of Bell (1999) showed that retail area image components explained 29% of the affect towards a retail area variance. These results are almost similar to our online store image findings. An explanation for this similarity might be derived from the statement of Spiller and Lohse: "electronic shopping incorporates many of the same characteristics as normal shopping, such as departmental product organization and browsing possibilities" (1997, p.29). Moreover, neither these similarities, nor the function of store attributes and its potential impact on purchase intentions differ substantially in an online context. This might explain the equivalence of our results and implies that online store attributes just do not account for more variance of the behavioral attitude. Although sufficient research to underpin this conclusion is lacking, we believe that this might have implications for both research and practice.

Table 7.5: Summary of the research questions and corresponding answers

	Question	Findings
1	What are the conceptual dimensions (components) of online store image?	- Online store usefulness - Online store enjoyment - Online store ease of use - Online store style - Online store familiarity - Online store trustworthiness - Online store settlement performance
2	What items can be used to measure each of these conceptual dimensions?	See Appendix F
3	Are the measurement instruments of the online store image components reliable and valid measures?	All measurement instruments are valid and reliable
4	What online store image components significantly affect the attitude towards purchasing at an online store?	- Online store settlement performance and online store usefulness - The influence of the other components requires further research
5	How strong are the relationships between the components of online store image and the attitude towards purchasing at an online store?	Modest
6	How strong is the relationship between the attitude towards purchasing at an online store and the intention to purchase at an online store?	Strong

At least two conclusions can be derived from our investigation. In the first place, our results demonstrate that the image related factors only explain a modest portion of the attitude towards purchasing at an online store (approx 30-35% of the variance). From the viewpoint of the online store these results are not too impressive, but certainly offer various possibilities for influencing consumer-purchase intentions. More importantly, it appears that the attitude towards purchasing at an online store is mostly explained by other factors. The store image can certainly tilt the balance towards purchasing online, provided the person is already inclined to purchase a product. However, we recommend researchers move beyond store image related constructs and work on those unique factors. There is still a lot we do not know about the motivations and considerations to purchase online.

A number of limitations are inherent to the results presented here.
First of all, as indicated in the previous chapter, the bias of the student sample impacts on the credibility with respect to broad applicability of our findings. Our sample consisted of young, highly educated people, most males, who are rather experienced with the Internet. The implications of this limitation will be discussed in section 8.5.
Second, the respondents did not really engage in online purchasing. In purchase situations, the impact of online store attributes might be different. As mentioned in chapter six, this limitation can be accounted for by studying online purchasing in more realistic situations.

Third, we investigated the impact of online store attributes on the intention to purchase at an online store. We did not examine the impact of intentions on overt purchase behavior. As indicated in chapter three, the impact of the behavioral intention on behavior is likely to decrease with the lapse of time (Fishbein and Ajzen, 1975). In fact, intentions seem to have a direct effect on behavior in the short run only. Especially, "when changes in the expected situational effects are not accounted for, intentions are less able to predict new intentions or behavior. When changes in expected situational effects are included, the models predict new intentions and behavior much better" (Cote and Whong, 1985, p.376). Based on these statements we encourage researchers to test the relationship between the intention to purchase at an online store → purchases at an online store and to explore what unexpected events might interfere in an online context.

Fourth, another design limitation is derived from the number of websites that have been examined. We especially refer to the contrasting outcomes of our online store image research. The fact that attributes that were significantly related to the attitude towards purchasing for one online store, while being not significant at all for the other online store requires an explanation. We think that clearer patterns might be revealed when more than two online stores are investigated. This idea is supported when focusing on the results of our empirical research reported on in chapter six. If this exploration had been restricted to only the Hot-Orange and Free Record Shop websites most results would have shown a greater contrast. The inclusion of the other websites resulted in clear outcomes. Further research might test this recommendation by replicating or extending our online store image examinations with more than two online stores.

Chapter 8: Discussion and conclusion

8.1 Introduction

In this thesis we have examined the decision to purchase at an online store within a well established theoretical framework which views consumers as using reasoned action in their purchase decision processes. We investigated the extent to which the perception of online store attributes affects intentions to purchase at an online store. We first studied literature concerning consumer purchase processes, behavior predicting models and store attributes. Next, we focused on results so far regarding the impact of online store attributes on online consumer purchase intentions. Based on the available literature we conducted an empirical analysis to examine the impact of online store attributes related to either trust in the online store or the website as online shopping system on the intention to purchase at an online store. A second empirical investigation explored the impact of online store image on the intention to purchase at an online store. In this chapter we will discuss our findings and draw some final conclusions.

The structure of this chapter is as follows. We will begin with a summary of this thesis in section 8.2. Next, section 8.3 addresses the research questions formulated in chapter one. The findings will be discussed, resulting in conclusions and overall observations. In section 8.4 limitations and recommendations for further research will be provided. We will end this chapter with some implications for electronic commerce practitioners.

8.2 Summary

In the first chapter of this thesis, we introduced research motivations and some basic terminology. Next we defined our research problem, formulated research questions and briefly considered the most important aspects of our research design.
In chapter two, we discussed consumer purchase processes. After an introduction of three consumer purchase perspectives, we focused on the dominant research perspective, which

examines the purchase process as a rational decision-making activity. Within this perspective we considered one of the most established models in the literature.

In chapter three we looked at a relatively well accepted model to explain and predict rational behavior: the Theory of Reasoned Action. A discussion of empirical results supports the applicability and robustness of the model for behavior in general as well as for consumer purchase behavior in particular. Furthermore, a discussion of empirical outcomes demonstrated that variables that are not part of the core of the theory itself (i.e. external variables such as experience, past behavior and knowledge), add to the predictive and explanatory power of the model.

In chapter four we focused on store characteristics, also known in the literature as store attributes. Based on store image literature we first provided an overview of important store attribute classifications. We then studied research findings concerning the impact of store attributes on the intention to purchase at a store/ retail area. Previous empirical studies suggest that store attributes do have an effect on the behavioral intention to purchase at a store/ retail area. In addition to a direct impact, effects mediated by an attitudinal/affective component have also been reported.

In the following chapter we extended our empirical review to an online setting. Specifically, we examined research relating *online store attributes* to intentions to purchase online. Again direct and indirect effects were reported and discussed. In general, the findings provide evidence for the notion that online store attributes do affect online purchase intentions. However, little research has been conducted into many of these relationships. This observation stimulated us to conduct further empirical research. Two examinations that contribute to this research field were described and discussed in the following two chapters. We reported on the first investigation in chapter six. Our first study replicated and extended the empirical study by Jarvenpaa et al. (2000). In particular, we tested the relationships between perceived risk, perceived trust, perceived size and perceived reputation (online store attributes relating to trust in the online store) and the intention to purchase at an online store. As an extension we included the online store attributes perceived ease of use and perceived usefulness as hypothesized by Chau et al. (2000) (both related to the website as online shopping system). This resulted in a research model consisting of the following structure of relationships. The intention to purchase at an online store was directly determined by the attitude towards purchasing at an online store, perceived risk and perceived usefulness. Perceived risk, perceived trust, perceived ease of use and perceived usefulness functioned as determinants of the attitude. Furthermore, perceived risk was determined by perceived trust, while perceived usefulness was influenced by perceived ease of use. Finally, perceived size and perceived reputation affected perceived trust and perceived size and perceived reputation were associated with each other. A student sample was used to investigate these relationships for purchasing a product at an online CD store or online insurance store. The results demonstrated that the attitude was the only direct determinant of the intention to purchase at a specific online store. The impact of the attitude on the behavioral intention was rather strong. Together, the online store attributes explained between 43 and 59% of the attitudinal variance. With respect to the impact of the individual store attribute perceptions, the following outcomes were revealed. Perceived ease of use was not a significant determinant of either an attitudinal or behavioral intention component. Perceived usefulness did not significantly affect the behavioral intention but had a weak significant effect on the attitude for two of the four online stores under examination. Perceived risk had a very strong significant impact on the attitude towards purchasing. Perceived trust only had an effect on the attitude, if mediated by perceived risk. The effect of perceived trust on perceived risk was strong. Furthermore, perceived reputation influenced perceived trust where perceived size did not. Finally,

perceived ease of use did significantly affect perceived usefulness and perceived size and perceived reputation were moderately related to each other.

In chapter seven, we conducted a second empirical study. We focused on online store attributes from an online store image perspective. We investigated the extent to which these online store attributes affect the intention to purchase at an online store. Because an appropriate measurement scale of online store image was unavailable, we adopted the measurement scale construction process of Churchill (1979) to construct a measurement instrument. The adoption of this process led to the following online store image attributes: online store usefulness, online store enjoyment, online store ease of use, online store style, online store familiarity, online store trustworthiness and online store settlement performance. We examined the impact of these attributes on the intention to purchase at an online store as hypothesized by the TRA. A student sample was used to examine these relationships for purchasing a product at an online bookstore. Again, the outcomes revealed that the attitude is a strong determinant of the behavioral intention. Furthermore, the online store image components explained 30-35% of the attitudinal variance. With respect to the impact of the single online store image components, online store settlement performance and online store usefulness had an effect on the attitude towards purchasing for both online stores under consideration. The results were less equivalent for the other online store attributes.

8.3 Research findings

At the start of this thesis, we formulated three research questions. Based on theoretical and empirical findings, this section will provide the answers to these questions.

8.3.1 The formation of purchase intentions

The first research question was formulated as follows:

Research question one: *"How do consumers form intentions to purchase at an online store?"*

To address this question we build on the rational decision-making process as discussed in chapter two. More specifically, we focus on the consumer decision-making process of Engel et al. (1995). This process has been the starting point for many comparable purchase models in the literature. According to this model, purchase intentions are formed as consumers go through the subsequent purchase process.

The process starts with need recognition. During this stage, consumers perceive a difference between a desired state of affairs and the actual situation. If this difference is sufficiently great, a need is recognized and the decision process is activated. Consumers then enter the second stage: the search for information. In order to make sound purchasing decisions consumers look for information about potential purchases that satisfy the recognized need. Usually, consumers first assess information available in their memory. In the literature, this is known as internal search. If internal search does not result in adequate information to facilitate a decision, consumers apply external search. External search concerns the search for information from the environment. In the following stage, consumers enter the evaluation

stage of the purchase process. During the evaluation stage choice alternatives are evaluated and assessed. Based on decision rules, the most appropriate alternatives are selected and intentions to purchase are formed. Intentions can be seen as the outcome of the evaluation stage and function as input for the next step of consumer decision-making: the purchase decision-making stage. During the purchase decision-making stage intentions are translated into action. An overview of the Engel et al. model is presented in figure 2.1 of chapter two. The intention formation described so far focuses on the decision 'what products to purchase' However, during the purchase decision-making stage consumers make various other decisions including 'whether to purchase', 'where to purchase', 'when to purchase' and 'how to pay'. Each of these decisions is, quite naturally, subject to its own decision-making process.

Applied to the decision 'where to purchase' consumers search for information about potential purchase locations, assess evaluative criteria (also described as attributes), which leads to the formation of an intention to purchase at a specific location. During the purchase decision-making stage this intention is translated into behavior.

Since the rational decision-making process also applies to online decision-making (as stated in chapter one), the decision where to purchase similarly refers to online stores. In an online context, consumers search for information about online purchase locations, assess evaluative criteria, which finally leads to the selection of an appropriate choice alternative and formation of a corresponding intention to purchase at an online store.

As a demarcation we must state that this thesis has focused on consumer decision-making *within* an online store. Consequently, the formation of an intention to purchase at an online store, as described above, is the result of online decision-making stages where the activities mainly concern one store. Further research might focus on how intention formation occurs in situations where the consumer decision-making process involves more than one online store (cf. the work of O'Keefe et al., 2000).

Finding 1
During the online purchase process consumers search for information about online purchase locations, assess evaluative criteria, select an appropriate choice alternative, which results in the formation of a corresponding intention to purchase at an online store.

8.3.2 Online store attributes affecting purchase intentions

The second research question to be addressed is:

Research question two: *"Which perceived online store characteristics affect consumer intentions to purchase online?"*

To address this question we build on the literature review as discussed in chapter five and the empirical investigations we reported on in chapters six and seven.

In chapter five, we considered online store attributes in relation to online purchasing. Many of these online store attributes have significantly been related to online purchase constructs including online sales, frequency of online purchasing, total amount of money spent and online sales and customer preference. Although these relationships imply that the online store attributes under consideration also affect consumer purchase intentions, no clear results are available to support this assumption. The few empirical investigations that did focus on the impact of online store attributes on consumer purchase intentions revealed that the following online store attributes significantly affect consumer purchase intentions: perceived risk, trust

in store, perceived size, perceived reputation, perceived usefulness, security perceptions, perceived risks associated with transaction security, representative retail price, perceptions of the relative live content of Internet based e-shopping and perceived quality of vendors.

In chapter six we replicated and extended the work of Jarvenpaa et al. Although the impact of several online store attributes was tested for, the results demonstrate that it was mainly the trust related attributes perceived risk, perceived trust and perceived reputation that significantly affected the intention to purchase for all online stores under investigation.

In chapter seven we focused on the impact of online store image. Our results showed that two online store attributes affect the intention to purchase at an online store: online store usefulness and online store settlement performance. With respect to the other online store attributes no robust results where reported (see section 7.5).

The results described above demonstrate that online store attributes do affect consumer intentions to purchase. Based on this overview, we argue that online store attributes that affect consumer purchase intentions can roughly be divided into two categories.

The first consists of online store attributes similar or closely related to perceived risk and perceived trust. This category of theoretically associated concepts (see section 5.3 discussion of the work of Jarvenpaa et al.) consists of the following online store attributes: perceived risk, perceived risks associated with transaction security, perceived trust (determinant of perceived risk), perceived reputation, perceived size and security perceptions (all trust determinants) and online store settlement performance. The latter online store attribute involves perceptions of expectations with respect to payment and delivery. Both aspects might contribute to trust in an online store or the perceived risk associated with a purchase at the online store.

The second category comprises online store attributes that are related to the usefulness of the online store. Online store attributes that fall within this category are: perceived usefulness, representative retail price, perceptions of the relative live content of Internet based e-shopping and perceived quality of vendors. All attributes refer to perceptions of the usefulness of an online store.

Finding 2
Online store attributes that affect consumer intentions to purchase online are, or are closely related to, perceptions of risk and trust associated with (a purchase at) an online store and online store usefulness.

The next question that arises is how and to what extent perceptions of online store attributes affect consumer intentions to purchase at an online store. These questions will be addressed below.

8.3.3 The impact of online store attributes on the intention to purchase at an online store

The third research question to be addressed is:

Research question three: *"How and to what extent do consumer perceptions of online store characteristics affect consumer intentions to purchase at an online store?"*

This third research question specifically concerns consumer purchase intentions at the online store level. The findings of both our empirical examinations (see chapters six and seven) have shown that consumer perceptions of online store attributes do have an effect on the intention to purchase at an online store.

Two findings are worth mentioning with respect to the nature of the present relationships. First, our empirical findings provide strong empirical support for the external variable→attitude→ intention relationship, as hypothesized by the TRA (chapter three). Both the research we reported on in chapter six and our online store image investigation confirm that perceptions of online store attributes affect the intention to purchase at an online store, mediated by the attitude towards purchasing at an online store.

However, because other findings in the literature did reveal significant direct effects between online store attribute perceptions and the intention to purchase at an online store (e.g. Jarvenpaa et al., 2000) more research is needed to verify the exact nature of these relationships.

Finding 3
The impact of perceptions of online store attributes on the intention to purchase at an online store is mediated by the attitude towards purchasing at an online store.

Second, our findings show that several online store attributes affect the intention to purchase at an online store by functioning as a determinant of other online store attributes. In this context we refer in particular to the online store attributes perceived trust and perceived reputation. The results of the model we tested in chapter six show that perceived trust does only influence the attitude towards purchasing at an online store if mediated by perceived risk. As such, perceived trust can be labeled as a perceived risk determinant. In addition, our results showed that perceived reputation determines perceived trust. As a perceived trust determinant, perceived reputation contributes to perceived risk, which finally has an impact on the behavioral intention.

Finding 4
Mediated by perceived risk, perceived trust and perceived reputation have an impact on the intention to purchase at an online store.

With respect to the *extent* to which perceptions of online store attributes affect intentions to purchase at an online store, we would like to make the following comments.

Both structures we empirically tested confirmed that the effects of perceptions of online store attributes on the intention to purchase at an online store are mediated by the attitude towards purchasing at an online store. This implies that the effects of perceptions of online store attributes on the attitude towards purchasing have to be considered as does the impact of the attitude on the intention to purchase at an online store.

When focusing on the impact of the perception of online store attributes on the attitude towards purchasing at an online store, the results of our first empirical examination show that the online store attributes explain around half of the attitudinal variance (see section 6.4 for details). Combined with the fact that the attitude towards purchasing explained about 50% of the purchase intention variance, we state that the impact of the online store attributes included in this examination do have a substantial impact on the intention to purchase at an online store.

With respect to the online store image research, the perceptions of included online store attributes accounted for a good 30% of the attitude variance, while the attitude towards

purchasing explained the more than acceptable figure of 60% of the behavioral intention variance (see section 7.4 for details). This implies that most of the effects that online store attributes have on the attitude towards purchasing will also have an impact on the behavioral intention.

Overall, our research demonstrated that online store attributes have a substantial impact on the intention to purchase at an online store. When accounting for the strength of the attitude→ intention relationship both our examinations reveal that perceptions of online store attributes account for approximately a quarter of the behavioral intention variance.

Finding 5
Perceptions of online store attributes have a substantial effect on the intention to purchase at an online store.

In addition to the extent to which the overall perception of online store attributes affects intentions to purchase at an online store, we will now focus on the impact of perceptions of individual store attributes. Our findings above confirm the attitude-mediated relationships between online store attribute perceptions and the intention to purchase at an online store, as hypothesized by the TRA . Moreover, our findings showed that the relationship between the attitude and the intention to purchase at an online store is very strong. In this context, we will focus on the extent to which online store attribute perceptions influence the attitude towards purchasing at an online store because it implies the extent to which the intention to purchase at an online store is affected. Based on chapters 6 and 7 the most important findings will be considered below.

First, our research findings emphasize the importance of *perceived risk*. Our investigation reported on in chapter six, showed that perceived risk was the only online store attribute which had very strong direct effects on the attitude towards purchasing at an online store. As second online store attribute is *perceived trust*. Our research findings in chapter six revealed that perceptions of trust strongly determine perceived risk, which itself has a very strong impact on the attitude towards purchasing. In our online store image research, we examined the direct impact of online store trustworthiness on the attitude towards purchasing at an online store. Although this online store attribute is not completely similar to the perceived trust construct we used in chapter six, both online store attributes are closely related. The results demonstrated that online store trustworthiness did affect the attitude towards purchasing at an online store for one online store under investigation while being not significant at all for the other online store. The significant effect can be described as rather weak.

Online store usefulness is another online store attribute, which perceptions affect intentions to purchase at an online store. In chapter six we examined the impact of perceived usefulness, which is closely related to the online store usefulness construct we applied in chapter seven. Significant but rather weak effects between perceived usefulness and the attitude towards purchasing were reported for two of the four online stores we investigated. The findings of our online store image research showed that perceptions of online store usefulness do have a moderate impact on the attitude towards purchasing at an online store for both online stores under examination.

Fourth, we mention *online store settlement performance*. As part of our online store image research, perceptions of this online store attribute had the strongest effect on the attitude towards purchasing at an online store. The impact itself can be described as moderate.

Perceived reputation is the fifth online store attribute to be considered. Our research described in chapter six showed that perceived reputation strongly affects perceptions of trust.

As such, perceived reputation can be described as an important third order attitude determinant. However, because the impact of perceived reputation is mediated by several constructs, its overall impact on the intention to purchase at an online store can be described as weak.

Finally, we refer to online store attributes where no unambiguous outcomes were reported. *Perceived ease of use* (chapters six and seven), *online store enjoyment*, *online store style* and *online store familiarity* (chapter six) were directly related to the attitude towards purchasing. The results revealed both significant and insignificant relationships for each of these online store attributes. All significant effects can be labeled as "weak" The impact of *perceived size* (chapter six) was mainly tested for as a perceived trust determinant. Except for a weak effect for one online store, no significant influences of perceived size on perceived risk were found. With respect to these online store attributes, we believe more research is needed before any conclusions can be drawn.

Finding 6: the impact of online store attributes that affect intentions to purchase at an online store:
- perceived risk: a strong impact
- online store usefulness: a moderate impact
- online store settlement performance: a moderate impact
- perceived trust: a moderate impact
- perceived reputation: a weak impact

Overall our research has demonstrated that perceptions of online store attributes determine a substantial part of the intention to purchase at an online store. The store attributes mentioned in the "Finding 6" box can be labeled as 'most important' The fact that our findings show that the online store can be used to affect about a quarter of consumer purchase intentions is quite encouraging.

8.4 Summary of contributions

In this dissertation we explored the relationships between perceptions of online store attributes and the intention to purchase at an online store. The most important contributions of our research are briefly considered below.

First, we provided new theoretical insights into the relationships between online store characteristics and online purchase intentions. Building upon store image literature (e.g. Lindquist, 1974), we introduced an organized theoretical framework to identify the most important traditional store characteristics and arrived at overall observations concerning the relationships between perceived store characteristics and consumer purchase intentions. An exploration of ecommerce research so far resulted in the preliminary observation that perceived online store attributes are likely to affect online purchase intentions. In line with the TRA, this impact is expected to be mediated by an attitudinal component.

Second, the dissertation contributed with new empirical material to a scant body of empirical research on online purchasing. We investigated online purchase intention using two different perspectives: a trust-oriented perspective and a technology-oriented shopping system perspective. We reviewed and synthesized the antecedents of online purchase intention that have been developed within these two perspectives. Building upon the work of Jarvenpaa et

al. (2000) and Chau et al. (2000) we empirically addressed the contributions of trust and online shopping system related attributes in explaining the intention to purchase at an online store. Our findings underlined the importance of trust related attributes as behavioral intention determinants but did not find support for the hypothesized effects of online shopping system related attributes. In general, our findings supported the external variable (online store attribute perceptions) → attitude → intention chain, as hypothesized by the TRA. The relationships between technology-oriented shopping system attributes and the behavioral intention, as specified by TAM, were not supported.

Third, the dissertation developed a new instrument to study online store image. Building upon the process of instrument development of Churchill (1979) we constructed a reliable and valid measurement instrument. We applied the instrument in an empirical study to address the impact of online store image on the intention to purchase at an online store. The results showed that online store image does have a substantial effect on the intention to purchase at an online store. As far as the impact of the online store image components is concerned, the results revealed the importance of "online store usefulness" and "online store settlement performance" Our findings provided support for the external variable (online store attribute perceptions) → attitude → intention chain, as hypothesized by the TRA.

8.5 Limitations and directions for further research

The research in this thesis has been subject to several limitations. In this section these limitations will be discussed and recommendations for further research will be made.

First, we need to state that we explicitly focused on rational purchase processes. In line with the rational purchase processes as described in chapter two, we build mainly on the TRA to explain intentions to purchase at an online store. By applying the TRA, our research is restricted to what is known as the high-involvement hierarchy of effects. This implies that rational purchases based on the low-involvement hierarchy of effects (cf. table 2.1) are not covered by our research. Moreover, we cannot deny the fact that non-rational purchase behavior (e.g. impulse purchasing) was not covered. It is likely that online store attributes also trigger impulse purchasing. Further research might focus on the relationships, if present, between online store attributes and purchase intentions for situations under low involvement as well as for impulse purchasing.

A second limitation relates to the sequence of steps as specified by general purchase models (cf. 2.3.2). Based on this series of steps we addressed how intentions to purchase are formed. However, we emphasize that the sequence of steps used is just a logical way of discussing the consumer purchase process (Engel et al., 1995; Evans, Moutinho and van Raaij, 1996). The steps do not always have the same "distance" from each other, which implies that the extent to which consumers use the purchase stages might differ (Howard and Sheth, 1969; Hansen, 1972; Bettman, 1979; Engel et al, 1995). Depending on the amount of involvement accompanying the purchase, the stages will be used either briefly or extensively. If the decision-making complexity is high, consumers are likely to be highly involved and therefore motivated to use all stages thoroughly (Engel et al., 1995). In contrast, when the complexity of decision-making diminishes, because consumers do not have the time, resources, motivation or they have already been through the purchase process once (repeat purchase), the purchase process is simplified (Howard and Sheth, 1969; Engel et al., 1995). Consequently,

consumers go briefly through the purchase process stages or even skip some steps. These remarks have to be taken into account when applying and interpreting rational purchase models.

Third, we explicitly build on the TRA to explain online purchase intentions. More specifically, we applied the attitude→ intention relationship, since research results so far have confirmed its validity and robustness. Nevertheless, the TRA contains another intention determinant, described as "subjective norms concerning the behavior" Moreover, to overcome the restrictive assumption of the TRA that behavior is always under complete volitional control, an extension of the TRA, the TPB, included the "perceived behavioral control" construct (see chapter three). The inclusion of subjective norms and perceived behavioral control might add to the explanatory power of the model we tested. More importantly, online store attributes might have a more impressive effect on online purchase intentions mediated by subjective norms and/or perceived behavioral control. Further research could explore these relationships in detail.

Fourth, our research has focused on the impact of consumer perceptions of online store attributes on the intention to purchase at an online store. Although behavioral intentions can be interpreted as a forecast for final behavior, this relationship has not been covered empirically in this dissertation.
Research results in traditional settings demonstrate that the behavioral intention accounts for only a modest amount of the variance of the overt behavior (see chapter three). In this context, it will be of particular interest to explore the extent to which online purchase intentions affect online purchase behavior. The findings are likely to contribute to the existing body of knowledge concerning the relationships between consumer perceptions of online store attributes and online purchase behavior.

Fifth, we investigated the relationships between perceptions of online store attributes and the intention to purchase at an online store as hypothesized in the available literature. In our first examination, we built on the work of Jarvenpaa et al. and Chau et al. to test the impact of online store attributes related to trust in the online store or the website as online shopping system on the behavioral intention. The relationships between online store attributes and the intention to purchase at an online store, as specified in our online store image research, were derived from the TRA (see chapter three). Although the usage of these theories can be interpreted as a strength (i.e. we build on existing theory which justifies the tested relationships), it also implies that we did not examine whether online store attributes affect (determinants of) the intention to purchase at an online store differently from the relationships we tested for. Our investigations can be seen as small steps in an under-explored research field. More empirical examinations are required to test and extend our findings. Exploring the determinants of perceived risk would be of particular interest. Our findings emphasize the importance of this online store attribute. We assume that, in addition to perceived trust, other online store attributes (e.g. online store settlement performance) might also affect perceived risk. Further research could focus on these aspects.

A sixth limitation is that online store attributes explained a part of the intention to purchase at an online store. Clearly, other factors need to be taken into account to explain and predict online purchase intentions (for an overview see Turban et al., 2000, p.74). The few empirical results available demonstrate that aspects such as household size, age, gender, income, shopping orientation and motivation to use the Internet might all significantly affect online purchase behavior (Crisp et al., 1997; Korgaonkar, 1999; Li, Kuo and Rusell, 1999).

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Furthermore, we believe that researchers should recognize that several decisions are involved in the decision to purchase at an online store. People decide not only to purchase or not, but also what to purchase, where to purchase, when to purchase, and how to pay. In this thesis we focused on the 'where to purchase' decision (i.e. at an online store). It is likely that factors that influence the other decisions also contribute to the attitude towards purchasing at an online store. For example, the decision whether to purchase or not is influenced by an individual's immediacy of the need, his or her purchase priorities, and his or her financial position. The decision when to purchase is likely to be influenced by similar factors. None of these are directly related to perceptions of online store attributes, and therefore none of these were included in our investigations. We suspect many of them account for the remaining variance to be explained. We encourage researchers to examine these factors more fully, as well as their impact on the diverse "sub decisions" related to online purchasing. In the long run, we envision a comprehensive model of online purchasing that takes into account the antecedents of multiple purchase decisions, organized in multiple levels of decision-making. Moreover, one aspect that should not be ignored is that many companies use several marketing channels to communicate with and sell to consumers. Online stores are likely to be used as an integral part of a multi-channel strategy to serve markets. In addition to the online store, companies might use physical outlets, catalogs, telephone and fax, mail and mobile communication (e.g. WAP) to reach consumers. From the consumer point of view, this implies that their image of an online store not only depends on the characteristics of the online store itself but also on their experiences with and/or knowledge about the other channels. In chapter six we referred to this phenomenon as retail familiarity effects. One of the limitations of our first empirical study is that we did not account for possible retail familiarity effects. We think it is conceivable that perceptions of the other channels, as well as the overall image of the channels used by a company, affect online purchase intentions. We would encourage researchers to explore this topic in detail. Of particular interest would be a study that focuses on the relationships between perceptions of physical store characteristics and the perception of the attributes of its online representation. We believe the outcomes are likely to provide some interesting insights for both research and practice.

A seventh limitation is the fact that we considered online purchase intentions for three different products: CDs, insurance, and books. The findings of our first examination are based on purchasing CDs or insurance at online stores, while our online store image examination involved purchasing a book. It is likely that the products under study, and their corresponding purchase processes, moderate the various relationships between online store attributes and the attitude towards purchasing. Books and CDs are low-risk goods. High involvement goods such as pianos, mortgages and intercontinental flight tickets are likely to have a more severe impact on, for example, the relationship between online store settlement performance and the attitude towards purchasing at an online store. These goods simply require more certainty before the consumer is willing to make a purchase decision. Therefore, we recommend researchers replicate our studies with online stores that sell low and high involvement products in order to identify whether the relationships between the online store attributes and the intentions to purchase are of similar strength.

An eighth limitation is that we used student samples. Consequently, the results of our empirical explorations are biased towards young, highly educated people, most males, who are rather experienced with the Internet. This might have several implications for our findings. For example, the fact that the majority of the sample was relatively experienced with the Internet could have had a downward-biasing effect on the impact of an online store attribute like ease of use. Based upon years of experience, most students have learned how to use

various forms of web-based technology. In this context, ease of use is likely to be less of an issue. Another example concerns the male-female ratio. It is believable that men are less sensible to an aesthetic-related attribute like online store style, while relying more on the usefulness of an online shopping system when engaging in online purchasing. The bias toward males could have affected our findings with respect to both attributes.
Caution is required when extrapolating the findings of this dissertation to online purchasing in general. However, the reader will have noticed that researchers frequently employ student samples (see section 4.3, 5.2, 5.3 and 5.4). In the literature, convenience samples are almost an accepted phenomenon when conducting online research. Future research will have to demonstrate that our findings apply in other contexts, with non-convenience samples.

A final limitation is that this thesis has explicitly focused on online store choice decision-making *within* an online store. Store choice decision-making *across* several online stores was not considered (cf. the work of O'Keefe et al., 2000). However, on the Internet access to other stores is not hindered by any physical limitation. While going through the online purchase process, consumers have the opportunity to visit numerous online stores in order to select a product. Consequently, the decision as to where to purchase might not only be determined by how the online store is perceived but also by perceptions of its competitors. In other words, the intention to purchase at an online store might well be influenced by comparisons of online store attributes across several stores. Further research might involve the comparison processes between online stores and their impact on online decision-making. We suggest it might be interesting to relate perceptions of the online store attributes we identified in chapter seven to consumer preferences by, for example, applying a comparative scale technique (cf. the work of Muthitacharoen as described in chapter five).

8.6 Practical recommendations

The findings of this dissertation have several implications for practice. Generating revenue is one of the major concerns for online stores today. We examined the widely assumed relationships between online store attributes and intentions to purchase at an online store. Our findings show that perceptions of online store attributes do affect intentions to purchase at an online store. Just as Nevin and Houston (1980) argued with respect to shopping area attributes (see chapter four), this implies that online store attributes might be used to move consumers through the hierarchy of effects such as liking, intentions and, finally, behavior (see also Huizingh, 2002; Huizingh and Hoekstra, 2003). As such, online store attributes contribute to transforming online store visitors into purchasers. From a practical point of view, one question that becomes paramount is how online stores might use this knowledge to improve revenues.

We think that the answer to this question is closely related to possibilities of online stores to influence consumer perceptions of online store attributes. Here, we refer to those online store attributes that affect intentions to purchase at an online store. Online stores should realize that perceptions of online store attributes are strongly influenced by what is to be perceived. Since online store attributes are represented by or derived from website features, the presence or absence of these website features in particular will have an impact on how consumers perceive the online store. In other words, online stores can use website features as 'instruments' to influence the perception of its online store attributes.

In this context, the following practical recommendations can be made. To affect the closely related concepts of *perceived trust* and *perceived risk*, online stores might offer various forms of information. Information about the company (e.g. history, references, information about partners), the products to be bought (e.g. extensive textual descriptions, pictures, 3D manipulation), security (e.g. explanation of safety measures), privacy policy and legal settings might all contribute to an increase of perceived trust and/or reduction of perceived risk. Another opportunity to add to positive trust and perceived risk perceptions are contact options. Several uncertainties about the online store, the supplier or the products to be bought might arise due to the lack of physical presence. By offering options to contact and interact with the supplier these uncertainties might be diminished, resulting in less perceived risk and/or higher perceived trust. Examples of website features that can be used to accomplish this include e-mail, electronic forms, telephone and fax numbers, mail and chat facilities. Other website features that can be used to allow customers to verify the trustworthiness of online stores include a virtual community, customer comments and trust seals.

To influence perceived trust one might also focus on its determinants. Two of them have been considered in this thesis: *perceived reputation* and *perceived size*. To affect perceived reputation, customer comments and press releases can be integrated. Perceived size can be influenced by providing clear information about the size of the online store and/or the company behind the store. Moreover, indications about the size of the product range and the number of customers might also be implemented.

As far as *online store settlement performance* is concerned, online stores need to focus on website features related to financial settlement and product delivery. Information about safe payments, the presence of several payment methods and a fast payment process influence the financial settlement perception. With respect to impressions of product delivery, website attributes that can be used include a wide choice of delivery options, guarantees, a track-and-tracing option, a compensation program and the name of a well-known and reliable logistical partner.

To affect perceptions of *usefulness,* online stores might consider various options. Online stores could guarantee a simple and well-structured online purchase process. Furthermore, adequate information about products, interesting offers and a wide range increase the usefulness of an online store. Alignment with consumer interests might also be examined. This could be accomplished by providing purchase related information (e.g. information about concerts while purchasing a CD) or by offering personalized suggestions.

Finally, we conclude with three general recommendations.

The first is related to the implementation of website features. Some website features are easy to implement. Online stores can easily 'score' on features such as company information, product descriptions and contact information. Other website features require huge investments and/or demand much from an organization (e.g. extending one's range, chat facilities, track and tracing). Depending on both advantages (e.g. cost reduction, revenue) and disadvantages (e.g. costs, effort), companies might decide whether or not to implement them. However, we do not see any reason for online stores to fail when it comes to the presence of easy-to-implement website features. We strongly recommend online stores map out these features and make sure that they are in place.

Second, next to affecting perceptions of an online store, website features can be applied to support consumers throughout the stages of the consumer decision process. Various researchers underline the practical relevance of consumer decision process support (e.g. Creemers, 1999; Verhagen, 1999; Verhagen, de Vries and van den Ham, 2002; Liang and Lai, 2002). Consumers are more likely to visit and purchase at online stores that provide adequate

functional support at each stage of the consumer decision process (Liang and Lai, 2002). Overviews of website features, assigned to the different stages of the consumer decision process, can be used for strategic and tactical considerations. For example, offering a large selection is likely to require the implementation of features supporting the pre-purchase evaluation stage (e.g. overviews, comparison modules). Despite its assumed importance, decision process oriented classifications of website features are hardly found. The few works available today mainly focus on technological website features like search engines, navigational style, payment methods and security measures. Although important as is, our research demonstrated that online stores are in many ways similar to physical outlets. This implies the more 'traditional' features and functions have to taken into account as well (see appendix E and F). We encourage practitioners to construct process-oriented overviews of both technological and traditional online store features. The overviews will guide managers in developing effective online sales strategies, and function as starting point for concrete implementations.

Third, when putting website features into practice we recommend companies conduct complementary research. Website features are very likely to affect perceptions of online store attributes. However, to increase the chance of success, exploratory investigations among the online store's (potential) customers will show what website features are considered to be important and what features are likely to contribute to perceptions of online store attributes. Combined with the measurement of online store attribute perception before and after website feature implementation, important information is gathered. Based on the derived insights, online stores will be able to implement the most important website features. This will stimulate positive perceptions of online store attributes and is very likely to have a positive effect on consumer purchase intentions.

References

Ajzen, I. and Fishbein, M., "Attitude-behavior relations: a theoretical analysis and review of empirical research", *Psychological Bulletin*, 1977, vol. 84, no. 5, p.888-918.

Ajzen, I. And Fishbein, M., *Understanding Attitudes and Predicting Social Behavior*, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1980.

Ajzen, I. and Madden, T.J., "Prediction of Goal-Directed Behavior: Attitudes, Intentions, and Perceived Behavioral Control", *Journal of Experimental Social Psychology*, 1986, vol. 22, p.453-474.

Ajzen, I., "The Theory of Planned Behavior", *Organizational Behavior and Human Decision Processes*, 1991, vol. 50, p.179-211.

Alba, J., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A. and Wood, S., "Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Marketplaces", *Journal of Marketing*, 1997, vol. 61, no. 3, p.38-53.

Alwitt, L.F. and Berger, I.E., "Understanding the Link between Environmental Attitudes and Consumer Product Usage: Measuring the Moderating Role of Attitude Strength", *Advances in Consumer Research*, 1993, vol. 20, p.189-194.

Anderson, E. and Weitz, E., "Determinants of continuity in conventional industrial channel dyads", *Marketing Science*, 1989, vol. 8, no. 4, p.310-323.

Anderson, J.C. and Narus, A., "A model of distributor firm and manufacturing firm working partnerships", *Journal of Marketing*, 1990, vol. 54, no. 1, p.42-58.

Anderson, E.W. and Sullivan, M.W., "The Antecedents and Consequences of Customer Satisfaction for Firms", *Marketing Science*, 1993, vol. 12, no. 2, p.125-143.

Arbuckle, J.L. and Wothke, W., *AMOS 4.0 User's Guide*, SmallWaters Corporation, Chicago, 1999.

Arnold, S., Ma, S. and Tigert, D.J., "A comparative Analysis of Determinant Attributes in Retail Store Selection", *Advances in Consumer Research*, 1978, vol. 5, p.663-667.

Arons, L., "Does Television Viewing Influence Store Image and Shopping Frequency?", *Journal of Retailing*, 1961, vol. 37, no. 3, p.1-13.

Axelrod, R., *"The Evolution of Cooperation"*, Basic Books, 1984.

Babin, B.J. and Darden, W.R., "Consumer Self-Regulation in a Retail Environment", *Journal of Retailing*, 1995, vol. 71, no. 1, p. 47-70.

Bagozzi, R.P., "Attitudes, Intentions and Behavior: A Test of Some Key Hypotheses", *Journal of Personality and Social psychology*, 1981, vol. 41, no. 4, p.607-627.

Bagozzi, R.P. and Yi, Y., "The degree of intention formation as moderator of the attitude-behavior relationship", *Social Psychology Quarterly*, 1989, vol.52, no. 4., p.266-279.

Bagozzi, R.P. and Warshaw, P.R., "Trying to Consume", *Journal of Consumer Research*, 1990, vol. 17, no. 2, p.127-140.

Baker, J., Grewal, D. and Levy, M., "An Experimental Approach to Making Retail Store Environmental Decisions", *Journal of Retailing*, 1992, vol. 68, no.4, p.445-460.

Baker, J., Grewal, D. and Parasuraman, A., " he Influence of Store Environment on Quality Inferences and Store Image", *Journal of the Academy of Marketing Science*, 1994, vol. 22, no. 4, p.328-339.

Balabanis, G. and Vassileiou, S., "Some Attitudinal Predictors of Home-Shopping through the Internet", *Journal of Marketing Management*, 1999, vol. 15, no. 1, p.361-385.

Beale, D.A. and Manstead, A.S.R., "Predicting Mothers' Intentions to limit Frequency of Infants' Sugar Intake: Testing the Theory of Planned Behavior", *Journal of Applied Social Psychology*, 1991, vol. 21, no.5, p.409-431.

Bearden, W.O., "Determinant Attributes of Store Patronage: Downtown Versus Outlying Shopping Centers", *Journal of Retailing*, 1977, vol. 53, no.2, p.15-22.

Bell, S.J., "Image and consumer attraction to intraurban retail area's: An environmental psychology approach", *Journal of Retailing and Consumer Services*, 1999, vol. 6, no. 2., p.67-78.

Bellenger, D.N., Robertson, D.H. and Greenberg, B.A., "Shopping Center Patronage Motives", *Journal of Retailing*, 1977, vol. 53, no.2, p.29-38.

Bellenger, D., Robertson, D. and Hirschman, E., "Impulse Buying Varies by Product", *Journal of Advertising Research*, 1978, vol. 18, no. 6, p.15-18.

Benbasat, I. and Dexter, A.S., "An experimental evaluation of graphical and color-enhanced information presentation", *Management Science*, 1985, vol. 31, no. 11, p.1348-1364.

Benbasat, I. and Dexter, A.S, "An investigation of the effectiveness of color and graphical information presentation under varying time constraints", *MIS Quarterly*, 1986, vol. 10, no. 1, p.59-81.

Berri, D.J. and Schmidt, M.B., " Instrumental versus bounded rationality: comparison of major league baseball and the National Basketball Association", *Journal of Socio-Economics*, 2002, In press, Uncorrected Proof, Available online 4 March 2002, p.1-24.

Bettman, J.R., *An information processing theory of consumer choice*, Addison-Wesley Publishing Company, Inc., USA, 1979.

Boldero, J., '"The prediction ofhousehold recycling of newspapers: The role of attitudes, intentions and situational factors", *Journal of Applied Social Psychology*, 1995, vol. 25, p.440-462

Bollen, K.A., *Structural equations with latent variables*, John Wiley & Sons, New York, 1989.

Bolton, R.N. and Drew, J.H., "A Multistage Model of Customers' Assessment of Service Quality and Value", *Journal of Consumer Research*, 1991, vol. 17, no. 4, p.375-384.

Boudreau, M.C., Gefen, D. and Straub, D.W., "Validation in information systems research: a state-of-the-art assessment," *MIS Quarterly*, 2001, vol. 25, no.1, p.1-16.

Bowers, D.K., "FAQs on Online research", Marketing Research, 1998, vol. 10, no.4, p.45-48.

Bowman, C.H. and Fishbein, M., "Understanding Public Reaction to Energy Proposals" An application of the Fishbein Model", *Journal of Applied Social Psychology*, 1978, vol. 8, no.4, p.319-340.

Bradach, J.L. and Eccles, R.G., " Markets versus hierarchies: from ideal to plural forms", *Annual Review of Sociology*, 1989, vol. 15, p.97-115.

Brinberg, D. "An Examination of the Determinants of Intention and Behavior: A Comparison of Two Model", *Journal of Applied Social Psychology*, 1979, vol.9, no.6, p.560-575.

Brinberg, D. and Durand, J., "Eating at Fast-Food Restaurants: An Analysis Using Two Behavioral Intention Models", *Journal of Applied Social Psychology*, 1983, vol. 13, no.6, p.459-472.

Brinberg, D. and Cummings, V., "Purchasing Generic Prescription Drugs: an analysis using tow behavioral intention models", *Advances in Consumer Research*, 1984, vol. 11, p.229-234.

Bruner II, G.C. and Hensel, *Marketing Scales Handbook: a compilation of multi-item measures*, American Marketing Association, Chicago Illinois, 1992.

Bruner II, G.C., "Web Commercials and Advertising Hierarchy-of-Effects" *Journal of Advertising Research*, 2000, vol. 40, no. 1, p.35-42.

Bucklin, L.P., "Retail Gravity Models and Consumer Choice: A Theoretical and Empirical Critique", *Economic Geography*, 1971, vol. 47, p.489-497.

Burke, R.R., Cho, J., DeSarbo, W.S., Mahajan, V., "The Impact of Product-Related Announcements on Consumer Purchase Intentions", Advances in Consumer Research, 1990, vol. 17, p.342-350.

CBS, De digitale economie 2001, *Centraal Bureau voor de Statistiek*, 2001 Voorburg/Heerlen.

Census, *2000 E-commerce Multi-sector Report*, 2002, http://www.census.gov/estats

Chau, P.Y.K., Au, G. and Tam, K.Y., "Impact of Information Presentation Modes on Online Shopping: Am Empirical Evaluation of a Broadband Interactive shopping Service", *Journal of Organizational Computing and Electronic Commerce*, 2000, vol. 10, no. 1, p.1-22.

Chiles, T.H. and McMackin, J.F., " Integrating variable risk preferences, trust, and transaction cost economics", *Academy of Management Review*, 1996, vol. 21, no. 1, p.73-99.

Chow, S. and Holden, R., "Toward an understanding of loyalty: the moderating role of trust", *Journal of Managerial Issues*, 1997, vol. 9, no. 3, p.275-298.

Churchill, Jr., G.A., "A Paradigm for Developing Better Measures of Marketing Constructs", *Journal of Marketing Research*, 1979, vol. 16, no. 1, p.64-73.

Cobb, C.J. and Hoyer, W.D., "Planned Versus Impulse Purchase Behavior", *Journal of Retailing*, 1986, vol. 62, no. 4, p.384-409.

Colley, R.H., *Defining advertising goals for measured advertising results*, Association of National Advertisers, New York, 1961.

Copeland, M.T. , "Relation of Consumer's Buying Habits to Marketing Methods", *Harvard Business Review*, 1932, April, p.282-289.

Coupey, E., *"Marketing and the Internet: Conceptual Foundations"*, Prentice Hall, Upper Saddle River, New Jersey, 2001.

Cote Jr, J.A. and Wong, J.K., "The effects of Time and Situational Variables on Intention-Behavior Consistency", *Advances in Consumer Research*, 1985, vol. 12. p.374-377.

Crawford, T.J. and Boyer, R., "Salient Consequences, Cultural Values, and Childbearing Intentions", *Journal of Applied Social Psychology*, 1985, vol. 15, no.1, p.16-30.

Creemers, M.R., "In de elektronische boekhandel is informatie belangrijker dan prijs", *Holland Management Review*, 1999, no. 66, juli-augustus, p.58-63.

Creswell, J.W., *Research Design: Qualitative and Quantitative Approaches*, Sage Publications, Inc. Thousand Oaks, 1994

Crisp, C.B., Jarvenpaa, S.L. and Todd, P.A., *"Individual Differences and Internet Shopping Attitudes and Intentions"*, June 1997, http://ccwf.cc.utexas.edu/~crisp/Indiv_Shop.htm.

Cronin, Jr., J.J., Brady, M.K. and Hult, G.T.M., "Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments", *Journal of Retailing*, 2000, vol. 76, no. 2, p.193-218.

Crosby, L.A. and Muehling, D.D., "External Variables and the Fishbein Model: Mediation, Moderation, or Direct Effects?", *Advances in Consumer Research*, 1983, vol. 10, p.94-99.

Dahab, D.J., Gentry, J.W. and Su, W., "New Ways to Reach Non-Recyclers: An Extension of the Model of Reasoned Action to Recycling Behavior", *Advances in Consumer Research*, 1995, vol. 22, p.251-256.

- D'Astous, A., Bensouda, I. and Guindon, J., "A Re-Examination of Consumer Decision-making for a Repeat Purchase Product: Variations in Product Importance and Purchase Frequency", *Advances in Consumer Research*, 1989, vol. 16, p.433-438.

Darden, W.R. and Dorch, M.J., "An Action Strategy Approach to Examining Shopping Behavior", *Journal of Business Research*, 1990, vol. 21, no. 3, p.289-308.

Davidson, A.R. and Jacard, J.J., "Variables that Moderate the Attitude-Behavior Relation: Results of a Longitudinal Study", *Journal of Personality and Social Psychology*, 1979, vol. 37, no. 8, p.1364-1376.

Davis, Jr, F.D., "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, 1989, vol. 13, no. 3, p.319-340.

Davis Jr., F.D., Bagozzi, R.P. and Warshaw, P.R., " User acceptance of computer technology: a comparison of two theoretical models", *Management Science*, 1989, vol. 35, no. 8, p.982-1003.

Deighton, J. and Grayson, K., "Marketing and Seduction: building exchange relationships by managing social consensus", Journal of Consumer Research, vol. 21, p.660-676.

DeLone, W.H. and E. R. McLean, "Information system success: the quest for the dependent variable", *Information Systems Research*, 1992, vol. 3, no. 1, p.60-95.

Dewan, R., Jing, B. and Seidmann, A., "One to One Marketing on the Internet", *Proceedings of the 20th International Conference on Information Systems* (ICIS), December 1999, Charlotte, North Carolina, USA.

Dewey, J., "How we think", D.C. Heath & Co., Publishers, Boston, 1910.

Dick, A.S. and Basu, K., "Customer Loyalty: Toward an Integrated Conceptual Framework", *Journal of the Academy of Marketing Science*, 1994, vol. 22, no. 2, p.99-113.

Dickson, J. and Albaum, G., "A Method for Developing Tailormade Semantic Differentials for Specific Marketing content Areas", *Journal of Marketing Research*, 1977, vol. 14, no. 1, p.87-91.

Dillman, D.A., *Mail and internet surveys: the tailored design method*, second edition, John Wiley & Sons, New York, 2000.

Dodds, W.B., Monroe, K.B. and Grewal, D., "Effect of Price, Brand, and Store Information on Buyers' Products Evaluations", *Journal of Marketing Research*, 1991, vol. 28, no. 3, p.307-319.

Doney, P.M. and Cannon, J.P., "An examination of the nature of trust in buyer-seller relationships", *Journal of Marketing*, 1997, vol. 61 , no. 2, p.35-51.

Douglas, S.P. and Wind, Y., "Intentions to Buy as Predictors of Buying Behavior", *Proceedings of the Second Annual Conference of the Association for Consumer Research*, 1971, p.331-343.

De Vries, D.L. and Ajzen, I., "The Relationship of Attitudes and Normative Beliefs To Cheating in College", *The Journal of Social Psychology*, 1971, vol. 83, p.199-207.

East, R., "Investment decisions and the theory of planned behavior", *Journal of Economic Psychology*, 1993, vol. 14, no.2, p.337-375.

Engel, J.F., Miniard, R.D., Blackwell, P.W., *Consumer Behavior*, eighth edition, The Dryden Press, Forth Worth, 1995.

Evans, M.J., Moutinho, L. and van Raaij, W.F. *Applied consumer behavior*, Addison-Wesley Publishing Company, Inc. Harlow, England, 1996.

Fishbein, M., "Toward an Understanding of Family Planning Behaviors", *Journal of Applied Social Psychology*, 1972, vol. 2, no. 3, p.214-227.

Fishbein, M. and Ajzen, I., *Belief, Attitude, Intention and Behavior: an introduction to theory and research*, Addison-Wesley Publishing Company, Reading Massachusetts, 1975.

Fishbein, M. and Ajzen, I., "Predicting and Understanding Consumer Behavior: Attitude-Behavior correspondence", in Ajzen, I. and Fishbein, M., *Understanding Attitudes and Predicting Social Behavior*, Prentice Hall, Englewood Cliffs, New Jersey, 1980, p.149-172.

Fishbein, M., Ajzen, I. and Hinkle, R., "Predicting and Understanding Voting in American Elections: Effects of external variables", in Ajzen, I. and Fishbein, M., *Understanding Attitudes and Predicting Social Behavior*, Prentice Hall, Englewood Cliffs, New Jersey, 1980, p.173-195.

Fishbein, M., Bowman, C.H., Thomas, K., Jaccard, J.J. and Ajzen, I., "Predicting and Understanding Voting in British elections and American Referenda: Illustrations of the theory's generality", in in Ajzen, I. and Fishbein, M., *Understanding Attitudes and Predicting Social Behavior*, Prentice Hall, Englewood Cliffs, New Jersey, 1980, p.196-216.

Fisher, W.A., "Predicting Contraceptive Behavior Among University Men: The Role of Emotions and Behavioral Intentions", *Journal of Applied Social Psychology*, 1984, vol. 14, no.2, p.104-123.

Fisk, G., "A conceptual Model for Studying Customer Image", *Journal of Retailing*, 1961, vol. 37, no. 4, p.1-8.

Floor, K. and Raaij, F. van, *Marketing-Communicatiestrategie*, Stenfert Kroese Uitgevers, Leiden/Antwerpen, 1989.

Foxall, G.R., " The role of radical behaviorism in the explanation of consumer choice", *Advances in Consumer Research*, 1986, vol. 13, p.187-191.

Foxall, G.R., " A Behaviourist Perspective on Purchase and Consumption", *European Advances in consumer Research*, 1993, vol. 1, p.501-506.

Geek.com: http://www.geek.com

Geissler, G.L. and Zinkhan, G.M., "Consumer perceptions of the World Wide Web: an exploratory study using focus group interviews", *Advances in Consumer Research*, 1998, vol. 25, p.386-392.

Gentry, J.W. and Burns, A.C., "How "Important" Are Evaluative Criteria in Shopping Center Patronage", *Journal of Retailing*, vol. 53, no. 4, p.73-86.

Golden, L.L., Albaum, G. and Zimmer, M., " The Numerical Comparative Scale: An Economical Format for Retail Image Measurement", *Journal of Retailing*, 1987, vol. 63, no. 4, p.393-410.

Grandon, E.E. and Ranganathan, C., "The Impact of Content and Design of Web Sites on online Sales", *Proceedings of the Seventh Americas Conference on Information Systems*, August 2001, Boston, p.920-926.

Greenstein, M., Miller, R.H. and Weldon, D.E., "Attitudinal and Normative Beliefs as Antecedents of Female Occupational Choice", *Personality and Social Psychology Bulletin*, 1979, vol. 5, no. 3, p.356-362.

Grewal, D., Krishnan, R., Baker, J. and Borin, N., "The Effect of Store Name, Brand Name and Price Discounts on Consumers' Evaluations and Purchase Intentions", *Journal of Retailing*, 1998, vol. 74, no. 3, p.331-352.

GVU (Graphic, Visualization and Usability center), *10th WWW User Survey*, 1998, available at http://www.gvu.gatech.edu/user_surveys/survey-1998-10/

Hair Jr., J.F., Anderson, R.E., Tatham, R.L. and Black, W.C., *Multivariate data analysis*, fifth edition, Prentice-Hall, Upper Saddle River, NJ, 1998.

Hansen, F. *Consumer choice behavior: A cognitive theory*. The Free Press, New York, 1972.

Hansen, R.A. and Deutscher, T., "An Empirical Investigation of Attribute Importance in Retail Store Selection", *Journal of Retailing*, 1977, vol. 53, no. 4, p.59-72.

Harell, G.D. and Frazier, G.L., *Marketing, connecting with customers*, Prentice Hall, 1999.

Hattie, J.A., "Methodology review: Assessing unidimensionality of tests and items", *Applied Psychological Measurement*, 1985, vol. 9, no. 2, p.139-164.

Hedrick, T.E., Bickman, L. and Rog, D.J., " *Applied Research Design: A Practical Guide*", Applied Social Research Methods Series, vol. 32, Sage Publications Inc., Newbury Park, 1993.

Heider, F., *The Psychology of Interpersonal Relations*", Wiley, 1958.

Heijden, H.v.d., Verhagen, T. and Creemers, M. R. "Predicting online purchase behaviour: replications and tests of competing models", *Proceedings of the 34 Hawaiian International Conference on System Sciences (HICSS)*, January 2001, Outrigger Wailea Resort Island of Maui, Hawaii.

Heijden, H. v.d. and Verhagen, T., " Measuring and assessing online store image: a study of two online bookshops in the Benelux", *Proceedings of the 35 Hawaiian International Conference on System Sciences (HICSS)*, January 2002, Hilton Waikoloa Village, Hawaii.

Heijden, H.v.d., Verhagen, T.and Creemers, M.R., "Understanding online purchase intentions: contributions from technology and trust perspectives", *European Journal of Information Systems*, 2003, forthcoming.

Hoffman, D.L., Novak, T. and Chatterjee, P., " Commercial scenarios for the Web: opportunities and challanges ", *Journal of Computer Mediated Communication*, 1995, vol 1, no. 3, http://www.ascusc.org/jcmc/vol1/issue3/hoffman.html

Holbrook, M. B. and Hirschman, E. C., "The experiential aspects of consumption: consumer fantasies, feelings, and fun", *Journal of Consumer Research*, 1982a, vol. 9, no. 2, p.132– 140.

Holbrook, M. B. and Hirschman, E. C, " Hedonic consumption: emerging methods and propositions", *Journal of Marketing*, 1982b, vol. 46, no. 3, p.92-101.

Holbrook, M.B., "The Nature of Customer Value: Anaxiology of Services in the Consumption Experience" in: *Service Quality: New Directions in Theory and Practice*, Rust, R.T. and Oliver, R.L., Newbury Park, CA, Sage, 1994, p.21-71.

Holbrook, M.B. and Corfman, K.P., "Quality and Value in the Consumption Experience: Phaedrus Rides Again", in Jacoby, J. and Olson, J.C., *Perceived Quality: How Consumers View Stores and Merchandise*,", Lexington, MS, Lexington Books, 1985, p.31-57.

Hom, P.W., Katerberg, Jr, R. and Hulin, C.L., "Comparative Examination of Three Approaches to the Prediction of Turnover", *Journal of Applied Psychology*, 1979, vol. 64, no. 3, p.280-290.

Houston, M.J. and Nevin, J.R., "Retail Shopping Area Image: Structure and Congruency Between Downtown Areas and Shopping Centers", *Advances in Consumer Research*, 1981, vol. 8, p.677-681.

Howard, J.A. and Sheth, J.N., *The Theory of Buyer Behavior*, John Wiley & Sons, Inc., New York, 1969.

Howell, R.D. and Rogers, J.D., "Research into Shopping Mall Choice Behavior", *Advances in Consumer Research*, 1981, vol. 8, p.671-676.

Hoyer, W.D. and Ridgway, N.M., "Variety Seeking as an Explanation for Exploratory Purchase Behavior: a Theoretical Model", *Advances in Consumer Research*, 1984, vol. 11, p.114-119.

Hoyer, W. D., "An Examination of Consumer Decision-making for a Common Repeat Purchase Product", *Journal of Consumer Research*, 1984, vol. 11, no. 3, p.822-829.

Huff, D.L., *"Determination of Intra-Urban Retail Trade Areas"*, 1962, Los Angeles: University of California Real Estate Research Program.

Huff, D.L. and Blue, L., *"A Programmed Solution for Estimating Retail Sales Potential"*, 1966, Lawrence: University of Kansas Center for Regional Studies.

Huizingh, E.K.R.E., " The content and design of web sites: an empirical study", *Information and Management*, 2000, vol. 37, no. 3, p.123-134.

Huizingh, E.K.R.E., "Towards Successful eBusiness Strategies: A Hierarchy of Three Management Models", *Journal of Marketing Management*, 2002, vol. 18, no. 7-8, p.721-747

Huizingh, E.K.R.E. and Hoekstra, J.C., "Why do consumers like Web sites?", *Journal of Targeting, Measurement and Analysis for Marketing*, 2003, forthcoming.

Jaccard, J., Knox, R. and Brinberg, D., "Prediction of Behavior From Beliefs: An Extension and Test of a Subjective Probability Model", *Journal of Personality and Social Psychology*, 1979, vol. 37, no. 7, p.1239-1248.

Jacoby, J., Berning, C.K. and Dietvorst, T.F., "what about disposition", *Journal of Marketing*, July 1977, no. 2, p.23.

James, D.L., Durand, R.M. and Dreves, R.A., "The Use of a Multi-Attribute Attitude in a Store Image Study", *Journal of Retailing*, 1976, vol. 52, no 2., p.23-32.

Jarvenpaa, S.L. and Dickson, G.W., "Graphics and managerial decision-making: research based guidelines", *Communications of the ACM*, 1988, vol. 31, no. 6, p.764-774.

Jarvenpaa, S.L. and Todd, P.A., "Consumer Reactions to Electronic Shopping on the World Wide Web", *International Journal of Electronic Commerce*, 1996, vol. 1, no. 2, p.59-88.

Jarvenpaa, S.L., Tractinsky, N and Vitale, M., "Consumer Trust in an Internet store", *Information Technology and Management*, 2000, vol. 1, no 1., p.45-71.

John, G., "An empirical investigation of some antecedents of opportunism in a marketing channel", *Journal of Marketing Research*, 1984, vol. 21, no. 3, p.278-289.

Kalakota, R. and Whinston, A.B., *"Electronic Commerce: A Managers's Guide"*, Addison Wesley Longman, Inc., Reading Massachusetts, 1997.

Kantola, S.J., Syme, G.J. and Campbell, N.A., "The Role of Individual Differences and External Variables in a Test of the Sufficiency of Fishbein's Model to Explain Behavioral Intentions to Conserve Water", *Journal of Applied Social Psychology*, 1982, vol. 12, no. 1, p.70-83.

Kahneman, D. and Tversky, A., "Prospect Theory: An Analysis of Decision Under Risk" , *Econometrica*, 1979, vol. 47, no. 2, p.263-91.

Keaveney, S.M. and Hunt, K.A., " Conceptualization and Operation of Retail Store Image: A Case of Rival Middle-Level Theories", *Journal of the Academy of Marketing Science*, 1992, vol. 20, no. 2, p.165-175.

Keen, P., Ballance, C., Chan, S. and Schrump, S., *Electronic Commerce Relationships: Trust By Design*. Prentice Hall, Englewood Cliffs, New Jersey, 1999.

Kelly, R.F. and Stephenson, R., "The Semantic Differential: An Information Source for Designing Retail Patronage Appeals", *Journal of Marketing*, 1967, vol. 31, no. 4, p.43-47.

Kelly, J.P. and Smith, S.M., "Determinants of Retail Patronage: An Examination of Alternative Models", *Advances in Consumer Research*, 1983, vol. 10, p.345-350.

Kerlinger, F.N., *Foundations of Behavioral Research*, Holt, Rinehart & Whinston, London, 1973.

Kokkinaki, F., "Predicting Product Purchase and Usage: The Role of Perceived Control, Past Behavior and Product Involvement", *Advances in Consumer Research*, 1999, vol. 26, p.576-583.

Kolvereid, L., "Prediction of Employment Status Choice Intentions", *Entrepreneurship Theory and* Practice, 1996, vol. 21, no. 1, p.47-57.

Korgaonkar, P.K., Lund, D. and Price, B., "A Structural Equations Approach Toward Examination of Store Attitude and Store Patronage Behavior", *Journal of Retailing*, 1985, vol. 61, no. 2, p.39-60.

Korgaonkar, P. K., "A Multivariate Analysis of Web Usage", *Journal of Advertising Research*, 1999, vol. 39, vol. 2, p.53-58.

Kotler, P. and Armstrong, *Principles of Marketing*, eighth edition , Prentice-hall, Inc. Upper Saddle River, New Jersey, 1999.

Kotler, P., *Marketing Management, the millennium edition*, Prentice Hall, Inc., Upper Saddle River. New Jersey, 2000.

Kozinets, R.V., "On netnography: initial reflections on consumer research investigations of cyberculture", *Advances in Consumer Research*, 1998, vol. 25, p.366-371.

Kunkel, J.H. and Berry, L.L., "A Behavioral Conception of Retail Image", *Journal of Marketing*, 1968, vol. 32, no. 4, p.21-27.

Kurland, N.B., "Sales Agents and Clients: Ethics, Incentives, and a Modified Theory of Planned Behavior", *Human Relations*, vol. 49, no. 1, 1996.

Kurniawan, S.H., "Modeling Online Retailer Customer Preference and Stickiness: A Mediated Structural Equation Model, an Empirical Study on Customer Value in Electronic Commerce", *Proceedings of the Fourth Pacific Asia Conference on Information Systems"*, June 2000, Hong Kong, p.238-252.

LaBarbera, P.A. and Mazursky, D., "A Longitudinal Assessment of Consumer Satisfaction/Dissatisfaction: The Dynamic Aspect of the Cognitive Process", *Journal of Marketing Research*, 1983, vol. 20, no. 4, p.393-404.

Laroche, M., Toffoli, R., Kim, C. and Muller, T.E., "The Influence of Culture on Pro-Environmental Knowledge, Attitudes, and Behavior: a Canadian Perspective", *Advances in Consumer Research*, 1996, vol. 23, p.196-202.

Lavidge, R.J. and Steiner, G.A., A model for predictive measurement of advertising effectiveness, *Journal of Marketing*, 1961, vol. 25, no. 6, p.59-62.

Lee, K-H., "Determinants of Repeat Purchase Intention: Users'Attribute Beliefs VS. Advertising; an Aggregate Level Analysis of Consumer Durables in Hong Kong", *Historical Perspective in Consumer Research: National and International Perspectives*, 1985, p.267-269.

Lewis, H.G., *Direct Marketing Strategies and Tactics*, Dartnell Corporation, Chicago, 1992.

Lewis, E., 1898, in Strong, Jr., E.K., *The Psychology of Selling and Advertising*, McGraw-Hill, New York, 1925.

Li, H., Kuo, C. and Rusell, M.G., "The Impact of Perceived Channel Utilities, Shopping Orientations, and Demographics on the Consumer's Online Buying Behavior", *Journal of Computer Mediated Communication*, 1999, vol. 5, no. 2, http://www.ascusc.org/jcmc/vol5/issue2/hairong.html

Liang, T-P. and Lai, H-J., "Effect of store design on consumer purchases: an empirical study of on-line bookstores", *Information & Management*, 2002, vol. 39, p.431-444.

Liao, Z. and Cheung, M.T., "Internet-based e-shopping and consumer attitudes: an empirical study", *Information & Management*, 2001, vol. 38, no. 5, p.299-306.

Lindquist, J.D., "Meaning of Image", *Journal of Retailing*, 1974, vol. 50, no. 4, p.29-38.

Liu, C. and Arnett, K.P., "Exploring the factors associated with Web site success in the context of electronic commerce", *Information and Management*, 2000, vol. 38, no. 1, p.23-33.

Lohse, G.L. and Spiller, P., " Internet retail store design: how the user interface influences traffic and sales", *Journal of Computer Mediated Communication*, vol. 5, no. 2, 1999, http://www.ascusc.org/jcmc/vol5/issue2/lohse.htm.

Loken, B. and Fishbein, M., "An Analysis of the Effects of Occupational Variables on Childbearing Intentions", *Journal of Applied Social Psychology*, 1980, vol. 10, no. 3, p.202-223.

Loken, B., "Effects of Uniquely Purchase Information on Attitudes Toward Objects and Attitudes Toward Behaviors", *Advances in Consumer Research*, 1983a, vol. 10, p.88-93.

Loken, B. "The Theory of Reasoned Action: Examination of The Sufficiency Assumption for a Television Viewing Behavior", *Advances in Consumer Research*, 1983b, vol. 10, p.100-105.

Loken, B., "Effects of Uniquely Purchase Information on attitudes Toward Objects and Attitudes toward Behaviors", *Advances in Consumer Research*, 1983, vol. 10, p.88-93.

Macintosh, G. and Lockshin, L.W., "Retail relationships and store loyalty: a multi level perspective", *International Journal of Research in Marketing*, 1997, vol. 14, no. 5, p.487-497.

MacKay, D.B. and Villareal, A., "Performance differences in the use of graphicla and tabular displays of multivariate data", *Decision Sciences*, 1987, vol. 18, no.4, p.535-546.

Maes, P., Guttman, R.H. and Moukas, A.G., " Agents that buy and sell", *Communications of the ACM*, 1999, vol. 42, no.3, p.81-91.

Malaga, R.A., "Consumer Costs in Electronic Commerce: An Empirical Examination of Electronic Versus Traditional Markets", *Journal of Organizational Computing and Electronic Commerce*, 2001, vol. 11, no. 1, p.47-58.

Malhotra, N.K., "A Treshold Model of Store Choice", *Journal of Retailing*, 1983, vol. 59, no. 2, p.3-21.

Malhotra, N.K., *Marketing Research, An Applied Orientation*, Prentice Hall, Upper Saddle River, New Jersey, 1999.

Mano, H., "The Influence of Pre-Existing Negative Affect on Store Purchase Intentions", *Journal of Retailing*, 1999, vol. 75, no. 2, p.149-172.

Mantel, S.P. and Kardes, F.R., "The Role of Direction of Comparison, Attribute-Based Processing, and Attitude-Based Processing in Consumer Preference", *Journal of Consumer Research*, 1999, vol. 25, no. 4, p.335-352.

Markin, R.J. and Narayana, C.L., "Behavior control: are consumers beyond freedom and dignity?", *Advances in Consumer Research*, 1976, vol. 3, p.222-228.

Marks, R.B., "Operationalizing the Concept of Store Image", *Journal of Retailing*, 1976, vol. 52, no. 3, p.37-46.

Martineau, P., "The Personality of the Retail Store", *Harvard Business Review*, 1958, vol. 36, no. 1, p.47-55.

Mathwick, C., Malhotra, N. and Ridgon, E., "Experiential value: conceptualisation, measurement and application in the catalog and Internet shopping Environment", *Journal of Retailing*, 2001, vol. 77, no. 1, p.39-56.

Mayer, R.J., Davis, J.H. and Schoorman, F.D., "An integrative model of organizational trust", *Academy of Management Review*, 1995, vol. 20, no. 3, p.709-734.

Mazursky, D. and Jacoby, J., "Exploring the Development of Store Images", *Journal of retailing*, 1986, vol. 62, no. 2, p.145-165.

Mazursky, D. and Geva, A., "Temporal Decay in Satisfaction-Purchase Intention Relationship", *Psychology and Marketing*, 1989, vol. 6, no. 3, p.211-227.

McAllister, D.J., "Affect- and cognition-based trust as foundation for interpersonal cooperation in organizations", *Academy of Management Journal*, 1995, vol. 38, no.1, p.24-59.

McCarty, D., "Changing Contraceptive Usage Intentions: A test of the Fishbein Model of Intention", *Journal of Applied Social Psychology*, 1981, vol. 11, no. 3, p.192-211.

McDougall, G.h.G. and Fry, J.N., "Combining Two Methods of Image Measurement", *Journal of Retailing*, 1974, vol. 50, no. 4, p.53-61.

McSweeney, F. K. and Bierley, C., "'Recent Developments in Classical Conditioning," *Journal of Consumer Research*, 1984, vol. 11, no. 2, p.619-631.

Mehrabian, A. and Rusell, J.A., *"An Approach to Environmental Psychology"*, MIT Press, Cambridge, MA, 1974.

Miller, T.W., "Can we trust the data of online research?", *Marketing Research*, 2001, vol. 13, no. 2, p.26-32.

Moon, J-W and Kim, Y-G, "Extending the TAM for a World-Wide-Web context", *Information and Management*, 2001, vol. 38, no. 4, p.217-230.

Mowen, J.C., Beyond Consumer Decision-making, *Journal of Consumer Marketing*, vol. 5, no. 1, winter 1988, p.15-25.

Mowen, J.C. and Minor, M., *Consumer Behavior*, fifth edition, Prentice hall. Inc., Upper saddle River, New Jersey, 1998.

Mowen, J.C. and Minor, M., *Consumer Behavior: A Framework*, Prentice Hall. Inc., Upper Saddle River, New Jersey, 2001.

Muthitacharoen, A.M., "Consumer's Preference between the Internet and Conventional Stores (An Exploratory study)", *Proceedings of the American Conference on Information Systems*, August 2000, Long Beach, p.1373-1379.

Nevin, J.R. and Houston, H., " Images as a Component of Attractiveness to Intra-Urban Shopping Areas", *Journal of Retailing*, 1980, vol. 56, no. 1, p.77-93.

Netemeyer, R.G. and Burton, S., "Examining the Relationships Between Voting Behavior, Intention, Perceived Behavioral Control, and Expectation", *Journal of Applied Social Psychology*, 1990, vol. 20, no. 8, p.661-680.

Netemeyer, R.G., Andrews, J.G. and Durvasula, S., "A Comparison of Three Behavioral Intention Models: The Case of Valentine's Day Gift-Giving", *Advances in Consumer Research*, 1993, vol. 20, p.135-142.

Newman, J.E., "Predicting Absenteeism and Turnover: a field comparison of Fishbein's model and traditional job attitude measures", *Journal of Applied Psychology*, 1974, vol. 59, no. 3, p.610-615.

Nicosia, F.M., *Consumer Decision Processes: marketing and advertising implications*, Prentice Hall, inc., Englewood Cliffs, New Jersey, 1966.

NUA.com, *Analysis US ecommerce 1998-2003*, http://www.nua.com/surveys/analysis/graphs_charts/comparisons/ecommerce_us.html

Nunnally, J.C., *Psychometric Theory*, second edition, McGraw-Hill, New York, 1978.

OECD, Business-to-consumer e-commerce statistics, *Consumers in the online marketplace OECD workshop on the guidelines: one year later*, March 2001, Berlin

O'Keefe, R.M. and McEachern, T., "Web-based customer decision support systems," *Communications of the ACM*, 1998, vol. 41, no. 3, p.71-78.

O'Keefe, R. M., Cole, M., Chau, P.Y.K., Massey, A., Montoya-Weiss, M. and Perry, M., "From the user interface to the consumer interface: results from a global experiment," *International Journal of Human-Computer Studies*, 2000, vol. 53, no. 4, p.611-28.

Oliver, R.L., "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions", *Journal or Marketing Research*, 1980, vol. 17, no. 4, p.460-469.

Oxenfeldt, A.R., " Developing a favorable price-quality image", Journal of Retailing, 1974. vol. 50, no. 4, p.8-14, 115.

Pagel, M.D. and Davidson, A.R., "A Comparison of Three Social-Psychological Models of Attitude and Behavioral Plan: Prediction of Contraceptive Behavior", *Journal of Personality and Social Psychology*, 1984, vol. 47, no. 3, p.517-533.

Pavlou, P.A., "Integrating Trust in Electronic Commerce with the Technology Acceptance Model: Model Development and Validation", *Proceedings of the Seventh Americas Conference on Information Systems*, 2001, August 2001, Boston, p.816-822.

Pavlov, I. P., *Conditioned Reflexes*, Oxford University Press, Oxford, England, 1927.

Peter, J.P., "Reliability: A Review of Psychometric Basics and Recent Marketing Practices", *Journal of Marketing Research*, 1979, vol. 16, no. 1, p.6-17.

Peter, J.P. and Olson, J.C., *Consumer Behavior and Marketing Strategy*, Richard, second edition, D. Irwin, Inc, Homewood, 1990.

Piron, F., "Defining Impulse Purchasing", *Advances in Consumer Research*, 1991, vol. 18, p.509-514.

Pomazal, R.J. and Jaccard, J.J., "An Information Approach to Altruistic Behavior", *Journal of Personality and Social Psychology*, 1976, vol. 33, no. 3, p.317-326.

Pomazal, R.J. and Brown, J.D., "Understanding Drug Use Motivation: A New Look At A Current Problem", *Journal of Health and Social Behavior*, 1977, vol. 18, June, p.212-222.

Prasad, V.K. "Socioeconomic Product Risk and Patronage Preferences of Retail Shoppers", *Journal of Marketing*, 1975, vol. 31, no. 3, p.42-47.

Quelch, J.A. and Klein, L.R., "The Internet and international marketing", *Sloan Management Review*, 1996, vol 37, no. 3, p.60-75.

Raju, P.S., Bhagat, R.S. and Sheth, J.N., "Predictive Validation and Cross-Validation of the Fishbein, Rosenberg, and Sheth Models of Attitudes", *Advances in Consumer Research: proceedings of the Association for Consumer Research*, 1974, vol. 2, p.405-425.

Raman, N.V., " A qualitative investigation of web-browsing behavior", *Advances in Consumer Research*, 1997, vol. 24, p.511-516.

Rich, S.U. and Portis, B.D., "The Imageries of Department Stores", *Journal of Marketing*, 1964, vol. 28, p.10-15.

Rogers, E.M., *Diffusion of Innovations*, third edition, The Free Press, New York, 1983.

Rook, D.W. and Hoch, S.J., "Consuming Impulses", *Advances in Consumer Research*, 1985, vol. 12, p.23-27.

Rook, D.W., "The Buying Impulse", *Journal of Consumer Research*, 1987, vol. 14, no. 2, p.189-199.

Roster, C.A., "Letting go, the process and meaning of dispossession in the lives of consumers", *Advances in Consumer Research Volume*, 2001, vol. 28, p.425-430.

Rothschild, M.L. and Gaidis, W.C. "Behavioral Learning Theory: Its Relevance to Marketing and Promotions," *Journal of Marketing*, 1981, vol. 45, no. 2, p.70-78

Ryan, M.J. and Bonfield, E.H., "The Fishbein Extended Model and Consumer Behavior", *Journal of Consumer Research*, 1975, vol. 2, no. 2, p.118-136.

Ryan, M.J. and Bonfield, E.H., "Fishbein's Intentions Model: A Test of External and Pragmatic Validity", *Journal of Marketing*, 1980, vol. 44, no. 2, p.82-95.

Ryan, M.J., "Behavioral Intention Formation: The Interdependency of Attitudinal and Social Influence Variables", *Journal of Consumer Research*, 1982, vol. 9, no. 3, p.263-278.

Samli, A.C., Kelly, J.P. and Hunt, H.K., "Improving the Retail Performance by Contrasting Management- and Customer –Perceived Store Images: A Diagnostic Tool for Corrective Action", *Journal of Business Research*, 1998, vol. 43, no. 1, p.27-38.

Schau, H.J., Wolfinbarger, M. and Muniz, A., "Qualitative research perspectives in computer mediated environments", *Advances in Consumer Research*, 2001, vol. 28, p.326.

Schifter, D.E. and Ajzen, I., "Intention, Perceived Control, and Weight Loss: An Application of the Theory of Planned Behavior", *Journal of Personality and Social Psychology*, 1985, vol. 49, no. 3, p.843-851.

Schlegel, R.P., Crawford, C.A. and Sanborn, M.D., "Correspondence and Mediational Properties of the Fishbein Model: An Application to Adolescent Alchohol Use", *Journal of Experimental Social Psychology*, 1977, vol. 13, no. 5, p.421-430.

Schurr, P.H. and Ozanne, J.L., " Influences on exchange processes: buyers' preconceptions of a seller's trustworthiness and bargaining toughness", *Journal of Consumer Research*, 1985, vol. 11, no. 4, p.939-953.

Seligman, C., Hall, D. and Finegan, J., "Predicting Home Energy Consumption: an Application of the Fishbein-Ajzen model", *Advances in Consumer Research*, 1983, vol. 10, p.647-651.

Sheppard, B.H., Hartwick, J. and Warshaw, P.R., "The Theory of Reasoned Action: A Meta-Analysis of Past Research with Recommendations for Modifications and Future Research", *Journal of Consumer Research*, 1988, vol. 15, no. 3, p.325-343.

Simon, H.A., *Models of Man*. Wiley and Sons, Inc., New York, 1957.

Simon, H. A., "Satisficing", in Eatwell, J., Milgate, M. and Newman, P., *The New Palgrave: A Dictionary of Economics*, 1987, vol. 4. MacMillan, New York, p.243-245.

Singson, R.L., "Multidimensional Scaling Analysis of Store Image and Shopping Behavior", Journal of Retailing, 1975, vol. 51, no. 2, p.38-52.

Skinner, B. F., The behavior of organisms, Appleton-Century, New York, 1938.

Solomon, M., Consumer Behavior, third edition, Prentice Hall, Inc., Englewoods Cliffs, New Jersey, 1996.

Songer-Nocks, E., "Situational Factors Affecting the Weighting of Predictor Components in the Fishbein Model", Journal of Experimental Social Psychology, 1976, vol. 12, p.56-69.

Spiller, P. and Lohse, G.L., "A Classification of Internet Retail Stores", *International Journal of Electronic Commerce*", Winter 1997-98, vol. 2, no. 2, p.29-56.

Steenkamp, J-B, E.M. and Trijp, H.C.M. van, "The use of LISREL in validating marketing constructs", *International journal of research in Marketing*, 1991, vol. 8, p.283-299.

Stephenson, P.R., "Identifying Determinants of Retail Patronage", *Journal of Marketing*, 1969, vol. 33, no. 3, p.57-61.

Straub, Detmar W. (1989), "Validating instruments in MIS reseach", *MIS Quarterly*, vol. 13, no. 2, p.147-169.

Strong, Jr., E.K., *The Psychology of Selling and Advertising*, McGraw-Hill, New York, 1925.

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Stutzman, T.M. and Green, S.B., "Factors Affecting Energy consumption: Two Field Tests of the Fishbein-Ajzen Model", *The Journal of Social Psychology*, 1982, vol. 117, no. 2, p.183-201.

Subasinghe, H.S., " What's in a name? An investigation of the first stage in the decision-making process", *Asia Pacific Advances in Consumer Research*, 1998, vol. 3, p.204-209.

Swaminathan, V., Lepkowska-White, E. and Rao, B.P., "Browsers or Buyers in Cyberspace? An Investigation of Factors Influencing Electronic Exchange", *Journal of Computer Mediated Communication*, 1999, vol. 5, no. 2, http://www.ascusc.org/jcmc/vol5/issue2/swaminathan.htm.

Sweeney, J.C., Soutar, G.N. and Johnson, L.W., "The Role of Perceived Risk in the Quality-Value Relationship: A Study in a Retail Environment", *Journal of Retailing*, 1999, vol. 75, no. 1, p.77-105.

Tan, Y-H and Toen, W., "Toward a generic model of trust for electronic commerce", *International Journal of Electronic Markets*, vol. 5, no. 2, p.61-74.

Taylor, S. and P.A. Todd, "Understanding IT usage: a test of competing models", *Information Systems Research*, 1995, vol. 6, no. 2, p.144-176.

Thibaut, J.W. and Kelley, H.H., *The Social Psychology of Groups*, Wiley, New York, 1959.

Turban, E., Lee, J., King, D. and Chung, H.M., *Electronic Commerce: A Managerial Perspective*, Prentice Hall, Upper Saddle River, New Jersey, 2000.

Umanath, N.S., Scamell, R.W. and Das, R.S., "An examination of two screen/report design variables in an information recall context", *Decision Sciences*, 1990, vol. 21, no. 1, p.216-240.

Vaanholt, G., *"En zo kleait wiej verdan....:Wiesheden oet 't Tweantse Leaven"*, Boekhandel Broekhuis, Hengelo, 1999

« VanderVeen, S., "The Consumption of Heroes and the Hero Hierarchy of Effects", *Advances in Consumer Research*, 1994, vol. 21, p.332-336.

Venkatesh, V. and Davis, F.D., "A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies", *Management Science*, vol. 46, no. 2, February 2000, p.186-204.

Verhagen, T., Towards an Internet Generation Pre-Transaction Model, *Serie Research Memoranda VU*, July 1999, no. 37, p.16.

Verhagen, T., Vries, W. de & van den Ham, E., Succesvol online verkopen vereist inzicht in de ondersteuning van het aankoopproces, *Holland Management Review*, 2002, no. 81, jan-feb, p.38-49.

Vinokur-Kaplan, D., "To have-or Not to Have-Another Child: Family Planning Attitudes, Intentions, and Behavior", *Journal of Applied Social Psychology*, 1978, vol. 1, p.29-46.

Ward, J.C., Bitner, M.J. and Barnes, J., "Measuring the Prototypicality and Meaning of Retail Environments", *Journal of Retailing*, 1992, vol. 68, no.2, p.194-220.

Warshaw, P.R., Calantone, R. and Joyce, M., "A Field Application of the Fishbein and Ajzen Intention model", *The Journal of Social Psychology*, 1986, vol. 126, no. 1, p.135-136.

Webopedia: http://www.webopedia.com

Wee, C.H. and Pearce, M.R., "Patronage Behavior Toward Shopping Areas: A Proposed Model Based on Huff's Model of Retail Gravitation", *Advances in Consumer Research*, 1985, vol. 12, p.592-597.

Wee, C.H., "Shopping Area Image:It's Factor Analytic Structure and Relationships with Shopping Trips and Expenditure Behavior", *Advances in Consumer Research*, 1986, vol. 13, p.48-52.

Weinberg, P. and Gottwald, "Impulsive Consumer Buying as a Result of Emotions", *Journal of Business Research*, 1982, vol. 10, no. 1, p.43-57.

Weinberg, B.D., "Research in exploring the online consumer experience", *Advances in Consumer Research*, 2001, vol. 28, p.227-232.

West, C.J., "Results of Two Years of Study into Impulse Buying", *Journal of Marketing*, 1951, vol. 15, no. 3, p.27-35.

Williams, J. and Dardis, R., "Shopping Behavior for Soft Goods and Marketing Strategies", *Journal of Retailing*, 1972, vol. 48, no. 1, p.32-41.

Williamson, O.E., *"The Economic Institutions of Capitalism"*, The Free Press, New York, 1985.

Yin, R.K., " Case Study Research: Design and Methods", Applied Social Research Methods Series, volume 5, Sage Publications, Inc. Thousand Oaks, 1994.

Yun, G.W. and Trumbo, C.W., "Comparative Response to a Survey Executed by Post, E-mail, & Web Form", *Journal of Computer Mediated Communication*, vol. 6, no.1, 2000, http://www.ascus.org/jcmc/vol 6/issue1/yun.html.

Zimmer, M.R. and Golden, L.L., "Impressions of Retail Stores: A content Analysis of Consumer Images", *Journal of Retailing*, 1988, vol. 64, no. 3, p.265-293.

Zinkhan, G.M. and Fornell, C., "A Test of the Learning Hierarchy in High- and low Involvement Situations", *Advances in Consumer Research*, 1989, vol. 16, p.152-159.

Zuckerman, M. and Reis, H.T., "Comparison of three Models for Predicting Altruistic Behavior", *Journal of Personality and Social Psychology*, 1978, vol. 36, no. 5, p. 498-510.

Appendix A: Measurement instrument chapter six

All items were measured on a 7 point Likert strongly disagree/strongly agree scale, unless mentioned otherwise.

Perceived reputation
1. This store is well known*,**[2]
2. This store has a bad reputation in the market (reverse)
3. This store has a good reputation

Perceived size
1. This store is a very large company
2. This store is the industry's biggest supplier in the Netherlands (modified)*
3. This store is a small player in the Dutch market (modified)(reverse)

Trust in store
1. This store is trustworthy
2. This store wants to be known as one who keeps his promises (modified)
3. I trust this store keeps my best interests in mind
4. I think it makes sense to be cautious with this store (modified)(reverse)*,**
5. This retailer has more to lose than to gain by not delivering on their promises*,**
6. This store's behavior meets my expectations*,**
7. This store could not care less about servicing students*,** (modified)(reverse)

Attitude towards online purchasing
1. The idea of using this website to buy a product of service is appealing (modified)
2. I like the idea of buying a product or service on this website (modified)
3. Using the website to buy a product or service at this store would be a good idea (modified)

Online purchase intention
1. How likely is it that you would return to this store's website?
2. How likely is it that you would consider purchasing from this website in the short term? (modified)
3. How likely is it that you would consider purchasing from this website in the longer term? (modified)
4. For this purchase, how likely is it that you would buy from this store?

Risk perception
1. How would you characterise the decision to buy a product through this website? (a very small risk - a very big risk)
2. How would you characterise the decision to buy a product through this website? (high potential for loss – high potential for gain)(Reverse)
3. How would you characterise the decision to buy a product through this website? (a very negative situation – a very positive sitation)(Reverse)

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[2] * indicates dropped item by Jarvenpaa et al., 2000. ** indicates dropped item in our own research, "modified" indicates adaptations from original work

4. What is the likelihood of your making a good bargain by buying from this store through the Internet? (very unlikely – very likely) (Reverse)

Ease of use
1. Learning to use the website is easy
2. It is easy to get the website to do what I want
3. The interactions with the website are clear and understandable
4. The website is flexible to interact with
5. The website is easy to use

Usefulness
1. The online purchasing process on this website is fast
2. It is easy to purchase online on this website
3. This website is useful to buy the products or services they sell

Appendix B: Online stores under investigation

Hot-Orange (music department):
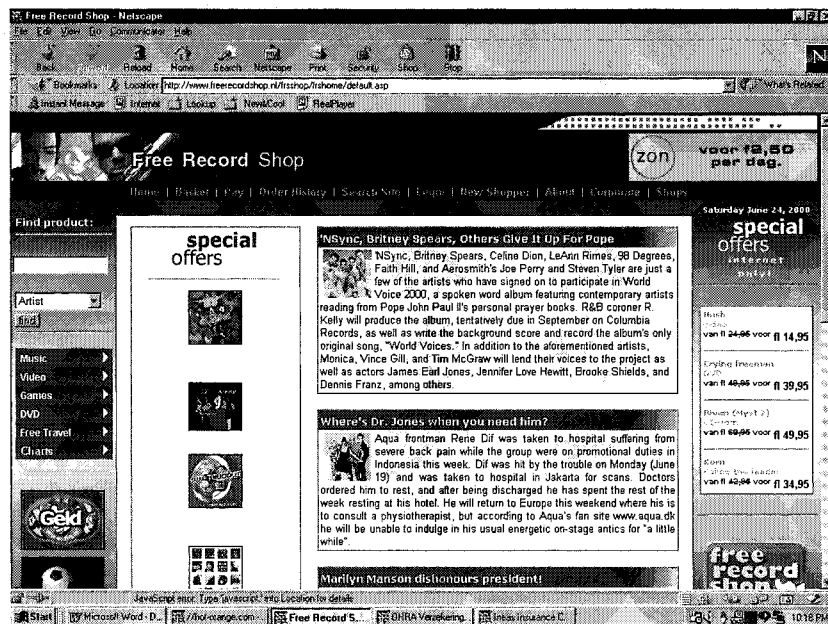
Free Record Shop: CDs
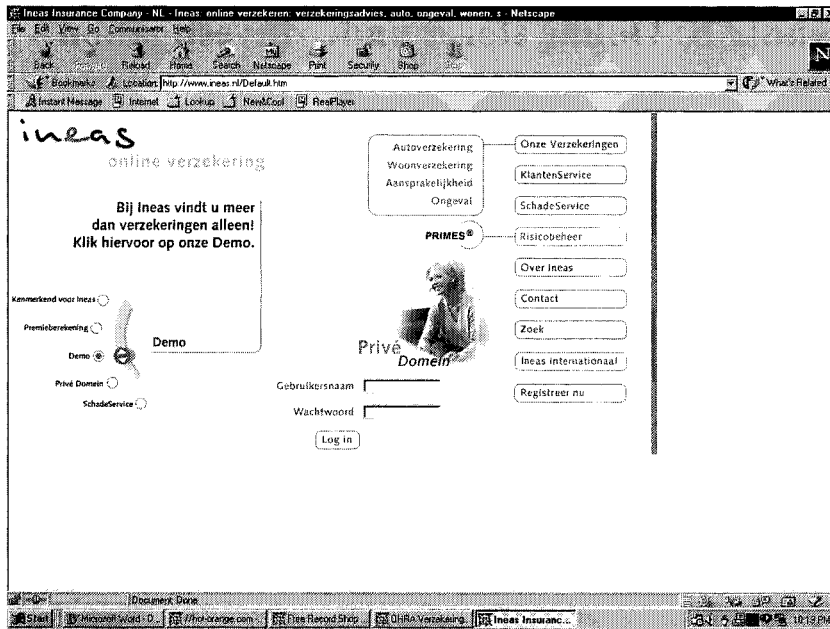
Ineas: insurances
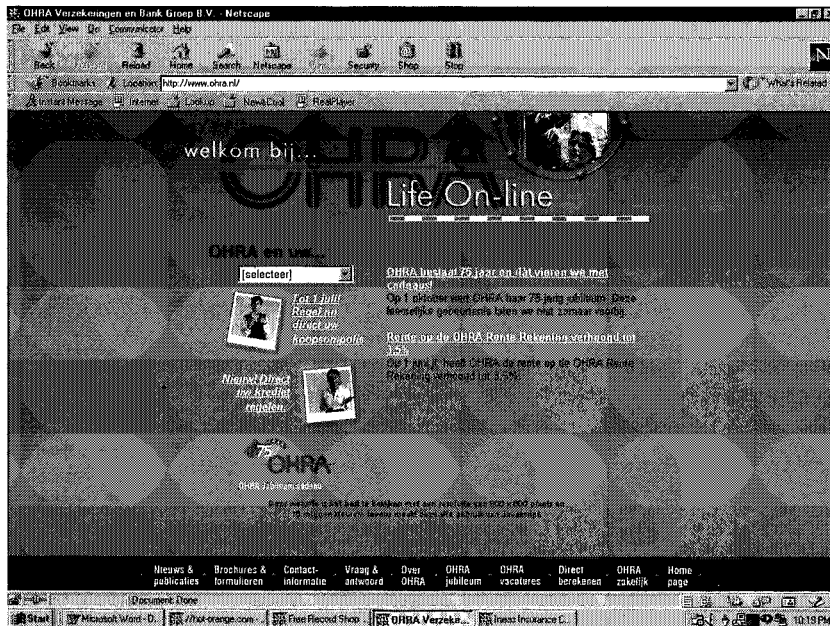
Ohra: insurances

Appendix C: Online questionnaire (Dutch)

Welkom bij deel 1 van de enquete voor het vak Informatiesystemen. U hoeft dit deel van de enquete slechts eenmaal in te vullen.

Voor assistentie kunt u contact opnemen met Tibert Verhagen.
E-mail: tverhagen@econ.vu.nl
Tel. 020 4446059

1)	Vul hier uw studentnummer in (verplicht). Dit nummer dient slechts als controlemiddel en zal niet in de analyse worden meegenomen.	
		studentnummer

2)	Wat is uw leeftijd?	
		(leeftijd in jaren)

3)	Bent u:	
	O	Man
	O	Vrouw

4)	Maakt u thuis gebruik van een Internet aansluiting?	
	O	ja
	O	nee

5)	Hoeveel ervaring heeft u reeds met het gebruik van Internet?	
	O	niet
	O	1 jaar
	O	2 jaar
	O	3 jaar
	O	4 jaar of langer

6)	Hoe vaak heeft u iets via Internet gekocht?	
	O	nooit
	O	1 maal
	O	2 maal
	O	3 maal
	O	4 maal of meer

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Comments on question (Optional):	

Welkom bij deel 2 van de enquete voor het vak Informatiesystemen. Vul deze enquete vier maal in, telkens voor een andere website uit de lijst.

Voor assistentie kunt u contact opnemen met Tibert Verhagen.
E-mail: tverhagen@econ.vu.nl
Tel. 020 4446059

1)	Vul hieronder uw voor- en achternaam in:
	voor- en achternaam

2)	Vul hier uw studentnummer in (verplicht). Dit nummer dient slechts als controlemiddel en zal niet in de analyse worden meegenomen.
	studentnummer

3)	Welke website heeft u bekeken?
	O	www.hot-orange.com (Muziekafdeling)
	O	www.freerecordshop.nl
	O	www.ineas.nl
	O	www.ohra.nl

Het eerste deel van de vragen gaat over de reputatie van de onderneming achter deze website (dus: Hot-Orange, Free Record Shop, Ineas of Ohra).

4) Deze onderneming is welbekend.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

5) Deze onderneming heeft een slechte reputatie in de markt.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

6) Deze onderneming heeft een goede reputatie.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

De volgende vragen gaan over uw beeld van de grootte van de onderneming.

7) Deze onderneming is een zeer grote organisatie.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

8) Deze onderneming is een van de grootste Nederlandse organisaties in haar sector.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

9) Deze onderneming is een kleine speler in de Nederlandse markt.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

De volgende vragen gaan over uw vertrouwen in de onderneming.

10) Deze onderneming is te vertrouwen.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

11) Deze onderneming wil bekend staan als een bedrijf dat zijn beloftes nakomt.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

12) Ik vertrouw erop dat deze winkel het beste met mij voor heeft.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

13) Ik denk dat het verstandig is om met deze onderneming voorzichtig te zijn.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

14) Deze onderneming heeft meer te verliezen dan te winnen bij het niet nakomen van beloftes.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

15) Het gedrag van deze onderneming voldoet aan mijn verwachtingen.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

16) Deze onderneming heeft weinig op met dienstverlening aan studenten.

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geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

De volgende vragen gaan over de gebruiksvriendelijkheid van de website.

17) Het is gemakkelijk om de website te leren gebruiken.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

18) Het is gemakkelijk om de website te laten doen wat ik wil.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

19) De interactie met de website is duidelijk en begrijpelijk.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

20) De website is flexibel om mee om te gaan.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

21) De website is gemakkelijk in het gebruik.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

De volgende vragen gaan over het aankoopproces op de website. Probeer hiervan een indruk te krijgen zonder zelf producten of diensten aan te schaffen!

22) Het aankoopproces op deze website verloopt snel.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

23) Het is gemakkelijk om via deze website een product of dienst aan te schaffen.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

24) Deze website is bruikbaar om de producten of diensten aan te schaffen die zij aanbieden.						
geheel mee oneens			neutraal			geheel mee eens
O	O	O	O	O	O	O

De volgende vragen gaan over uw houding ten opzichte van een aankoop op deze website.

25)	De gedachte om via deze website een product of dienst aan te schaffen is aantrekkelijk.						
geheel mee oneens			neutraal			geheel mee eens	
O	O	O	O	O	O	O

26)	Ik vind het een goed idee om op deze website een product of dienst aan te schaffen.						
geheel mee oneens			neutraal			geheel mee eens	
O	O	O	O	O	O	O

27)	Om via deze website een product of dienst bij de betreffende onderneming te kopen zou een goed idee zijn.						
geheel mee oneens			neutraal			geheel mee eens	
O	O	O	O	O	O	O

De volgende vragen gaan over uw bereidheid tot een aankoop op deze website.

28)	Hoe waarschijnlijk is het dat u naar de website van deze onderneming zult terugkeren?						
zeer onwaarschijnlijk			neutraal			zeer waarschijnlijk	
O	O	O	O	O	O	O

29)	Hoe waarschijnlijk is het dat u op korte termijn een aankoop op deze website zou overwegen?						
zeer onwaarschijnlijk			neutraal			zeer waarschijnlijk	
O	O	O	O	O	O	O

30)	Hoe waarschijnlijk is het dat u op langere termijn een aankoop op deze website zou overwegen?						
zeer onwaarschijnlijk			neutraal			zeer waarschijnlijk	
O	O	O	O	O	O	O

31)	Hoe waarschijnlijk is het dat u een product of dienst zult aanschaffen via deze website als u het nodig heeft?						
zeer onwaarschijnlijk			neutraal			zeer waarschijnlijk	
O	O	O	O	O	O	O

De volgende vragen gaan over uw beeld van de risico's bij deze website.

32)	Hoe zou u de beslissing karakteriseren om via deze website een product of dienst aan te schaffen (1)?						
een zeer klein risico			neutraal			een zeer groot risico	
O	O	O	O	O	O	O

33)	Hoe zou u de beslissing karakteriseren om via deze website een product of dienst aan te schaffen (2)?						
een grote kans dat ik ik erop achteruit ga			neutraal			een grote kans dat ik erop vooruit ga	
O	O	O	O	O	O	O

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34)	Hoe zou u de beslissing karakteriseren om via deze website een product of dienst aan te schaffen (3)?					
een zeer negatieve situatie			neutraal		een zeer positieve situatie	
O	O	O	O	O	O	O

35)	Hoe waarschijnlijk is het dat u een goede aankoop zult doen door op deze website een product of dienst te kopen?					
zeer onwaarschijnlijk			neutraal		zeer waarschijnlijk	
O	O	O	O	O	O	O

Hartelijk dank voor uw deelname aan dit onderzoek!

Appendix D: Confirmatory Factor Analysis Results

Results Hot-Orange

Chi-square = 484.181
Degrees of freedom = 310
Probability level = 0.000

Maximum Likelihood Estimates:

Regression Weights						
			Estimate	S.E.	P	Standardised Estimate
perceived size	→	trust in store	0.054	0.082	0.516	0.058
perceived reputation	→	trust in store	0.366	0.081	0.000	0.481
trust in store	→	perceived risk	-0.569	0.117	0.000	-0.636
perceived website ease of use	→	perceived website usefulness	0.718	0.103	0.000	0.586
trust in store	→	attitude towards purchasing at the store	-0.101	0.173	0.559	-0.057
perceived risk	→	attitude towards purchasing at the store	-1.538	0.282	0.000	-0.780
perceived website usefulness	→	attitude towards purchasing at the store	0.055	0.115	0.629	0.037
perceived website ease of use	→	attitude towards purchasing at the store	0.208	0.138	0.132	0.113
perceived risk	→	purchasing intention	-0.415	0.234	0.075	-0.177
attitude towards purchasing at the store	→	purchasing intention	0.726	0.119	0.000	0.612
perceived website usefulness	→	purchasing intention	-0.147	0.101	0.147	-0.082
perceived size	→	SIZE1	1.000			0.575
perceived size	→	SIZE2	1.576	0.193	0.000	0.825
perceived size	→	SIZE3REV	1.675	0.207	0.000	0.864
perceived reputation	→	REP2REV	1.000			0.959
perceived reputation	→	REP3	0.657	0.084	0.000	0.731
trust in store	→	TRUST1	1.000			0.692
trust in store	→	TRUST2	0.792	0.127	0.000	0.556
trust in store	→	TRUST3	1.036	0.155	0.000	0.615
perceived risk	→	RISK4REV	1.443	0.224	0.000	0.732
perceived risk	→	RISK3REV	1.224	0.184	0.000	0.799

perceived risk	→	RISK2REV	1.254	0.191	0.000	0.773
perceived risk	→	RISK1	1.000			0.469
attitude towards purchasing at the store	→	ATT1	1.000			0.861
attitude towards purchasing at the store	→	ATT2	0.980	0.054	0.000	0.899
attitude towards purchasing at the store	→	ATT3	0.953	0.051	0.000	0.919
purchasing intention	→	INT1	1.000			0.846
purchasing intention	→	INT2	0.887	0.055	0.000	0.860
purchasing intention	→	INT3	1.038	0.058	0.000	0.916
purchasing intention	→	INT4	0.888	0.063	0.000	0.796
perceived website ease of use	→	EASE1	1.000			0.797
perceived website ease of use	→	EASE2	1.134	0.104	0.000	0.719
perceived website ease of use	→	EASE3	1.031	0.084	0.000	0.797
perceived website ease of use	→	EASE4	1.136	0.104	0.000	0.717
perceived website ease of use	→	EASE5	1.074	0.089	0.000	0.780
perceived website usefulness	→	USEFUL1	1.000			0.758
perceived website usefulness	→	USEFUL2	1.079	0.103	0.000	0.858
perceived website usefulness	→	USEFUL3	0.761	0.084	0.000	0.663

Intercepts			
		Estimate	S.E.
	SIZE1	3.670	0.095
	SIZE2	4.037	0.104
	SIZE3REV	4.151	0.106
	REP2REV	4.766	0.069
	REP3	4.550	0.059
	TRUST1	5.326	0.072
	TRUST2	5.794	0.071
	TRUST3	5.312	0.084
	RISK4REV	3.202	0.088
	RISK3REV	3.422	0.069
	RISK2REV	3.546	0.073
	RISK1	3.101	0.096
	ATT1	4.674	0.103
	ATT2	4.463	0.096
	ATT3	4.610	0.092
	INT1	3.995	0.124

	INT2	2.771	0.108
	INT3	3.936	0.119
	INT4	3.661	0.117
	EASE1	6.206	0.060
	EASE2	5.899	0.075
	EASE3	5.917	0.062
	EASE4	5.628	0.076
	EASE5	6.009	0.066
	USEFUL1	5.546	0.077
	USEFUL2	5.835	0.074
	USEFUL3	5.963	0.067

Squared Multiple Correlations	Estimate
trust in store	0.256
perceived website usefulness	0.343
perceived risk	0.405
attitude towards purchasing at the store	0.586
purchasing intention	0.562
USEFUL3	0.439
USEFUL2	0.736
USEFUL1	0.574
EASE5	0.609
EASE4	0.513
EASE3	0.635
EASE2	0.517
EASE1	0.635
INT4	0.633
INT3	0.839
INT2	0.739
INT1	0.716
ATT3	0.844
ATT2	0.808
ATT1	0.742
RISK1	0.220
RISK2REV	0.597
RISK3REV	0.638
RISK4REV	0.536
TRUST3	0.379
TRUST2	0.309
TRUST1	0.479
REP3	0.534
REP2REV	0.919
SIZE3REV	0.747
SIZE2	0.680
SIZE1	0.331

Results Free Record Shop

Chi-square = 473.155
Degrees of freedom = 310
Probability level = 0.000

Maximum Likelihood Estimates:

Regression Weights						
			Estimate	S.E.	P	Standardised Estimate
perceived size	→	trust in store	0.393	0.176	0.026	0.179
perceived reputation	→	trust in store	0.476	0.057	0	0.674
trust in store	→	perceived risk	-0.41	0.087	0	-0.542
perceived website ease of use	→	perceived website usefulness	0.668	0.064	0	0.701
trust in store	→	attitude towards purchasing at the store	-0.078	0.126	0.536	-0.045
perceived risk	→	attitude towards purchasing at the store	-1.617	0.298	0	-0.707
perceived website usefulness	→	attitude towards purchasing at the store	0.078	0.081	0.335	0.076
perceived website ease of use	→	attitude towards purchasing at the store	0.226	0.077	0.003	0.231
perceived risk	→	purchasing intention	-0.682	0.265	0.01	-0.241
attitude towards purchasing at the store	→	purchasing intention	0.669	0.113	0	0.541
perceived website usefulness	→	purchasing intention	0.092	0.073	0.204	0.073
perceived size	→	SIZE1	1			0.341
perceived size	→	SIZE2	1.794	0.44	0	0.759
perceived size	→	SIZE3REV	1.877	0.466	0	0.776
perceived reputation	→	REP2REV	1			0.921
perceived reputation	→	REP3	1.013	0.059	0	0.945
trust in store	→	TRUST1	1			0.715
trust in store	→	TRUST2	1.006	0.127	0	0.607
trust in store	→	TRUST3	1.465	0.146	0	0.829
perceived risk	→	RISK4REV	1.666	0.295	0	0.632

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perceived risk	→	RISK3REV	1.848	0.295	0	0.889
perceived risk	→	RISK2REV	1.822	0.296	0	0.809
perceived risk	→	RISK1	1			0.428
attitude towards purchasing at the store	→	ATT1	1			0.862
attitude towards purchasing at the store	→	ATT2	1.032	0.053	0	0.926
attitude towards purchasing at the store	→	ATT3	1.005	0.052	0	0.926
purchasing intention	→	INT1	1			0.875
purchasing intention	→	INT2	0.751	0.049	0	0.819
purchasing intention	→	INT3	0.972	0.054	0	0.895
purchasing intention	→	INT4	0.861	0.055	0	0.824
perceived website ease of use	→	EASE1	1			0.88
perceived website ease of use	→	EASE2	0.934	0.05	0	0.883
perceived website ease of use	→	EASE3	1.078	0.053	0	0.913
perceived website ease of use	→	EASE4	0.863	0.051	0	0.835
perceived website ease of use	→	EASE5	1.014	0.046	0	0.942
perceived website usefulness	→	USEFUL1	1			0.87
perceived website usefulness	→	USEFUL2	1.086	0.066	0	0.93
perceived website usefulness	→	USEFUL3	0.625	0.067	0	0.585

Intercepts			
		Estimate	S.E.
	SIZE1	6.078	0.066
	SIZE2	6.401	0.053
	SIZE3REV	6.415	0.054
	REP2REV	5.977	0.076

	REP3	5.871	0.075
	TRUST1	5.88	0.069
	TRUST2	5.512	0.082
	TRUST3	5.244	0.087
	RISK4REV	3.364	0.098
	RISK3REV	3.65	0.077
	RISK2REV	3.599	0.084
	RISK1	2.834	0.087
	ATT1	4.171	0.099
	ATT2	4.037	0.095
	ATT3	4.101	0.093
	INT1	3.613	0.121
	INT2	2.378	0.097
	INT3	3.369	0.114
	INT4	3.203	0.11
	EASE1	4.949	0.099
	EASE2	4.811	0.092
	EASE3	4.645	0.103
	EASE4	4.65	0.09
	EASE5	4.774	0.094
	USEFUL1	4.705	0.096
	USEFUL2	4.829	0.097
	USEFUL3	5.456	0.089

Squared Multiple Correlations	Estimate
trust in store	0.520
perceived website usefulness	0.491
perceived risk	0.294
attitude towards purchasing at the store	0.582
purchasing intention	0.564
USEFUL3	0.343
USEFUL2	0.865
USEFUL1	0.756
EASE5	0.887
EASE4	0.697
EASE3	0.834
EASE2	0.780
EASE1	0.775
INT4	0.680
INT3	0.801
INT2	0.671
INT1	0.765
ATT3	0.857
ATT2	0.858
ATT1	0.743
RISK1	0.183
RISK2REV	0.654
RISK3REV	0.790
RISK4REV	0.400

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TRUST3	0.687
TRUST2	0.369
TRUST1	0.511
REP3	0.893
REP2REV	0.848
SIZE3REV	0.601
SIZE2	0.576
SIZE1	0.116

Results Ineas

Chi-square = 493.227
Degrees of freedom = 310
Probability level = 0.000

Maximum Likelihood Estimates:

Regression Weights						
			Estimate	S.E.	P	Standardised Estimate
perceived size	→	trust in store	0.137	0.099	0.166	0.135
perceived reputation	→	trust in store	1.871	0.379	0	0.797
trust in store	→	perceived risk	-0.733	0.102	0	-0.696
perceived website ease of use	→	perceived website usefulness	0.649	0.08	0.	0.569
trust in store	→	attitude towards purchasing at the store	-0.223	0.177	0.209	-0.129
perceived risk	→	attitude towards purchasing at the store	-1.203	0.184	0	-0.731
perceived website usefulness	→	attitude towards purchasing at the store	0.175	0.08	0.027	0.153
perceived website ease of use	→	attitude towards purchasing at the store	0.094	0.095	0.319	0.072
perceived risk	→	purchasing intention	-0.153	0.095	0.108	-0.123
attitude towards purchasing at the store	→	purchasing intention	0.513	0.065	0	0.678
perceived website usefulness	→	purchasing intention	0.054	0.046	0.244	0.062
perceived size	→	SIZE1	1			0.674
perceived size	→	SIZE2	1.146	0.12	0	0.803
perceived size	→	SIZE3REV	1.216	0.127	0	0.861
perceived reputation	→	REP2REV	1			0.56
perceived reputation	→	REP3	0.762	0.148	0	0.515
trust in store	→	TRUST1	1			0.851
trust in store	→	TRUST2	0.485	0.09	0	0.4
trust in store	→	TRUST3	0.706	0.091	0	0.579

perceived risk	→	RISK4REV	1.048	0.113	0	0.727
perceived risk	→	RISK3REV	0.933	0.087	0	0.869
perceived risk	→	RISK2REV	0.888	0.085	0	0.841
perceived risk	→	RISK1	1			0.663
attitude towards purchasing at the store	→	ATT1	1			0.925
attitude towards purchasing at the store	→	ATT2	0.945	0.035	0	0.956
attitude towards purchasing at the store	→	ATT3	0.91	0.039	0	0.912
purchasing intention	→	INT1	1			0.777
purchasing intention	→	INT2	0.538	0.051	0	0.702
purchasing intention	→	INT3	1.078	0.078	0	0.867
purchasing intention	→	INT4	1.182	0.083	0	0.897
perceived website ease of use	→	EASE1	1			0.839
perceived website ease of use	→	EASE2	1.04	0.065	0	0.856
perceived website ease of use	→	EASE3	1.052	0.061	0	0.892
perceived website ease of use	→	EASE4	1.007	0.062	0	0.865
perceived website ease of use	→	EASE5	1.145	0.06	0	0.949
perceived website usefulness	→	USEFUL1	1			0.885
perceived website usefulness	→	USEFUL2	1.021	0.061	0	0.939
perceived website usefulness	→	USEFUL3	0.691	0.065	0	0.642

Intercepts			
		Estimate	S.E.
	SIZE1	3.701	0.09
	SIZE2	3.079	0.087
	SIZE3REV	3.187	0.086
	REP2REV	4.238	0.047
	REP3	4.089	0.039
	TRUST1	4.537	0.073
	TRUST2	5.257	0.075
	TRUST3	4.93	0.076
	RISK4REV	4.009	0.094
	RISK3REV	4.033	0.07
	RISK2REV	3.944	0.069
	RISK1	3.939	0.098
	ATT1	3.603	0.116
	ATT2	3.383	0.106
	ATT3	3.598	0.107
	INT1	2.285	0.104
	INT2	1.537	0.062
	INT3	2.421	0.101
	INT4	2.584	0.107
	EASE1	5.243	0.098
	EASE2	5.145	0.1
	EASE3	5.168	0.097
	EASE4	4.967	0.096
	EASE5	5.154	0.099
	USEFUL1	4.332	0.106
	USEFUL2	4.636	0.102
	USEFUL3	5.103	0.101

Squared Multiple Correlations	Estimate
trust in store	0.721
perceived website usefulness	0.323
perceived risk	0.485
attitude towards purchasing at the store	0.505
purchasing intention	0.617
USEFUL3	0.412
USEFUL2	0.882
USEFUL1	0.783
EASE5	0.900
EASE4	0.748
EASE3	0.795
EASE2	0.732
EASE1	0.703
INT4	0.805
INT3	0.753
INT2	0.493
INT1	0.604

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ATT3	0.832
ATT2	0.915
ATT1	0.856
RISK1	0.439
RISK2REV	0.708
RISK3REV	0.755
RISK4REV	0.528
TRUST3	0.335
TRUST2	0.160
TRUST1	0.723
REP3	0.265
REP2REV	0.314
SIZE3REV	0.741
SIZE2	0.644
SIZE1	0.455

Results Ohra

Chi-square = 470.723
Degrees of freedom = 310
Probability level = 0.000

Maximum Likelihood Estimates:

Regression Weights			Estimate	S.E.	P	Standardised Estimate
perceived size	→	trust in store	0.185	0.098	0.06	0.161
perceived reputation	→	trust in store	0.599	0.084	0	0.671
trust in store	→	perceived risk	-0.61	0.118	0	-0.47
perceived website ease of use	→	perceived website usefulness	0.567	0.096	0	0.425
trust in store	→	attitude towards purchasing at the store	-0.035	0.141	0.804	-0.019
perceived risk	→	attitude towards purchasing at the store	-0.814	0.134	0	-0.579
perceived website usefulness	→	attitude towards purchasing at the store	0.248	0.059	0	0.299
perceived website ease of use	→	attitude towards purchasing at the store	0.023	0.075	0.753	0.021
perceived risk	→	purchasing intention	-0.139	0.115	0.229	-0.104
attitude towards purchasing at the store	→	purchasing intention	0.534	0.095	0	0.561
perceived website usefulness	→	purchasin purchasing	0.027	0.055	0.627	0.034
perceived size	→	SIZE1	1			0.638
perceived size	→	SIZE2	1.729	0.19	0	0.861
perceived size	→	SIZE3REV	1.51	0.168	0	0.795
perceived reputation	→	REP2REV	1			0.77
perceived reputation	→	REP3	1.012	0.091	0	0.914
trust in store	→	TRUST1	1			0.801
trust in store	→	TRUST2	0.9	0.101	0	0.659

trust in store	→	TRUST3	1.048	0.119	0	0.652
perceived risk	→	RISK4REV	1.087	0.126	0	0.747
perceived risk	→	RISK3REV	0.974	0.104	0	0.862
perceived risk	→	RISK2REV	0.911	0.102	0	0.784
perceived risk	→	RISK1	1			0.616
attitude towards purchasing at the store	→	ATT1	1			0.826
attitude towards purchasing at the store	→	ATT2	1.119	0.07	0	0.922
attitude towards purchasing at the store	→	ATT3	0.991	0.07	0	0.83
purchasing intention	→	INT1	1			0.734
purchasing intention	→	INT2	0.614	0.066	0	0.666
purchasing intention	→	INT3	1.134	0.093	0	0.883
purchasing intention	→	INT4	1.065	0.092	0	0.825
perceived website ease of use	→	EASE1	1			0.884
perceived website ease of use	→	EASE2	1.098	0.055	0	0.906
perceived website ease of use	→	EASE3	0.912	0.053	0	0.844
perceived website ease of use	→	EASE4	1.006	0.06	0	0.839
perceived website ease of use	→	EASE5	1.112	0.053	0	0.925
perceived website usefulness	→	USEFUL1	1			0.847
perceived website usefulness	→	USEFUL2	1.135	0.073	0	0.925
perceived website usefulness	→	USEFUL3	0.988	0.078	0	0.756

Intercepts			
		Estimate	S.E.
	SIZE1	5,902	0,064
	SIZE2	5,628	0,082
	SIZE3REV	5,86	0,077
	REP2REV	5,967	0,068
	REP3	5,879	0,058
	TRUST1	5,926	0,058
	TRUST2	5,963	0,064
	TRUST3	5,516	0,075
	RISK4REV	3,54	0,088
	RISK3REV	3,684	0,069
	RISK2REV	3,651	0,071
	RISK1	3,084	0,099
	ATT1	3,856	0,103
	ATT2	3,619	0,103
	ATT3	3,967	0,102
	INT1	3,121	0,111
	INT2	1,851	0,075
	INT3	2,995	0,104
	INT4	3,079	0,105
	EASE1	5,372	0,087
	EASE2	5,209	0,093
	EASE3	5,326	0,083
	EASE4	5,047	0,092
	EASE5	5,186	0,092
	USEFUL1	3,567	0,121
	USEFUL2	3,781	0,126
	USEFUL3	3,986	0,134

Squared Multiple Correlations	Estimate
trust in store	0.591
perceived website usefulness	0.181
perceived risk	0.221
attitude towards purchasing at the store	0.428
purchasing intention	0.406
USEFUL3	0.571
USEFUL2	0.856
USEFUL1	0.717
EASE5	0.856
EASE4	0.704
EASE3	0.713
EASE2	0.821
EASE1	0.781
INT4	0.680
INT3	0.779
INT2	0.443
INT1	0.539
ATT3	0.689

ATT2	0.850
ATT1	0.682
RISK1	0.380
RISK2REV	0.615
RISK3REV	0.743
RISK4REV	0.558
TRUST3	0.425
TRUST2	0.434
TRUST1	0.641
REP3	0.836
REP2REV	0.594
SIZE3REV	0.632
SIZE2	0.742
SIZE1	0.406

Appendix E: Focus group session: from store image to online store image

Introduction:
The impact of store features on consumer's purchase intentions is a topic that has received remarkably little attention in consumer and retail research (Korgaonkar, Lund and Price, 1985; Ward, Bittner, and Barnes, 1992). In this context, our research can be seen as one of the few attempts to explore this relation. However, instead of focusing on traditional retail settings we will examine the impact of online store attributes on the online purchase intention. The outcomes of a theoretical and empirical review (chapter 4 thesis Verhagen, forthcoming) support the decision to apply a traditional retail construct to measure the perception of store features: store image.

Many authors have defined store image. For example:
Store image is "the way in which the store is defined in the shopper's mind, partly by its functional qualities and partly by an aura of psychological attributes" (Martineau, 1958, p.47).
Store image is "the total conceptualized or expected reinforcement that a person associates with shopping at a particular store" (Kunkel and Berry, 1968, (p.22).
Store image is: "the complex of a consumer's perceptions of a store on functional attributes and emotional attributes" (Houston and Nevin, 1981, p.677).
Store image is a "set of attitudes based upon evaluation of those store attributes deemed important by consumers (James, Durand and Dreeves, 1976, p.25).

Although the store image definitions above are based on different perspectives, their essence is rather similar. Most researchers stress that store image consists of a combination of tangible or functional factors and intangible or psychological factors (Lindquist, 1974, p.31; Zimmer and Golden, 1988). These factors are also referred to as store attributes (Houston and Nevin, 1981). The functional attributes refer to features like merchandise selection, prices ranges and store layout (Mazurski and Jacoby, 1986). The psychological attributes refer to aspects like character of sales personnel, service, store layout and reputation (Rich and Portis, 1964).

Store image as defined and described above is based on traditional (offline) retail settings. Our research, in contrast, aims to use store image in an online setting to investigate the impact of both functional and psychological online store attributes on consumer's online purchase intentions. Because reliable online store image scales are lacking, we decided to 'translate' an existing (offline) scale to an online alternative.

The assignment:
The purpose of this assignment is to evaluate the applicability of offline store image items in an online setting. In other words, the question is: "to what extent can the offline items be translated to a web store"? As basis, we use the offline store image scale constructed by Dickson and Albaum (1977). This 29-item scale has been chosen due to its proven reliability in several settings (Cronbach alpha .91).

Hereby, we invite you to complete the provided questionnaire. Please, read the questions carefully before judging about the applicability of the original scale items in an online setting.

For the sake of completeness, we request you to motivate all answers (indicated by "your considerations?" at the end of each question).

References (the most important):

Bearden, W.O., Netemeyer, R.G. and Mobley, M.F., "Handbook of Marketing Scales, Multi-Item Measures for Marketing and Consumer Behavior Research",1993, Sage Publications. Newbury Park, USA.

Bruner II, G.C. and Hensel, Marketing Scales Handbook: a compilation of multi- item measures. 1992 American Marketing Association, Chicago Illinois.

Dickson, J. and Albaum, G., "A Method for Developing Tailormade Semantic Differentials for Specific Marketing Content Areas, Journal of Marketing Research, 1977, vol 14, p.87-91.

Golden, L.L., Albaum, G. and Zimmer, M., "The numerical comparative scale: an economic format for retail image measurement", Journal of Retailing, 1987, vol 63, no 4, p.393-410 (derived from a scale with very high reliabilities).

Houston, M.J. and Nevin, J.R., "Retail Shopping Area Image: Structure and Congruency between Downtown Areas and Shopping Centers", Advances in Consumer Research, 1981, vol 8, p.677-681.

James, D.L., Durand, R.M. and Dreves, R.A., "The Use of a Multi-Attribute Attitude in a Store Image Study", Journal of Retailing, 1976, vol 52, p.23-32.

Kelly, R.F. and Stephenson, R., "The Semantic Differential: An Information Source for Designing Retail Patronage Appeals", Journal of Marketing, 1967, vol 31, p.43-47.

Korgaonkar, P.K., Lund, D. and Price, B., "A Structural Equations Approach Toward Examination of Store Attitude and Store Patronage Behavior", Journal of Retailing, 1985

Kunkel, J.H. and Berry, L.L., "A Behavioral Conception of Retail Image", Journal of Marketing, 1968, vol 32, p.21-27.

Lindquist, J.D., Meaning of Image, Journal of Retailing, 1974, vol50, p. 29-38

Martineau, P., "The Personality of the Retail Store", Harvard Business Review, 1958, vol 36, no 1, p.47-55.

Mazursky, D. and Jacoby, J., "Exploring the Development of Store Images", Journal of retailing,1986, vol 62, no 2, p.145-165.

McDougall, G.h.G. and Fry, J.N., "Combining Two Methods of Image Measurement", Journal of Retailing, 1974, vol 50, no4, p.53-61.

Rich, S.U. and Portis, B.D., "The "Imageries" of Department Stores, Journal of Marketing, 1964, vol 28, p.10-15.

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Stephenson, P.R., "Identifying Determinants of Retail Patronage", Journal of Marketing, 1969, Vol 33, July, p.57-61.

Ward, J.C., Bittner, M.J. and Barnes, J., "Measuring the Prototypicality and Meaning of Retail Environments", Journal of Retailing,1992, vol 68, no2, p.194-220.

Zimmer, M.R. and Golden, L.L., "Impressions of Retail Stores: A content Analysis of Consumer Images", Journal of Retailing, 1988, vol 64, no3, p.265-293.

The Questionnaire:

1)   crammed merchandise – well spaced merchandise
- definition: n.a.
- description: crammed = jammed, jam-packed, packed like sardines

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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....

2)   bright store – dull store
- definition: n.a.
- description: bright = cheerful, happy, positive, upbeat
             dull   = boring, unexciting

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable　　　　　　　*Neutral*　　　　　　　　*Very*
　　　　　　　　　　　　　　　　　　　　　　　applicable
1　　　2　　　3　　　4　　　5　　　6　　　7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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....

3)　　ads frequently seen by you – ads infrequently seen by you
- definition: n.a.
- description: ads = advertisements

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable　　　　　　　*Neutral*　　　　　　　　*Very*
　　　　　　　　　　　　　　　　　　　　　　　applicable
1　　　2　　　3　　　4　　　5　　　6　　　7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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4)   low quality products – high quality products
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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....

5)   well organized layout – unorganized layout
- definition: n.a.
- description: layout = landscape and organization of the store

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*

[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
....
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....

6)   low prices –high prices
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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....

7)   bad sales on products – good sales on products
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable   *Neutral*   *Very*
                                                                                    applicable
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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....

8)   unpleasant store to shop in - pleasant store to shop in
* definition: n.a.
* description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable   *Neutral*   *Very*
                                                                                    applicable
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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....

9)   good store – bad store
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very *inapplicable*			*Neutral*			*Very* *applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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....

10)   inconvenient location – convenient location
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very *inapplicable*			*Neutral*			*Very* *applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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11)   low pressure salesmen – high pressure salesmen
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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....

12)   big store – small store
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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13) bad buys on products – good buys on products
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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14) unattractive store – attractive store
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable   *Neutral*   *Very*
                                                          applicable
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)
[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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15)   unhelpful salesmen – helpful salesmen
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable   *Neutral*   *Very*
                                                          applicable
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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16)   good service – bad service
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very   *Very*
inapplicable   *Neutral*   *applicable*
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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17)   too few clerks – too many clerks
- definition: n.a.
- description: clerks = shop assistant, sales-clerk

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very   *Very*
inapplicable   *Neutral*   *applicable*
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*

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[ ] *modify – major*
[ ] *omit*

Your considerations?:...

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18) friendly personnel – unfriendly personnel

- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			*Neutral*			*Very applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...

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19) Easy to return purchases - hard to return purchases

- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable	*Neutral*	*Very applicable*

1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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20) unlimited selection of products – limited selection of products
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			*Neutral*			*Very applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
....
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....

21) unreasonable prices for value – reasonable prices for value

- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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22)   messy -neat
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..

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23)   spacious shopping – crowded shopping
- definition: n.a.
- description: spacious = roomy

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			*Neutral*			*Very applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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24)   attracts upper class customers – attracts lower class customers
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			*Neutral*			*Very applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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....

25) dirty - clean
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			*Neutral*			*Very applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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26) fast checkout – slow checkout
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very   *Very*
inapplicable   *Neutral*   *applicable*
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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27) good displays - bad displays
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very   *Very*
inapplicable   *Neutral*   *applicable*
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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28) hard to find items you want – easy to find items you want
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			Neutral			Very applicable
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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....

29) bad specials – good specials
- definition: n.a.
- description: In store image literature "specials" refer mostly to special sales/promotions

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			Neutral			Very applicable
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*

[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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....

30) The store has a pleasant atmosphere / unpleasant-pleasant atmosphere
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
....
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31) The store has well-known brands
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable   *Neutral*   *Very*
                                                                         applicable
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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32) The store has knowledgeable sales clerks / knowledgeable sales people
• definition: n.a.
• description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable   *Neutral*   *Very*
                                                                         applicable
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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33) The store has an attractive layout
* definition: n.a.
* description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable   *Neutral*   *Very*
                                                            applicable
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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....

34) hard to get credit - easy to get credit
* definition: n.a.
* description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very
inapplicable   *Neutral*   *Very*
                                                            applicable
1   2   3   4   5   6   7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

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Your considerations?:...
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35) unsophisticated - sophisticated
- definition: n.a.
- description: unsophisticated = simple/straightforward   sophisticated = difficult

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			*Neutral*			*Very applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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36) bad reputation - good reputation
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very inapplicable			*Neutral*			*Very applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
....
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37) not enjoyable - enjoyable
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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38) well-liked by friends – disliked by friends
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very *inapplicable*			*Neutral*			*Very* *applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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39) recommended by friends – not recommended by friends
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very *inapplicable*			*Neutral*			*Very* *applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:..
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40) known to friends – not known to friends
- definition: n.a.
- description: n.a.

a) If this item was asked for you for an online store, how applicable would it be according to your judgement? (please circle your answer)

Very						*Very*
inapplicable			*Neutral*			*applicable*
1	2	3	4	5	6	7

b) What would you recommend about this item as an indicator for online store image? (please mark your answer)

[ ] *keep as is*
[ ] *modify – minor*
[ ] *modify – major*
[ ] *omit*

Your considerations?:...
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41)   Are there items you consider to be important when measuring online store image, that are not mentioned in the overview below? (please mark your answer)

1)   crammed merchandise - well spaced merchandise
2)   bright store – dull store
3)   ads frequently seen by you – ads infrequently seen by you
4)   low quality products – high quality products
5)   well organized layout – unorganized layout
6)   low prices – high prices
7)   bad sales on products – good sales on products
8)   unpleasant store to shop in – pleasant store to shop in
9)   good store – bad store
10)   inconvenient location – convenient location
11)   low pressure salesmen – high pressure salesmen
12)   big store – small store
13)   bad buys on products – good buys on products
14)   unattractive store – attractive store

15)   unhelpful salesmen – helpful salesmen
16)   good service - bad service
17)   too few clerks – too many clerks
18)   friendly personnel – unfriendly personnel
19)   easy to return purchases – hard to return purchases
20)   unlimited selection of products - limited selection of products
21)   unreasonable prices for value - reasonable prices for value
22)   messy – neat
23)   spacious shopping – crowded shopping
24)   attracts upper class customers – attracts lower class customers
25)   dirty-clean
26)   fast checkout – slow checkout
27)   good displays - bad displays
28)   hard to find items you want - easy to find items you want
29)   bad specials – good specials
30)   the store has a pleasant atmosphere / unpleasant-pleasant atmosphere
31)   the store has well-known brands
32)   the store has knowledgeable sales clerks / knowledgeable sales people
33)   the store has an attractive layout
34)   hard to get credit - easy to get credit
35)   unsophisticated - sophisticated
36)   bad reputation - good reputation
37)   not enjoyable – enjoyable
38)   well-liked by friends – disliked by friends
39)   recommended by friends – not recommended by friends
40)   known to friends – not known to friends

[ ] *no, none*
[ ] *yes: (please specify)* :...............................
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Your considerations?:...
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Appendix F: Measurement instrument online store image

Each of the measures uses a bipolar Likert scale (also known as a semantic differential). The response categories were: Very, Quite, Some, Neutral, Some, Quite, Very.

Online Store Usefulness
Hard to find the books I need --- Easy to find the books I need
Little information about the books --- Much information about the books
Limited choice of books --- Wide choice of books
Little value for money --- A lot of value for money
Uninteresting offers --- Interesting offers
Bad alignment with my interests --- Good alignment with my interests

Online Store Enjoyment
Boring site --- Fun site
Little pleasure to browse through – great pleasure to browse through
Unattractive site --- Attractive site

Online Store Ease of Use
Hard to use --- Easy to use
Unorganised layout --- Organised layout
Bad representation of the books --- Good representation of the books
Hard to navigate the site --- Easy to navigate the site
Inflexible site --- Flexible site
Hard to learn how to use the site --- Easy to learn how to use the site

Online Store Trustworthiness
Does not keep my personal data confidential --- Does keep my personal data confidential
Bad reputation --- Good reputation
Unreliable enterprise --- Reliable enterprise

Online Store Style
Unhelpful --- Helpful
Unfriendly – Friendly
Less knowledgeable --- Very knowledgeable
Impersonal --- Personal

Online Store Familiarity
Infrequently seen advertisements on the Internet --- Frequently seen advertisements on the Internet
Infrequently seen advertisements outside the Internet --- Frequently seen advertisements outside the Internet
Unknown enterprise --- Well known enterprise

Online Store Settlement
Slow delivery --- Fast delivery
Limited choice of delivery options --- Wide choice of delivery options
Unreliable delivery --- Reliable delivery
Bad service --- Good service
Hard to return books --- Easy to return books
Slow financial settlement --- Fast financial settlement

Unsafe financial settlement --- Safe financial settlement
Limited choice of payment options --- Wide choice of payment options

Attitude towards Purchasing Online (measured on a 7-point Likert scale from Strongly Disagree to Strongly Agree)
I am positive towards buying a <product> on the <name> website.
The thought of buying a <product> at the website of <name> is appealing to me.
I think it is a good idea to buy a <product> at the website of <name>.

Intention to Purchasing Online (measured on a 7-point Likert scale from Highly Unlikely to Highly Likely)
How likely is it that you would return to the <name> website?
How likely is it that you would consider the purchase of a <product> at the <name> website in the short term?
How likely is it that you would consider the purchase of a <product> at the <name> website in the long term?
How likely is it that you would consider the purchase of a <product> at the <name> website if you need the <product>?

Appendix G: online stores under investigation
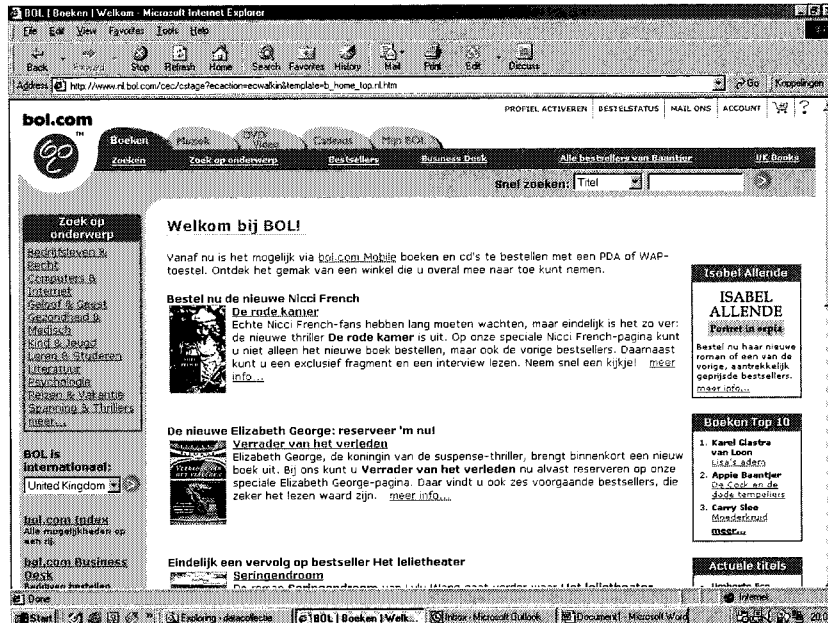
BOL: books
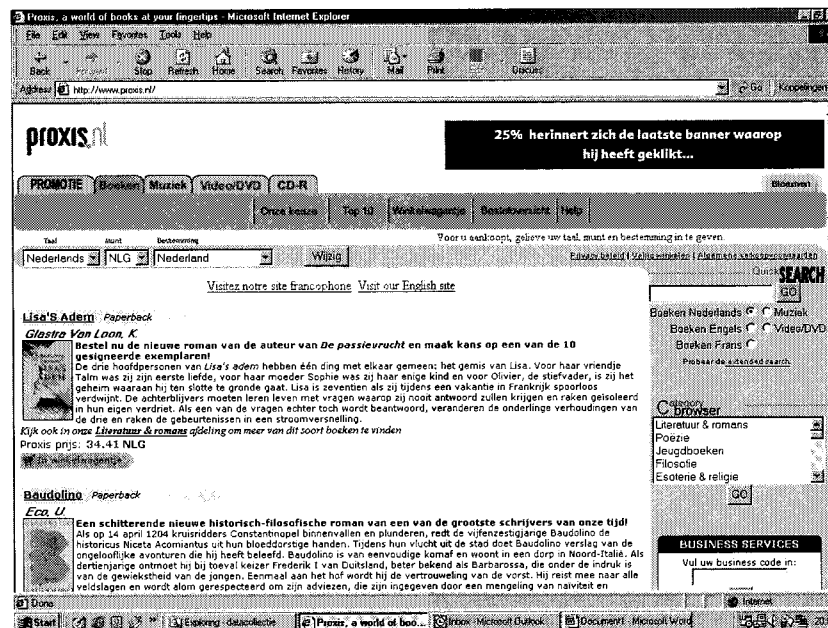
Proxis: books

Appendix H: Instructions online questionnaire (Dutch)

Te doorlopen stappen experiment HCIS 2001:

Welkom bij het experiment van het hoorcollege informatiesystemen. Met behulp van jullie inzet zullen wij proberen te bepalen welke factoren het imago van een
e-commerce onderneming bepalen. De opdracht is als volgt:

Stap 1) Ga naar www.nl.bol.com

Stap 2) Voer onderstaande instructies uit in de volgorde zoals die is weergegeven:

a) Neem 5 minuten de tijd om de gehele Bol site aandachtig te bekijken.
b) Richt je vervolgens in het bijzonder op de boekenafdeling van Bol.
c) Besteed hier minstens 5 minuten door de boekenafdeling zorgvuldig in je op te nemen en een boek te zoeken waarin je geintesseerd bent.
d) Ga vervolgens naar de klantenservice (klik op het vraagteken rechtsboven)
e) Neem binnen de klantenservice zowel de vragen als antwoorden over onderstaande zaken goed in je op:
   - de onderneming zelf (wie is Bol?)
   - privacy
   - betaalmogelijkheden
   - veiligheid van betalen
   - aflevering van de producten

Stap 3) Begeef je naar http://www.survissimo.org/bol en vul daar de enquête over de Bol-site in op basis van de indrukken die je zojuist hebt opgedaan

Stap 4) Ga naar http://www.proxis.nl/

Stap 5) Voer onderstaande instructies uit in de volgorde zoals die is weergegeven

a) Neem 5 minuten de tijd om de gehele Proxis site aandachtig te bekijken.
b) Richt je vervolgens in het bijzonder op de boekenafdeling van Proxis.
c) Besteed hier minstens 5 minuten door de boekenafdeling zorgvuldig in je op te nemen en een boek te zoeken waarin je geintesseerd bent.
d) Ga vervolgens naar de help functie (in de balk boven in beeld, klik op HELP)
e) Neem binnen de help functie zowel de vragen als antwoorden over onderstaande zaken goed in je op:
   - de onderneming zelf (wie is Proxis?)
   - privacy
   - betaalmogelijkheden
   - veiligheid van betalen
   - aflevering van de producten

Stap 6) Begeef je naar http://www.survissimo.org/proxis en vul daar de enquête over de Proxis-site in op basis van de indrukken die je zojuist hebt opgedaan

Einde van de opdracht, bedankt voor je deelname!

Appendix I: Online questionnaire (Dutch)

Welkom!

Hieronder staan kenmerken die betrekking hebben op BOL en de boekenafdeling op de website (http://www.nl.bol.com/). Graag willen we van jou weten hoe BOL op deze kenmerken 'scoort'.

Met jouw antwoord kunnen we precies bepalen welke factoren van belang zijn voor het imago van een e-commerce onderneming zoals BOL. Met deze wetenschap kunnen bedrijven als BOL gericht aan de slag om hun imago te verbeteren.

Heb je vragen of opmerkingen naar aanleiding van deze enquete, neem dan contact op met Tibert Verhagen, Vrije Universiteit Amsterdam, telefoon: 06-17274220, of e-mail: tverhagen@econ.vu.nl .

1.	Vul hieronder eerst je studentnummer in (voor het toekennen van het bonuspunt).	
		Studentnummer

2.	Wat is je voor- en achternaam? Deze informatie gebruiken wij bij het ophelderen van onduidelijkheden rond de studentnummers.	
		Voor- en achternaam

3.	Hoeveel jaar ervaring heb je met het gebruik van Internet?
o	Een jaar of minder
o	Twee jaar
o	Drie jaar
o	Vier jaar of meer

4.	Hoe ervaren of onervaren vind je jezelf bij het gebruik van Internet?				
	Zeer onervaren	Onervaren	Neutraal	Ervaren	Zeer ervaren
	O	O	O	O	O

5.	Hoeveel keer heb je tot nu toe een product via het Internet gekocht?
o	Nog nooit
o	1 keer
o	2 keer
o	3 keer
o	4 keer of meer

6.	Hoeveel keer heb je tot nu toe een product *bij BOL* gekocht (bv. een boek, een CD, of wat anders)?
	o Nog nooit
	o 1 keer
	o 2 keer
	o 3 keer
	o 4 keer of meer

7.	Ben je man of vrouw?
o	Man
o	Vrouw

8.	Wat is je leeftijd?
	Leeftijd in jaren

9.	Geef hier je indruk weer van het *assortiment* aan *boeken* van BOL. Je kunt op elke schaal aangeven waar BOL volgens jou moet worden geplaatst.							
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Hoge* prijzen van de boeken	O	O	O	O	O	O	O	*Lage* prijzen van de boeken
b.	*Moeilijk* om boeken te vinden die ik zoek	O	O	O	O	O	O	O	*Gemakkelijk* om boeken te vinden die ik zoek
c.	*Weinig* informatie over de boeken	O	O	O	O	O	O	O	*Veel* informatie over de boeken
d.	*Beperkte* keuze aan boeken	O	O	O	O	O	O	O	*Ruime* keuze aan boeken
e.	*Weinig waar* voor je geld	O	O	O	O	O	O	O	*Veel waar* voor je geld
f.	*Oninteressante* aanbiedingen	O	O	O	O	O	O	O	*Interessante* aanbiedingen
g.	*Slechte* aansluiting bij mijn interesses	O	O	O	O	O	O	O	*Goede* aansluiting bij mijn interesses

10.	Geef hier je indruk weer van de *gebruiksvriendelijkheid* van de BOL-website:							
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Moeilijk* in het gebruik	O	O	O	O	O	O	O	*Gemakkelijk* in het gebruik

b.	*Onoverzichtelijke* layout	O	O	O	O	O	O	O	*Overzichtelijke* layout
c.	*Slechte weergave* van de boeken	O	O	O	O	O	O	O	*Goede weergave* van de boeken
d.	*Moeilijk* te navigeren site	O	O	O	O	O	O	O	*Gemakkelijk* te navigeren site
e.	*Inflexibele* site	O	O	O	O	O	O	O	*Flexibele* site
f.	*Moeilijk* om met de site te leren omgaan	O	O	O	O	O	O	O	*Gemakkelijk* om met de site te leren omgaan

11. Geef hier je indruk weer van de *amusementswaarde* van de BOL-website:

		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Saaie* site	O	O	O	O	O	O	O	*Leuke* site
b.	*Weinig* genot om doorheen te bladeren	O	O	O	O	O	O	O	*Veel* genot om doorheen te bladeren
c.	*Onaantrekkelijke* site	O	O	O	O	O	O	O	*Aantrekkelijke* site
d.	*Onverzorgde* site	O	O	O	O	O	O	O	*Verzorgde* site

12. Geef hier je indruk weer van de *stijl* waarmee BOL de consumenten via zijn website benadert:

		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	Onprofessioneel	O	O	O	O	O	O	O	Zakelijk, professioneel
b.	Opdringerig	O	O	O	O	O	O	O	Kalm, rustig
c.	*Weinig* hulpvaardig	O	O	O	O	O	O	O	Hulpvaardig
d.	Onvriendelijk	O	O	O	O	O	O	O	Vriendelijk
e.	*Weinig* kennis van zaken	O	O	O	O	O	O	O	*Veel* kennis van zaken
f.	Onpersoonlijk	O	O	O	O	O	O	O	Persoonlijk

13. Geef hier je indruk weer van de *onderneming* achter BOL:

		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	Zelden advertenties van gezien *op Internet*	O	O	O	O	O	O	O	Vaak advertenties van gezien *op Internet*
b.	Zelden advertenties van gezien *buiten Internet*	O	O	O	O	O	O	O	Vaak advertenties van gezien *buiten Internet*

		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
c.	*Onbekende* onderneming	O	O	O	O	O	O	O	*Bekende* onderneming
d.	*Kleine* onderneming	O	O	O	O	O	O	O	*Grote* onderneming
e.	Gaat *niet* *vertrouwelijk* met mijn persoonsgegevens om	O	O	O	O	O	O	O	Gaat *vertrouwelijk* met mijn persoonsgegevens om
f.	*Slechte* reputatie	O	O	O	O	O	O	O	*Goede* reputatie
g.	*Onbetrouwbare* onderneming	O	O	O	O	O	O	O	*Betrouwbare* onderneming

14.	Geef hier je indruk weer van de *logistieke* afwikkeling van een boekenaankoop bij BOL. Probeer ook op deze vragen te antwoorden als je *geen* ervaring hebt met het kopen van een boek bij BOL.								
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Langzame* aflevering	O	O	O	O	O	O	O	*Snelle* aflevering
b.	*Beperkte* keuze aan aflevermogelijkheden	O	O	O	O	O	O	O	*Ruime* keuze aan aflevermogelijkheden
c.	*Onbetrouwbare* aflevering	O	O	O	O	O	O	O	*Betrouwbare* aflevering
d.	*Slechte* service	O	O	O	O	O	O	O	*Goede* service
e.	*Moeilijk* om boeken te retourneren	O	O	O	O	O	O	O	*Gemakkelijk* om boeken te retourneren

15.	Geef hier je indruk weer van de *financiële* afwikkeling van een boekenaankoop bij BOL Probeer ook op deze vragen te antwoorden als je *geen* ervaring hebt met het kopen van een boek bij BOL.								
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Langzame* financiële afwikkeling	O	O	O	O	O	O	O	*Snelle* financiële afwikkeling
b.	*Onveilige* financiële afwikkeling	O	O	O	O	O	O	O	*Veilige* financiële afwikkeling
c.	*Beperkte* keuze aan betaalmogelijkheden	O	O	O	O	O	O	O	*Ruime* keuze aan betaalmogelijkheden

16.	In hoeverre ben je het eens of oneens met de volgende stellingen?							
		Zeer oneens	Oneens	Enigszins oneens	Neutraal	Enigszins eens	Eens	Zeer eens
a.	Ik sta *positief* tegenover het kopen van een boek op de BOL website.	O	O	O	O	O	O	O
b.	De gedachte om via de website van BOL een boek aan te schaffen *spreekt mij aan.*	O	O	O	O	O	O	O
c.	Ik zou het een *goed idee*	O	O	O	O	O	O	O

		Zeer onwaarsch.	Onwaarsch.	Enigszins onwaarsch.	Neutraal	Enigszins waarsch.	Waarsch.	Zeer waarsch.
	vinden om op de website van BOL een boek aan te schaffen.							

17.	In hoeverre zijn de volgende vragen waarschijnlijk of onwaarschijnlijk?							
		Zeer onwaarsch.	Onwaarsch.	Enigszins onwaarsch.	Neutraal	Enigszins waarsch.	Waarsch.	Zeer waarsch.
a.	Hoe waarschijnlijk is het dat je naar de website van BOL zult *terugkeren*?	O	O	O	O	O	O	O
b.	Hoe waarschijnlijk is het dat je *op korte termijn* een boekaankoop op de BOL website zou overwegen?	O	O	O	O	O	O	O
c.	Hoe waarschijnlijk is het dat je *op langere termijn* een boekaankoop op de BOL website zou overwegen?	O	O	O	O	O	O	O
d.	Hoe waarschijnlijk is het dat je een boek zult aanschaffen op de BOL website *als je behoefte hebt aan dat boek*?	O	O	O	O	O	O	O

18.	Zijn je zaken opgevallen aan de website of aan de onderneming die niet of slechts gedeeltelijk in de vragenlijst aan bod kwamen? Zo ja, welke?

19.	Heb je nog andere opmerkingen of suggesties naar aanleiding van deze vragenlijst?

	Bedankt voor je deelname. Als je alle vragen hebt beantwoord, druk dan op "Verstuur".

Welkom!

Hieronder staan kenmerken die betrekking hebben op Proxis en de boekenafdeling op de website (http://www.proxis.nl/). Graag willen we van jou weten hoe Proxis op deze kenmerken 'scoort'.

Met jouw antwoord kunnen we precies bepalen welke factoren van belang zijn voor het imago van een e-commerce onderneming zoals Proxis. Met deze wetenschap kunnen bedrijven als Proxis gericht aan de slag om hun imago te verbeteren.

Heb je vragen of opmerkingen naar aanleiding van deze enquete, neem dan contact op met Tibert Verhagen, Vrije Universiteit Amsterdam, telefoon: 06-17274220, of e-mail: tverhagen@econ.vu.nl

1.	Vul hieronder eerst je studentnummer in (voor het toekennen van het bonuspunt).	
		Studentnummer

2.	Wat is je voor- en achternaam? Deze informatie gebruiken wij bij het ophelderen van onduidelijkheden rond de studentnummers.	
		Voor- en achternaam

3.	Hoeveel keer heb je tot nu toe een product *bij Proxis* gekocht (bv. een boek, een CD, of wat anders)?
o	Nog nooit
o	1 keer
o	2 keer
o	3 keer
o	4 keer of meer

3.	Hoeveel keer heb je tot nu toe een product *bij Proxis* gekocht (bv. een boek, een CD, of wat anders)?
o	Nog nooit
o	1 keer
o	2 keer
o	3 keer
o	4 keer of meer

4.	Geef hier je indruk weer van het *assortiment* aan *boeken* van Proxis. Je kunt op elke schaal aangeven waar Proxis volgens jou moet worden geplaatst.							
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Hoge* prijzen van de boeken	o	o	o	o	o	o	o	*Lage* prijzen van de boeken

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b.	*Moeilijk* om boeken te vinden die ik zoek	o	o	o	o	o	o	o	*Gemakkelijk* om boeken te vinden die ik zoek
c.	*Weinig* informatie over de boeken	o	o	o	o	o	o	o	*Veel* informatie over de boeken
d.	*Beperkte* keuze aan boeken	o	o	o	o	o	o	o	*Ruime* keuze aan boeken
e.	*Weinig waar* voor je geld	o	o	o	o	o	o	o	*Veel waar* voor je geld
f.	*Oninteressante* aanbiedingen	o	o	o	o	o	o	o	*Interessante* aanbiedingen
g.	*Slechte* aansluiting bij mijn interesses	o	o	o	o	o	o	o	*Goede* aansluiting bij mijn interesses

5.	Geef hier je indruk weer van de *gebruiksvriendelijkheid* van de Proxis-website:							
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Moeilijk* in het gebruik	o	o	o	o	o	o	o	*Gemakkelijk* in het gebruik
b.	*Onoverzichtelijke* layout	o	o	o	o	o	o	o	*Overzichtelijke* layout
c.	*Slechte weergave* van de boeken	o	o	o	o	o	o	o	*Goede weergave* van de boeken
d.	*Moeilijk* te navigeren site	o	o	o	o	o	o	o	*Gemakkelijk* te navigeren site
e.	*Inflexibele* site	o	o	o	o	o	o	o	*Flexibele* site
f.	*Moeilijk* om met de site te leren omgaan	o	o	o	o	o	o	o	*Gemakkelijk* om met de site te leren omgaan

6.	Geef hier je indruk weer van de *amusementswaarde* van de Proxis-website:							
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Saaie* site	o	o	o	o	o	o	o	*Leuke* site
b.	*Weinig* genot om doorheen te bladeren	o	o	o	o	o	o	o	*Veel* genot om doorheen te bladeren
c.	*Onaantrekkelijke* site	o	o	o	o	o	o	o	*Aantrekkelijke* site
d.	*Onverzorgde* site	o	o	o	o	o	o	o	*Verzorgde* site

7.	Geef hier je indruk weer van de *stijl* waarmee Proxis de consumenten via zijn website benadert:							
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	Onprofessioneel	O	O	O	O	O	O	O	Zakelijk, professioneel
b.	Opdringerig	O	O	O	O	O	O	O	Kalm, rustig
c.	*Weinig* hulpvaardig	O	O	O	O	O	O	O	Hulpvaardig
d.	Onvriendelijk	O	O	O	O	O	O	O	Vriendelijk
e.	*Weinig* kennis van zaken	O	O	O	O	O	O	O	*Veel* kennis van zaken
f.	Onpersoonlijk	O	O	O	O	O	O	O	Persoonlijk

8.	Geef hier je indruk weer van de *onderneming* achter Proxis:							
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	Zelden advertenties van gezien *op Internet*	O	O	O	O	O	O	O	Vaak advertenties van gezien *op Internet*
b.	Zelden advertenties van gezien *buiten Internet*	O	O	O	O	O	O	O	Vaak advertenties van gezien *buiten Internet*
c.	*Onbekende* onderneming	O	O	O	O	O	O	O	*Bekende* onderneming
d.	*Kleine* onderneming	O	O	O	O	O	O	O	*Grote* onderneming
e.	Gaat *niet vertrouwelijk* met mijn persoonsgegevens om	O	O	O	O	O	O	O	Gaat *vertrouwelijk* met mijn persoonsgegevens om
f.	*Slechte* reputatie	O	O	O	O	O	O	O	*Goede* reputatie
g.	*Onbetrouwbare* onderneming	O	O	O	O	O	O	O	*Betrouwbare* onderneming

9.	Geef hier je indruk weer van de *logistieke* afwikkeling van een boekenaankoop bij Proxis. Probeer ook op deze vragen te antwoorden als je *geen* ervaring hebt met het kopen van een boek bij Proxis.							
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Langzame* aflevering	O	O	O	O	O	O	O	*Snelle* aflevering
b.	*Beperkte* keuze aan aflevermogelijkheden	O	O	O	O	O	O	O	*Ruime* keuze aan aflevermogelijkheden
c.	*Onbetrouwbare* aflevering	O	O	O	O	O	O	O	*Betrouwbare* aflevering
d.	*Slechte* service	O	O	O	O	O	O	O	*Goede* service
e.	*Moeilijk* om boeken te retourneren	O	O	O	O	O	O	O	*Gemakkelijk* om boeken te retourneren

10.	Geef hier je indruk weer van de *financiële* afwikkeling van een boekenaankoop bij Proxis. Probeer ook op deze vragen te antwoorden als je *geen* ervaring hebt met het kopen van een boek bij Proxis.								
		Erg	Nogal	Enigszins	Neutraal	Enigszins	Nogal	Erg	
a.	*Langzame* financiële afwikkeling	O	O	O	O	O	O	O	*Snelle* financiële afwikkeling
b.	*Onveilige* financiële afwikkeling	O	O	O	O	O	O	O	*Veilige* financiële afwikkeling
c.	*Beperkte* keuze aan betaalmogelijkheden	O	O	O	O	O	O	O	*Ruime* keuze aan betaalmogelijkheden

11.	In hoeverre ben je het eens of oneens met de volgende stellingen?							
		Zeer oneens	Oneens	Enigszins oneens	Neutraal	Enigszins eens	Eens	Zeer eens
a.	Ik sta *positief* tegenover het kopen van een boek op de Proxis website.	O	O	O	O	O	O	O
b.	De gedachte om via de website van Proxis een boek aan te schaffen *spreekt mij aan.*	O	O	O	O	O	O	O
c.	Ik zou het een *goed idee* vinden om op de website van Proxis een boek aan te schaffen.	O	O	O	O	O	O	O

12.	In hoeverre zijn de volgende vragen waarschijnlijk of onwaarschijnlijk?							
		Zeer onwaarsch.	Onwaarsch.	Enigszins onwaarsch.	Neutraal	Enigszins waarsch.	Waarsch.	Zeer waarsch.
a.	Hoe waarschijnlijk is het dat je naar de website van Proxis zult *terugkeren*?	O	O	O	O	O	O	O
b.	Hoe waarschijnlijk is het dat je *op korte termijn* een boekaankoop op de Proxis website zou overwegen?	O	O	O	O	O	O	O
c.	Hoe waarschijnlijk is het dat je *op langere termijn* een boekaankoop op de Proxis website zou overwegen?	O	O	O	O	O	O	O
d.	Hoe waarschijnlijk	O	O	O	O	O	O	O

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	is het dat je een boek zult aanschaffen op de Proxis website *als je behoefte hebt aan dat boek?*							

13.	Zijn je zaken opgevallen aan de website of aan de onderneming die niet of slechts gedeeltelijk in de vragenlijst aan bod kwamen? Zo ja, welke?

14.	Heb je nog andere opmerkingen of suggesties naar aanleiding van deze vragenlijst?

	Bedankt voor je deelname. Als je alle vragen hebt beantwoord, druk dan op "Verstuur".

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Nederlandstalige samenvatting

"Naar een beter begrip van online aankoopgedrag"
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Introductie

Het aantal door consumenten verrichte online aankopen is de laatste jaren sterk gestegen. Diverse prognoses geven aan dat deze groei zich in de toekomst voort zal zetten. Toch vertegenwoordigt het percentage online aankopen slechts een fractie van de totale consumentenbestedingen. Het overgrote deel van de consumentenaankopen vindt nog steeds in de winkel (offline) plaats.

Wanneer we de verschillen tussen on- en offline aankopen nader beschouwen blijkt dat online aankopen op drie punten wezenlijk verschillen van aankopen die via traditionele kanalen worden gedaan.
Ten eerste ontbreekt bij het doen van een online aankoop de fysieke aanwezigheid van de winkel en haar producten. Dit heeft tot gevolg dat consumenten bij hun aankoopbeslissing geheel afhankelijk zijn van de virtuele weergave daarvan. Ten tweede vereisen online aankopen dat consumenten in staat zijn met pc's en internet om te gaan, maar ook dat zij bekend zijn met de procedures van online aankopen.
Als derde verschil noemen we het ontbreken van fysieke belemmeringen om veel en snel andere winkels te bezoeken. Indien de eigenschappen van een online winkel niet bevallen zal het de consument relatief weinig moeite kosten om andere online winkels 'binnen te treden'.

Deze drie met de online winkel samenhangende aspecten maken het doen van online aankopen wezenlijk anders dan het kopen in een fysieke winkel. Door deze verschillen zijn wij geïnteresseerd geraakt in de vraag in welke mate online winkelkenmerken het aankoopgedrag van consumenten beïnvloeden. In deze dissertatie richten we ons in het bijzonder op *de relaties tussen de kenmerken van een online winkel en de intentie van consumenten om bij deze online winkel een aankoop te doen*. De keuze voor dit onderwerp wordt ondersteund door diverse bronnen in de informatiekunde, e-commerce en marketing. Deze bronnen bevestigen dat het huidige onderzoeksveld nog in de kinderschoenen staat.

Positionering en onderzoeksvragen

In deze dissertatie richten we ons op *rationeel aankoopgedrag*. Dit impliceert dat aankopen wordt gezien als een proces waarbij consumenten door een aantal fasen gaan om een

probleem op te lossen. *Online aankopen* kan in deze context worden omschreven als het proces dat consumenten doorlopen om in een online omgeving tot een aankoop te komen. Onder de online omgeving verstaan we in dit proefschrift het World Wide Web in het algemeen en *online winkels* in het bijzonder. Online winkels worden hier gedefinieerd als websites van ondernemingen waarmee producten worden verkocht aan afzonderlijke consumenten.

Het doel van dit proefschrift is om de relaties te onderzoeken tussen de percepties die consumenten van een online winkel hebben en hun intenties om bij deze online winkel te kopen. Volgens de literatuur hebben intenties een grote voorspellende waarde voor wat betreft het uiteindelijke gedrag van consumenten. Inzicht in de relaties tussen percepties van online winkels en de aankoopintenties van consumenten kan een bijdrage leveren aan het beter begrijpen van de invloed van online winkelkenmerken op online aankoopgedrag.

De probleemstelling van deze dissertatie is als volgt gedefinieerd: *"Wat zijn de relaties tussen percepties die consumenten van de kenmerken van een online winkel hebben en hun intenties om bij deze online winkel te kopen".* Om de probleemstelling te beantwoorden zijn drie onderzoeksvragen geformuleerd:
1) "Hoe worden intenties om bij een online winkel te kopen gevormd?"
2) "Welke percepties van online winkelkenmerken beïnvloeden de intenties van consumenten om online te kopen?"
3) "Hoe en in welke mate beïnvloeden de percepties die consumenten van een online winkel hebben, hun intenties om bij een online winkel te kopen?"

Om de onderzoeksvragen te beantwoorden passen we zowel theoretisch als empirisch onderzoek toe.

Theoretisch onderzoek

In het tweede hoofdstuk van deze dissertatie wordt het aankoopproces bij consumenten besproken. Eerst wordt er een overzicht gegeven van drie perspectieven om het aankoopgedrag van consumenten te bestuderen: 'the decision-making perspective', 'the experiential perspective' en 'the behavioral influence perspective' Omdat we vooral geïnteresseerd zijn in rationeel aankoopgedrag, sluiten we aan bij 'the decision-making perspective' Vanuit dit in de literatuur algemeen geaccepteerde perspectief wordt het aankoopproces als rationeel proces bezien.

Binnen 'the decision-making perspective' worden diverse modellen voor het aankoopproces onderscheiden. Deze modellen kunnen ruwweg worden onderverdeeld in algemene aankoopmodellen, adoptieprocesmodellen en communicatiemodellen. In lijn met het doel van dit proefschrift concentreren we ons op de categorie algemene aankoopmodellen. Eén van de bekendste algemene modellen, het model van Engel et al. (1995), wordt uitgebreid behandeld. Dit model beschouwt het aankoopproces van consumenten als een serie van 7 opeenvolgende fasen: (1) 'need recognition', (2) 'search for information', (3) 'pre-purchase alternative evaluation', (4) 'purchase decision-making process', (5) 'consumption', (6) 'post-purchase alternative evaluation' en (7) 'divestment' Aankoopintenties worden gevormd tijdens de tweede en derde fase van het aankoopproces. Zodra consumenten een behoefte constateren, gaan zij op zoek en verzamelen zij informatie, waarderen en evalueren ze de alternatieven waaruit gekozen kan worden, en selecteren zij vervolgens middels besluitvormingsregels een product. Door deze activiteiten ontstaat een intentie om een bepaald product te kopen. De

intentie wordt vervolgens in de vierde fase al dan niet vertaald in aankoopgedrag. Op vergelijkbare wijze besluiten consumenten ook waar en wanneer zij zullen kopen en hoe zij willen betalen. Bij al deze beslissingen worden aankoopintenties gevormd die al dan niet in gedrag worden vertaald.

In hoofdstuk drie behandelen we een theorie die gebruikt wordt om gedrag in het algemeen, en aankoopgedrag in het bijzonder, te verklaren en voorspellen. We richten ons met name op de 'Theory of Reasoned Action' (TRA) van Fishbein en Ajzen (1975). Deze theorie is veelvuldig toegepast en heeft in de literatuur brede steun gekregen.
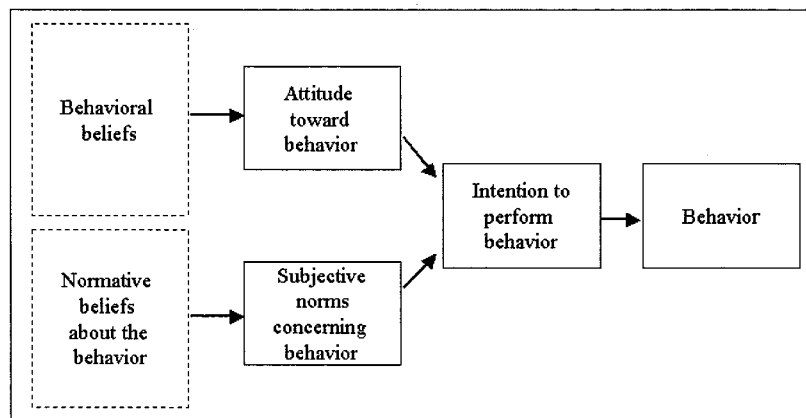
De Theory of Reasoned Action (Fishbein and Ajzen, 1975, p.16)

In grote lijnen wordt - volgens de TRA - gedrag als volgt bepaald. In eerste instantie worden 'behavioral beliefs' en 'normative beliefs about the behavior' gevormd. 'Behavioral beliefs' staan voor informatie of kennis die iemand heeft over het te vertonen gedrag. 'Normative beliefs about the behavior' staan voor de informatie of kennis die iemand heeft over wat anderen denken van het gedrag in kwestie.

Beide beliefs beïnvloeden twee andere componenten van de TRA. De 'behavioral beliefs' beïnvloeden de zogenaamde 'attitude toward the behavior'. Deze attitude omvat een affectieve houding ten aanzien van het te vertonen gedrag. De 'normative beliefs' beïnvloeden de 'subjective norms concerning the behavior'. 'Subjective norms' betreffen de sociale druk die ervaren wordt om het gedrag al dan niet uit te voeren. Vervolgens beïnvloeden de attitude en de 'subjective norms' samen de 'behavioral intention'. De 'behavioral intention' is de intentie om het gedrag in kwestie te vertonen. De 'behavioral intention' wordt binnen de TRA gezien als directe antecedent van het uiteindelijke gedrag ('the overt behavior').

Behalve de genoemde variabelen kunnen ook externe variabelen invloed op gedrag hebben. Volgens de TRA literatuur kan dit vrijwel uitsluitend via 'behavioral' en 'normative beliefs'. Naast het theoretische kader van de TRA wordt er in hoofdstuk drie een overzicht gegeven van onderzoek waarbij de TRA empirisch is getoetst. Dit empirische overzicht onderschrijft de betrouwbaarheid en de robuustheid van de TRA voor uiteenlopende vormen van gedrag, waaronder aankoopgedrag. Onderzoeken waarbij externe variabelen in de analyse zijn meegenomen, worden ook besproken. De resultaten bevestigen deels dat deze externe variabelen via de attitude en/of 'subjective norms' invloed op de 'behavioral intention' en 'behavior' uitoefenen. Er zijn echter ook resultaten die laten zien dat externe variabelen een directe invloed op 'behavioral intentions' en/of gedrag kunnen hebben.

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In het vierde hoofdstuk geven we een overzicht van traditionele winkelkenmerken en behandelen we publicaties van empirisch onderzoek waarin de relatie is onderzocht tussen percepties van deze kenmerken en aankoopintenties. Onderzoek op het gebied van online winkels en online aankoopgedrag is relatief schaars. Online winkels hebben veel overeenkomsten met fysieke winkels en volgens de literatuur verschilt het online aankoopproces niet wezenlijk van het proces dat een consument doorloopt bij het doen van een aankoop in een fysieke winkel. Dit rechtvaardigt de keuze om de relatie tussen winkelkenmerken en aankoopgedrag in eerste instantie in een fysieke omgeving te bekijken. De opgedane inzichten zullen dan als input voor online onderzoek dienen.

Om een overzicht van winkelkenmerken te geven baseren we ons op de zogenaamde 'store image' literatuur. 'Store image' is het totaalbeeld dat men van een winkel heeft. Het wordt gevormd door de percepties van alle winkelkenmerken tezamen. De winkelkenmerken worden in de literatuur ook wel winkelattributen genoemd. Winkelattributen kunnen zowel functioneel (het assortiment, prijzen) als psychologisch (service, reputatie) van aard zijn. Aan de hand van de meta studie van Lindquist (1974) wordt een overzicht gegeven van de belangrijkste classificaties van winkelattributen zoals die uit de literatuur bekend zijn. Vervolgens worden onderzoeken behandeld die de relaties tussen de percepties van winkelattributen en aankoopintenties hebben onderzocht. Het overzicht van de resultaten laat zien dat percepties van winkelkenmerken een significante invloed op aankoopintenties kunnen hebben. Ook zijn er onderzoeken waarvan de resultaten aantonen dat er een direct verband tussen percepties van winkelkenmerken en aankoopintenties kan zijn.

In het vijfde hoofdstuk maken we de overstap naar een online setting. Dit hoofdstuk geeft een overzicht van bestaand empirisch onderzoek dat de invloed heeft bestudeerd die percepties van online winkelattributen hebben op de intentie om bij een bepaalde online winkel te kopen. Omdat het onderzoeksveld nog relatief onontgonnen is, en er relatief weinig bronnen voorhanden zijn, is ook naar nauw verwant onderzoek gekeken. Hiermee bedoelen we onderzoeken die zich minder specifiek op aankoopintenties richten, nauw verwante constructen onderzoeken of relaties leggen tussen online winkelkenmerken en verkoopresultaat.

Hoofdstuk vijf begint met onderzoek waarbij centraal staat de invloed die 'trust' uitoefent op de intentie om bij een online winkel te kopen. 'Trust' is een attribuut dat volgens de literatuur een rol speelt bij het doen van een aankoop in online winkels, met name omdat de fysieke aanwezigheid van de winkel, het personeel en de producten ontbreekt. In het bijzonder nemen we de onderzoeken van Jarvenpaa, Tractinsky en Vitale (2000) en Pavlou (2001) onder de loep. Jarvenpaa et al. hebben onderzoek gedaan naar de invloed van 'perceived size', 'perceived reputation', 'trust' en 'perceived risk' op de attitude en intentie om bij een online winkel te kopen. Het door Jarvenpaa et al. geteste model laat zien dat de attitude een directe invloed op de aankoopintentie heeft en dat de attitude op zijn beurt met name door 'perceived risk' wordt bepaald. Tevens laten de resultaten zien dat 'trust' geen directe invloed op de attitude uitoefent maar wel een directe invloed op 'perceived risk' heeft en dat 'trust' vooral door 'perceived size' wordt bepaald. Het onderzoek van Pavlou geeft aan dat 'perceived risk' en 'perceived reputation' ook directe invloed op de aankoopintentie kunnen uitoefenen. Daarnaast blijkt uit Pavlou's werk dat 'trust' een belangrijke determinant van 'perceived risk' is en dat 'trust' door 'security perceptions' wordt bepaald. Naast trustgerelateerde attributen heeft Pavlou ook de attributen 'perceived usefulness' en 'perceived ease of use' meegenomen in zijn analyse. Deze attributen zijn afkomstige van het 'Technology Acceptance Model' (TAM) van Davis (1989). De resultaten laten zien dat van deze twee attributen alleen 'perceived usefulness' een significante invloed op de intentie uitoefent.

Na trustonderzoek wordt in hoofdstuk vijf het onderzoek van Chau, Au en Tam (2000) besproken. Dit onderzoek richt zich op de relaties tussen de wijze waarop informatie gepresenteerd wordt, de 'information presentation mode', en de intentie om van een 'online shopping system' gebruik te maken. Ofschoon het empirische gedeelte van het onderzoek geen verband legt tussen de perceptie van de 'information presentation mode' en de aankoopintenties van consumenten, is met name het conceptuele model een belangrijke aanvulling in de context van ons onderzoek. Volgens het model van Chau et al. beïnvloedt de wijze waarop informatie online wordt gepresenteerd (tekstueel of grafisch) en het gemak waarmee deze informatie kan worden gevonden ('search engine') de 'perceived usefulness' en de 'perceived ease of use' van een 'online shopping system' Gebaseerd op het TAM van Davis relateren de auteurs 'perceived ease of use' en 'perceived usefulness' aan de attitude om een 'online shopping system' te gebruiken, heeft 'perceived ease of use' een effect op 'perceived usefulness' en oefenen 'perceived usefulness' en de attitude een directe invloed uit op de intentie om een 'online shopping system' te gebruiken. Chau et al. complementeren het model door de intentie aan gedrag te linken.

Na het onderzoek van Chau et al. komen een aantal onderzoeken aan bod waarbij de invloed van online winkelattributen op 'customer preference' centraal staat. 'Customer preference' vertegenwoordigt de relatieve attitude die consumenten hebben ten aanzien van het doen van een aankoop bij een bepaalde online winkel. Het relatieve aan 'customer preference' is dat het wordt gevormd ten opzichte van andere winkelmogelijkheden (andere online winkels). Omdat 'customer preference' in de literatuur veelal als tussenstap tussen percepties van online winkelattributen en aankoopgedrag wordt gezien, en hiermee een deel van een TRA-gerelateerde structuur is, behandelen we drie belangrijke studies. De resultaten laten zien dat percepties van online winkelattributen een directe invloed op 'customer preference' uitoefenen en dat er tussen 'customer preference' en gedrag een sterke relatie is.

Tot slot wordt in hoofdstuk vijf onderzoek besproken dat nauw verwant is aan de hierboven genoemde attitude en intentie onderzoeken. Het betreft onderzoeken waarbij de perceptie of de aanwezigheid van bepaalde online winkelattributen aan bezoekersaantallen en verkoopgegevens wordt gerelateerd. Tevens bespreken we twee onderzoeken die zich richten op de relaties tussen online winkelpercepties en de intentie om op Internet te kopen. In grote lijnen blijkt uit de onderzoeken dat zowel percepties van online winkelattributen als de aanwezigheid ervan invloed hebben op winkelbezoek, intenties en aankopen. In de context van ons onderzoek is het werk van Spiller en Lohse (1997) en Lohse en Spiller (1999) noemenswaardig. Deze auteurs hebben als uitgangspunt de in hoofdstuk vier genoemde classificatie van Lindquist gehanteerd om een classificatie van online winkelattributen te construeren en deze vervolgens aan online winkelbezoek en aantal verkopen te relateren.

Empirisch onderzoek

In hoofdstuk zes presenteren we ons eerste empirische onderzoek. Het doel van deze empirische cyclus is om de relatie te onderzoeken tussen twee groepen online winkelattributen en de intentie om bij een specifieke online winkel te kopen. De ene groep online winkelattributen is gerelateerd aan 'trust' in de online winkel. De online winkelattributen die we in deze context hebben geselecteerd zijn afkomstig van het werk van Jarvenpaa et al.. Het betreft 'perceived size', 'perceived reputation', 'perceived trust' en 'perceived risk' De andere categorie online winkelattributen bestaat uit attributen die met de website als 'online shopping system' te maken hebben. In lijn met het onderzoek van Chau et al. gaat het om de online winkelattributen 'perceived ease of use' en 'perceived usefulness' Het feit dat beide onderzoeken de op de TRA gebaseerde attitude→ intentie structuur

hanteren leidt tot het volgende onderzoeksmodel indien we beide groepen van online winkelattributen combineren.
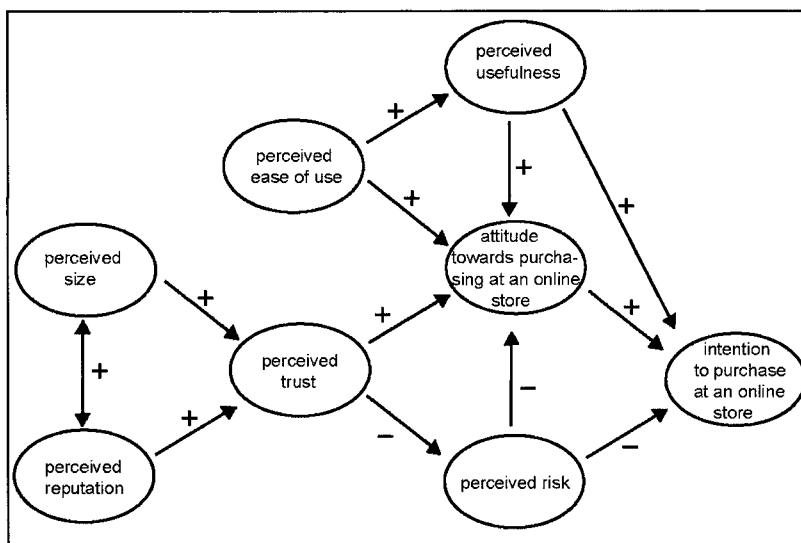
Onderzoeksmodel hoofdstuk 6

De met pijlen weergegeven relaties zijn als aparte hypotheses getoetst. Hierbij verwijst een plusteken naar een positief te verwachten relatie terwijl een minteken een negatieve relatie als uitgangspunt stelt. De keuze voor plussen respectievelijk minnen zijn gebaseerd op het werk van Jarvenpaa et al., Chau et al. en diverse aanvullende bronnen.

Om de hypothesen te toetsen is een online survey uitgevoerd. De respondenten, bestaande uit 227 studenten, hebben twee online CD winkels (Hotorange en de Free Record Shop) en twee online verzekeraars (Ohra en Ineas) bezocht. Elke bezoek werd afgesloten met het invullen van een enquête over de zojuist bezochte online winkel.

De resultaten laten een aantal interessante patronen zien. Zo wordt de robuustheid van de attitude→ intentie relatie bevestigd. De attitude blijkt een sterke en, wat betreft het onderzochte model, tevens de enige directe determinant van de intentie te zijn. De attitude verklaart tussen de 41 en 62 procent van de intentie-variantie. Wat betreft de invloed van de perceptie van online winkelattributen op de attitude blijkt dat het voornamelijk 'perceived risk' is dat de attitude in grote mate beïnvloedt. 'Perceived ease of use' en 'perceived trust' hebben geen significante directe invloed op de attitude. Het effect van 'perceived usefulness' of de attitude is niet geheel duidelijk daar dit voor de online verzekeraars wel significant (maar zwak) was maar voor de online CD winkels niet. Al met al verklaren de online winkelattributen tussen de 43 en 49 procent van de attitude variantie. Ofschoon de resultaten laten zien dat 'perceived trust' de attitude niet rechtstreeks beïnvloedt, blijkt dit online winkelattribuut een zeer sterke invloed op 'perceived risk' te hebben. Verder blijkt dat van de 'perceived trust' determinanten het vooral 'perceived reputation' is dat trust in grote mate beïnvloedt. Tot slot nemen we een significante associatie waar tussen 'perceived reputation' en 'perceived size'.

In hoofdstuk zeven introduceren en bespreken we de tweede empirische cyclus die in dit promotie-onderzoek is uitgevoerd. Ons eerste empirische onderzoek heeft aangetoond dat percepties van 'trust' en 'online shopping system' attributen een aanzienlijk deel maar zeker

niet alle variantie weten te verklaren van de attitude en de intentie om bij een online winkel te kopen. Klaarblijkelijk zijn er nog meer aspecten die de attitude en intentie beïnvloeden. Omdat - naast de voor online winkels zo kenmerkende 'trust' en 'online shopping system' attributen - veel traditionele attributen ook opgaan voor online winkels, zouden percepties van deze 'traditionele' kenmerken wel eens een gedeelte van de resterende variantie kunnen verklaren. Vanuit dit oogpunt richten we ons in het tweede empirische onderzoek op de indruk die consumenten van alle online winkelattributen te samen hebben. Deze totaalindruk is in de literatuur bekend als 'online store image'.

Omdat een instrument om 'online store image' te meten ontbreekt begint hoofdstuk zeven met een proces waarmee een betrouwbaar en valide meetinstrument wordt ontwikkeld. Dit proces is gebaseerd op de in de literatuur vaak gerefereerde procedure van Churchill (1979). Dit leidt uiteindelijk tot een betrouwbare en valide online store image meetschaal die uit zeven componenten bestaat. Deze componenten vertegenwoordigen de volgende online winkelattributen: 'online store usefulness', 'online store enjoyment', 'online store ease of use', 'online store style', 'online store familiarity', 'online store trustworthiness' en 'online store settlement performance' Om de invloed van deze attributen op de intentie om bij een bepaalde online winkel te kopen te meten, hanteren we de constructie zoals die door de TRA is gespecificeerd. Dit houdt in dat de invloed van online winkelattributen, als externe variabelen, op de aankoopintentie via de attitude of 'subjective norms' loopt. In lijn met de literatuur tot nu toe (zowel in een fysieke als online setting) beperken we ons tot de via de attitude bemiddelde relatie. Dit resulteert in het onderstaand onderzoeksmodel:
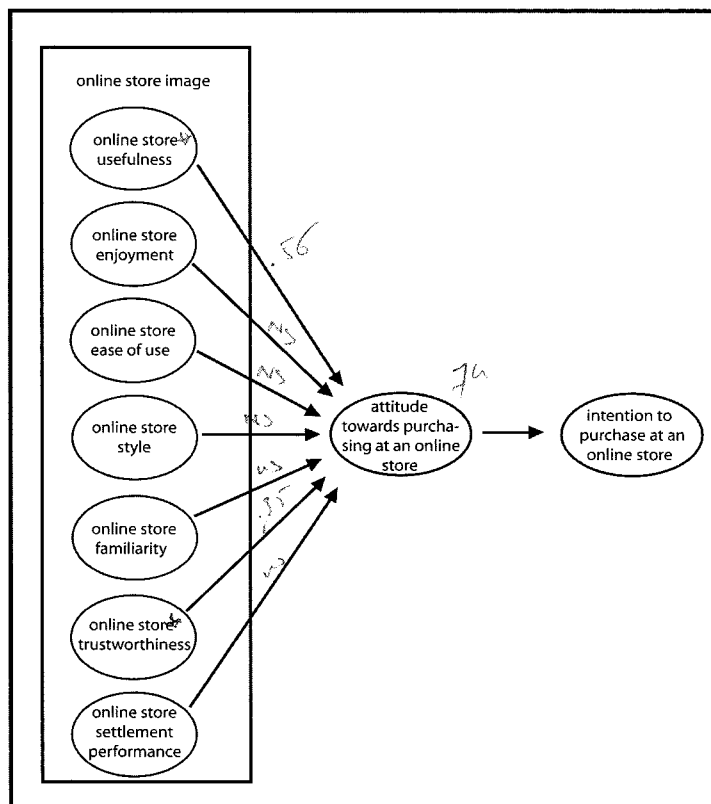
Onderzoeksmodel hoofdstuk 7

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Voor de dataverzameling hebben we een steekproef gehouden onder 312 studenten. Deze hebben onder onze begeleiding in een computerzaal twee online boekwinkels (Bol en Proxis) bekeken waarbij na elk bezoek een enquête is ingevuld.

Wederom bevestigen de resultaten de robuustheid van de attitude→ intentie relatie. Het verband tussen beide variabelen is zonder meer als sterk te betitelen (beta voor beide online winkels .78; verklaarde variantie 60 procent).

Tevens blijkt dat 'online store usefulness' en 'online store settlement performance' voor beide online winkels een significante, doch gematigde, invloed op de attitude hebben. Wat betreft de andere online store image componenten zijn de resultaten minder eenduidig. Zo hebben 'online store enjoyment' en 'online store trustworthiness' een significante invloed op de attitude voor de Bol site maar zijn deze verbanden niet significant voor de Proxis site. Daarentegen zijn de relaties tussen 'online store ease of use', 'online store style' en 'online store familiarity' wel significant voor de Proxis site maar niet voor de Bol site. De invloed van deze 'wisselend significante' attributen op de attitude is zwak te noemen. Als verklaring voor de verschillen tussen beide online winkels kan naar de kenmerken van de twee winkels worden gekeken (bekend versus onbekend) maar het is ook mogelijk dat een replicatie van het onderzoek met meer online winkels wel een duidelijk beeld naar voren zal halen. Wat betreft de totale invloed van 'online store image' op de intentie om bij een online winkel te kopen verschillen de resultaten voor de winkels nauwelijks. De online winkelattributen beïnvloeden ruim 30% van de variantie van de attitude. Gezien het sterke verband tussen de attitude en de intentie kan op basis van dit onderzoek geconcludeerd worden dat percepties van de online winkel een duidelijke, al hoewel geen overweldigende invloed op de aankoopintentie uitoefent.

Conclusies

In het achtste hoofdstuk trekken we de conclusies van ons onderzoek. Omdat er drie onderzoeksvragen zijn, komen er drie aandachtspunten aan bod.

Ten eerste geven we antwoord op de vraag hoe de intenties om bij een online winkel te kopen worden gevormd. Volgens de literatuur, zoals die in hoofdstuk twee is behandeld, worden aankoopintenties tijdens de tweede ('search for information') en derde ('pre-purchase alternative evaluation') fase van het aankoopproces gevormd, waarna ze in de vierde fase ('purchase decision-making process') al dan niet naar gedrag worden vertaald. In de context van deze dissertatie betreft het de beslissing *waar* de consument zal kopen. Op vergelijkbare wijze worden ook intenties gevormd ten aanzien van de vraag *of* de consument iets zal kopen en, zo ja, wat en wanneer en hoe hij of zij zal betalen. Ofschoon bovenstaand antwoord is gebaseerd op gedrag in een fysieke omgeving, bevestigen diverse auteurs dat dit proces in een online setting op vergelijkbare wijze opgaat.

Ten tweede beantwoorden we de vraag welke percepties van online winkelkenmerken een invloed uitoefenen op de intenties van consumenten om online te kopen. Uit zowel ons eigen onderzoek als uit het in hoofdstuk vijf besproken onderzoek, blijkt dat het met name percepties van online winkelattributen zijn die zowel met 'trust' en 'perceived risk' te maken hebben als met de 'usefulness' van een online winkel. Binnen de 'trust' en 'perceived risk' categorie vallen onder andere de volgende online winkelattributen: 'perceived risk', 'perceived trust', 'perceived size', 'perceived reputation', 'security perceptions' en 'online store settlement performance' Tot de 'usefulness' categorie behoren: 'perceived usefulness', 'representative retail price', 'perceived quality' en 'perceived live content'.

Ten derde geven we antwoord op de vraag hoe en in welke mate de percepties die consumenten van een online winkel hebben, invloed uitoefenen op hun intenties om bij een

online winkel te kopen. Uit de door ons geteste modellen concluderen we dat percepties van online winkelkenmerken voornamelijk via de attitude invloed uitoefenen op de intentie om bij een bepaalde online winkel te kopen. Daarnaast loopt de invloed van online winkelattributen zoals 'perceived trust' en 'perceived reputation' op de attitude via een ander online winkelattribuut ('perceived risk'). Ondanks de via de attitude lopende invloed hebben percepties van online winkelattributen een substantieel effect op de intentie om bij een bepaalde online winkel te kopen. Door het zeer sterke verband tussen de attitude en de intentie zal het effect dat de percepties van online winkelattributen op de attitude uitoefenen, grotendeels doorwerken naar de intentie. Ons onderzoek laat zien dat percepties van online winkelattributen via de attitude tussen de 20 en 25% van de variantie van de intentie verklaren. Op zich lijkt dit niet veel maar het kan net genoeg zijn om twijfelende consumenten over de streep te trekken.

Als we ons richten op de vraag wat voor invloed percepties van de individuele online winkelattributen op de intentie om bij een online winkel te kopen hebben, dan concluderen we het volgende. 'Perceived risk' blijkt een sterke invloed uit te oefenen. 'Online store usefulness', 'online store settlement performance' en 'perceived trust' hebben een gematigde invloed. De invloed van 'perceived reputation' is zwak te noemen. Wat betreft 'ease of use', 'online store familiarity', 'online store style', 'perceived size en 'online store enjoyment' kunnen geen eenduidige conclusies worden getrokken en is meer onderzoek nodig.

Curriculum Vitae

Tibert Verhagen was born on September 21, in Eindhoven, The Netherlands. After graduating from the "Bataafse Kamp" in Hengelo in 1993 he studied at the department of International Economics at the Faculty of Geographical Sciences of Utrecht University. Based on a 6 months working period, his master's thesis reported on the international expansion strategy of Silicon Graphics, Inc.. In November 1998 he began as doctoral candidate at the Vrije Universiteit Amsterdam, department of Information Systems, Marketing and Logistics. During his research he was involved in several activities. For more than three years he organized departmental seminars. He was part of Vuture.net, the E-business research institute of the Vrije Universiteit. Together with a colleague he started the company Scanyours.com. For two years he was member of the management team of the Edispuut, the Dutch network for Ph.D. students in EDI and ecommerce. Together with two colleagues, he organized the 2001 Edispuut conference and published the corresponding conference proceedings.

His research resulted in several publications. Next to working papers and management publications, his academic publications have appeared in the proceedings of the Pacific Asia Conference on Information Systems (2000), the Hawaiian International Conference on System Sciences (2001, best paper award nominee; 2002, best paper award nominee) and the European Journal of Information Systems (2003).

The Tinbergen Institute is the Institute for Economic Research, which was founded in 1987 by the Faculties of Economics and Econometrics of the Erasmus Universiteit Rotterdam, Universiteit van Amsterdam and Vrije Universiteit Amsterdam. The Institute is named after the late Professor Jan Tinbergen, Dutch Nobel Prize laureate in economics in 1969. The Tinbergen Institute is located in Amsterdam and Rotterdam. The following books recently appeared in the Tinbergen Institute Research Series:

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