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Consumer uncertainty in the e-commerce

The effect of uncertainty on the need for control on consumer purchase decision making

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Abstract

This paper investigates the way in which uncertainty influences consumer purchase decision making in the e-commerce. Moreover, we investigate whether this relationship is mediated by the need for control. At first will be looked at consumers' need for control over web design or information of a website, and how this will reduce uncertainty. Additionally, the moderating role of consumer expertise on this relationship is examined. Results indicated that consumers with an amount of expertise have a lower need for control. Furthermore, the relationship between the need for control and consumer purchase decision making will be discussed, and the locus of control will be used as a moderator. We found that consumers with a high internal locus of control make purchase decisions in a different way than externals do.
Finally, implications of the finding for future research and managerial recommendations are discussed.

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Chapter 1: Introduction

1.1 Background

"The internet-based online market comprises a network of buyers and sellers offering products"; increasingly more consumers are participating in this so-called e-commerce (Chatterjee and Datta 2008). For sellers it is important to build a relationship with their consumers and to satisfy them, so that the consumer will be certain about the purchase. Many times the consumer is not certain about the product or service offered at the website. This uncertainty of the consumers can be defined as "the inability of consumers to correctly and consistently assess the transactional outcome in the e-commerce due to unavailability of complete and perfect information". (Pavlou, Liang and Xue 2007, p. 107). Therefore, it is important for sellers to reduce consumer's uncertainty.

The relationship between uncertainty and consumer purchase decision making in the e-commerce can be explained by the need for control. Howell and Burnett (1978) state that control is a sense of certainty, since actions over which people perceive control will be less uncertain than actions over which people do not have control. In this study will be looked at consumers' need for control on web design and information, because the design and the information available on a website impacts prospective consumers (Song and Zahedi 2005). Not only is this interesting for managers, it is also interesting from an academic point of view, because not that much research has been done on the mediating role of the need for control on the relationship between uncertainty and consumer purchase decision making in the e-commerce.

Furthermore, we will investigate whether consumer expertise plays a moderating role in the relationship between uncertainty and the need for control. People who have expertise will be more certain to buy products online, because they recognize the situation due to their brand or product familiarity or prior experience (Heath and Tversky 1991).

Finally, consumers have a different perception of control. This perception of control is called the locus of control, and can be divided into two dimensions: the internal locus of control and the external locus of control (Lefcourt 1966; Rotter 1966). Therefore, we will also investigate whether the locus of control plays a moderating role between the need for control and consumer purchase decision making.

In sum, the purpose of this paper is to show how uncertainty influences consumers' need for

control and how this relationship affects how consumers make purchase decisions in the e-commerce.

1.2 Problem statement and research questions

A deeper insight is required in how uncertainty influences how consumers make purchase decisions in the e-commerce, and how the need for control influences this relationship. Thus, the problem statement of this study is:

> *How do feelings of uncertainty influence consumers' need for control and how can this relationship affect consumer purchase decision making in the e-commerce?*

This question will be answered by the following research questions:

1. How does perceived uncertainty influence consumers' need for control?
2. Does consumer expertise play a moderating role in the influence of uncertainty on the need for control?
3. What is the effect of the need for control on consumer purchase decision making in the e-commerce?
4. What is the moderating effect of the locus of control on the relationship between the need for control and consumer purchase decision making in the e-commerce?

1.3 Theoretical framework

The problem statement and research questions as stated in the previous paragraph led to the development of the following theoretical framework.

This framework gives an overview of the variables and their relationships studied in this research. In this picture *uncertainty* is the independent variable and *consumer purchase decision making in the e-commerce* is the dependent variable. This relationship will be discussed by using the mediator *need for control.* Moreover, *consumer expertise* will be used as moderator to discuss the influence of this variable on the relationship between uncertainty and the need for control. Finally, the moderating role of the *locus of control* will also be discussed in its influence on the relationship between the need for control and consumer purchase decision making in the e-commerce.

1.4 Relevance

1.4.1. Academic relevance

In recent years, uncertainty has been recognized as an important object of study in consumer behavior research. In particular, increasingly attention has been given to research of how uncertainty influences consumer purchase decision making in the e-commerce (Haubl and Trifts 2000; Pavlou et al. 2007). However, relatively little research has been done on how the need for control explains the relationship between uncertainty and purchase decisions consumers make in the e-commerce.

Moreover, other factors can influence this relationship and have not yet been considered by previous research; in particular, as consumer expertise can be a component in making decisions in the consumer behavior process (Brucks 1985; Laroche, Kim and Zhou 1996), it is relevant to examine if this factor will influence the relationship between uncertainty and the need for control. Thus, this paper will also provide a deeper insight on how consumer expertise plays a moderating role between uncertainty and the need for control.

Finally, earlier research mentioned the relationship between the locus of control and consumer behavior (Busseri, Lefcourt and Kerton 1998). But, relatively little research has been done on how the locus of control moderates the relationship between the need for control and consumer purchase decision making in the e-commerce. Therefore, it is relevant to examine this moderating role in this study.

1.4.2. Managerial relevance

Consumers' uncertainty is naturally of interest for e-commerce stores. An important issue for online sellers is to keep their consumers satisfied and gain their confidence. Internet stores are particularly dependent on consumers' trust and hence on consumers' perceived service certainty. If the need for control explains the relationship between uncertainty and purchase decisions consumers make in the e-commerce, marketers and managers could increase the level of perceived consumer control of their websites to increase customer satisfaction and sales. Design of the website of an online store can have a critical impact on the company's success, because design influences future customers (Song and Zahedi 2005). Additionally, it is also important for managers to know how different consumer segments react to online buying. In particular, online shoppers can vary significantly in terms of knowledge and skills. Therefore, the present research will also provide new insights to managers and marketers about the role of consumer expertise on the relationship between uncertainty and the need for control.

1.5 Thesis Structure

In the second chapter will be discussed what the influence of perceived uncertainty is on consumers' need for control. In this chapter will be looked consumers' need for control over web design and information.

The third chapter will cover the moderating role of consumer expertise in the influence of uncertainty on the need for control. In the fourth chapter the effect of this uncertainty-need for control relationship on consumer purchase decision making in the e-commerce will be explained, and the locus of control will be used as a moderator. The last chapter will contain the conclusion; the problem statement and research questions will be answered. After this the limitations and suggestions for further research and managerial recommendations will be given.

Chapter 2: Uncertainty and the need for control

The first section of this chapter describes what is meant with consumer uncertainty, and that uncertainty is a reason for not buying products online. Perceived information asymmetry will be mentioned as a problem of uncertainty in the e-commerce. After that, consumers' need for control will be explained, and the relationship between those two will be elucidated. Consumer's need for control over website design and information will be described. Finally, it will be discussed how the perceived information asymmetry can be reduced by controlling the website design and information available on a website.

2.1 Uncertainty in the e-commerce

The e-commerce offers huge potential for online sales, but it also implies high risks for consumers and sellers; for instance, cyber crimes, hacking incidents, spam or lack of personal interaction and information asymmetry (Chatterjee and Datta 2008). These risks can lead to consumer uncertainty. That is, consumers are more uncertain about buying products in the online environment than about buying the same products in a store (Pavlou et al. 2007). This uncertainty in internet stores discourages many consumers from participating in online transactions.

Uncertainty has been widely supported as the primary barrier for consumers to buy products online (Pavlou et al. 2007). One-half of the Internet consumers does not buy products online due to their uncertainty feelings (Verisign 2006). Similarly, the Wall Street Journal (Kesmodel 2006) reported that just 25 percent of consumers who searched for products in online stores actually bought the products on the Internet. Other research reported that 65 percent of the online consumers did not complete a purchase due to uncertainty feelings about the trustworthiness of the seller or the information on the website, or the presentation of the products it sold (Graeber 2007). So from this earlier research can be concluded that consumers stay somewhat uncertain about e-commerce transactions and that managing this uncertainty is a key issue for e-commerce managers.

Furthermore, in earlier research there are some problems of uncertainty discussed based on the fact that the consumer cannot completely observe the seller's performance: adverse selection (hidden information) and moral hazard (hidden action) (Pavlou et al. 2007). That is, perceived

consumer uncertainty arises from the perceived information asymmetry due to the hidden information and moral hazard problems. Perceived information asymmetry is defined as "the buyer's perception that the seller has a greater quantity or quality of information about its products, characteristics, and selling practices" (Pavlou et al. 2007, p. 112). For instance, it is difficult for the online buyer to see if the seller is of high or low quality (about seller quality or product quality), because low quality sellers may try to misrepresent their true quality, while in traditional stores buyers can check the quality themselves at the moment of the purchase. And therefore, due to the physical separation between buyers and sellers in the e-commerce, information asymmetry is a problem which increases the uncertainty feelings of online consumers" (Huston and Spencer 2002).

Thus, perceived information asymmetry leads to an increased consumer uncertainty in the online environment, and online sellers need to try to reduce this uncertainty. In the next paragraph the mediating variable *need for control* will be used to describe whether perceived control could be a tool to reduce the perceived information asymmetry and thus consumer's uncertainty.

2.2 Consumers' need for control in the e-commerce

2.2.1. Consumers' need for control

"Feelings of uncertainty tend to lead to an increase in feelings that outcomes cannot be controlled" (Edwards and Weary 1998, p. 143). That is, actions over which people think they have some measure of control are likely be judged less uncertain than actions over which people do not have control (Howell 1971; Langer and Roth 1975). Thus, control is a sense of certainty. Specifically, the uncertainty model of Weary and Edwards (1994) makes clear that people who are uncertain need control. The results of this model confirm that lack of control is a source of increasing uncertainty. This means that when people do not have control, their uncertainty is greater than for people who have control. Previous research has shown that consumers do not like being in uncertain situations where there is a lack of control, and hence, they need control to prevent negative feelings (Ashford and Black 1996). Control is an important element of the behavior of individuals. That is, according to Ashford and Black (1996), the more control consumers have over uncertain events, the less risky the consequences of uncertainty. Consumers want to feel in control with situations in which they act, and will actively try to arrive at that level of control (Greenberg and Strasser 1986). Therefore, consumers will try to gain control in

different ways, such as searching for information or obtaining mastery over skills (Ashford and Black 1996).

Earlier research has distinguished between several types of control. Ajzen (1991) suggested that the most important type of control is the perception of behavioral control and its influence on purchase decisions and actions. He proposed that "perceived behavioral control refers to people's perception of the easiness or difficulty of performing the behavior people want to perform" (Ajzen 1991, p. 183). This can be compared with the locus of control of Rotter (1966). However, while locus of control is a general expectation that remains constant across situations, perceived behavioral control can fluctuate between situations. The locus of control construct has been used many times to predict different behaviors (Busseri et al. 1998, Lefcourt 1982). Therefore, it is predictable that the locus of control plays a role on how consumers make purchase decisions in the e-commerce. This mediating effect of the need for control between uncertainty and consumer purchase decision making will be discussed in the fourth chapter. In the following section consumers' need for control on web design and the information available on the website will be discussed.

2.2.2. Consumers' need for control over web design and information

As described in the previous sections, consumers need to reduce their uncertainty feelings towards online shopping, and we propose that the need for control mediates these uncertainty feelings. In particular, since web design and information are the best predictors for positive feelings towards a website (Chen and Wells 1999), in the following lines consumers' need for control over web design and information will be described.

"Web design elements can be defined as the features, components, and information used in developing e-commerce websites" (Song and Zahedi 2001, p. 207). Consumers feel often forced by their lack of knowledge and skills, or their unfamiliarity with the web design, and hence they feel uncertain about buying the product online. Therefore, to reduce their uncertainty feelings, consumers need control over these web design elements. Consumers perceive control over a website, when the website is easy to use, and when they have the ability to complete tasks succesfully (Harrison, Mykytyn and Riemenschneider 1997). As mentioned earlier, consumers are not able to actually see the product and they cannot get in touch with the seller of the online store. Therefore, a website needs web design elements which create a perception of control for

the consumer. Thus, web design elements help customers in using the website effectively, and they provide a sense of control (Song and Zahedi 2005). Thus, consumers seem to need some control over the web design, and hence over the website, in the way that their uncertainty feelings are reduced, and they feel comfortable and familiar with it.

Besides website design, the quality of the information on a website is another important dimension that influences consumer uncertainty, and hence control. As described previously, perceived information asymmetry leads to consumer uncertainty. Perceived information asymmetry can be reduced by website informativeness. Website informativeness is defined as the extent to which a website gives information buyers perceive as useful and relevant (Luo 2002). According to Pavlou et al. (2007), consumers will not be certain about the purchase, when they read some information they do not perceive as useful. That is, sellers have to inform buyers about the true quality of the products, their own true characteristics, and their selling practices. If consumers perceive this information as useful, this will enhance seller's website informativeness, and this will reduce the perceived information asymmetry. Thus, besides web design, consumers also need control over the information, which will mean an increase of website informativeness, which in turn will lead to reduced uncertainty feelings of consumers.

2.3 Conclusion

Summarizing, it can be concluded that consumers are discouraged from buying products in online stores due to their perceived uncertainty feelings. This uncertainty arises from the perceived information asymmetry, that is, buyers cannot see if the product quality or seller quality is high or low. Therefore, consumers are uncertain about buying products in Internet stores.

Earlier research has mentioned that people who are uncertain need control (Weary and Edwards 1994), that is, increasing uncertainty arises from a lack of control. Therefore, consumers need control to reduce their uncertainty feelings towards purchase decision making in the e-commerce. This uncertainty can be reduced by control over web design and information on a website. When consumers are more familiar with a website design, or perceive the information on a website as useful and trustful, the perceived information asymmetry will be reduced, and thus the uncertainty feelings of consumers.

Chapter 3: The moderating role of consumer expertise

In the previous chapters, the uncertainty-need for control relationship was discussed, and their effect on how consumers make purchase decisions in the e-commerce. Now the moderating role of consumer expertise on the uncertainty-need for control relationship will be mentioned. At first, consumer expertise will be discussed in consumer behavior in general by looking at the effect on consumers' uncertainty feelings. After that, the moderating role will be discussed by explaining the competence hypothesis of Heath and Tversky (1991), in which is stated that consumers will join in uncertain situations earlier when they have prior knowledge or brand or product familiarity, and thus, understand the situation.

3.1 Consumer expertise

Consumers are supposed to have some amount of experience with or information about particular products or situations; this is most often concerned to as product or brand familiarity or prior knowledge (Alba and Hutchinson 1987). This so-called consumer expertise can be seen as an internal source of information. That is, as mentioned previously, consumers need useful information to reduce their uncertainty feelings when making purchase decisions. But, consumers also have some internal information themselves, from experience or familiar situations, which they can use to reduce this uncertainty problem (Elliot and Fowell 2000). Therefore, consumers can use their prior experiences and brand or product familiarity to make purchase decisions with less feelings of uncertainty.

These consumers can be seen as "experts". Experts have more knowledge and information than non-experts about specific products or brands, and have the knowledge necessary to make a decision between several products, or to make a decision whether to buy a product or not (Brucks 1985). That is, since experts have more knowledge about the different brands and products available (Bettman and Park 1980), they can make more comparisons between the products presented on different websites. Thus, when they make a purchase decision, they are able to choose the product which is the most related to their needs and wants (Brucks 1985). Alba and Hutchinson (1987) suggested that increasing brand or product familiarity will lead to an increase of knowledge of consumers, which will make them remembering the product better. Thus, the next time consumers observe the same brand or product, they believe they know the

product well. Thus, consumers will be more confident about well-known brand or products (Kent and Allen 1994), and this will lead to less perceived uncertainty feelings. That is, well-known brands will be better liked and earlier bought than less familiar brands (Colombo and Morrison 1989). Therefore, due to the low level of uncertainty towards a well-known brand, brand familiarity positively influences the purchase decision people have to make when buying a product, also in buying products in the e-commerce (Laroche et al. 1996).

The same thing is likely to occur when talking about prior experience, not only for buying products in stores, but also in the online environment. For instance, Yoh and Damhorst (2003) found that consumers who had more prior experience with the internet had more positive feelings about using the Internet and shopping on the Internet, and these feelings have in turn a positive influence on consumer purchase decision making in online stores.

Thus, consumers with expertise have less feelings of uncertainty due to their prior experience or brand or product familiarity. In the next paragraph the moderating role of consumer expertise between uncertainty and the need for control will be discussed.

3.2 Consumer expertise and the uncertainty-need for control relationship

In the previous section is described that consumers can use their prior experience, knowledge, and their product familiarity to make purchase decisions with reduced feelings of uncertainty. That is, consumers with an amount of expertise are more certain than consumers who do not have expertise. Now we will explain whether experts join in uncertain situations, and how this influences the need for control.

Heath and Tversky (1991) did some experiments about judgments under uncertainty. In one of their experiments they looked at how experts act according to situations in which they have knowledge, in comparison with situations in which they do not have knowledge. This experiment is in accord with the competence hypothesis. In this hypothesis Heath and Tversky (1991) state that consumers will join in uncertain situations earlier when they have general knowledge or understanding of the relevant information of the event. Thus, people prefer to bet on their judgment in situations in which they have some prior experience or where they are familiar with. That is, people perceive control over their judgment in their area of expertise (Howell and Burnett 1978), because they have some knowledge of that situation.

Consumers may have learned from experience that they generally act better in situations they

are familiar with than in situations in which they have less knowledge (Heath and Tverksy 1991). That is, consumers feel like they have control over the situation, because they have the skills and knowledge necessary to make good decisions, and hence, to reduce their uncertainty feelings (Howell and Burnett 1978). In such situations, previous experience and familiarity play an important role. That is, consumers can only know how skillful they are from their experiences in familiar tasks. When the task was a success, consumers feel in control with the situation, but when the task was a failure, consumers feel out of control (Howell and Burnett 1978). Therefore, the next time the consumer has to deal with the event, they will already know how to act, and how not to act. That is, these consumers have positive believes about their own abilities; that is, they know what they are good at. Thus, from this experiment can be concluded that consumers with expertise feel in control with situations, and therefore, they do not feel uncertain and will have a lower need for control than consumers without expertise.

Furthermore, as mentioned earlier, consumers have a need for control over web design and information. That is, their perception of control will be influenced by web design elements and information, in the way that their uncertainty feelings will be reduced. However, people with an amount of expertise already have their own knowledge and information to reduce their uncertainty feelings, and therefore, they are difficult to manipulate with web design elements and information. (Venkatesh, Morris, Davis and Davis 2003), and thus have a lower need for control.

3.3 Conclusion

It can be concluded that consumers with an amount of expertise can use their prior experiences and brand or product familiarity to make purchase decisions with less feelings of uncertainty. Furthermore, consumers prefer to bet on their judgment in situations in which they have some prior experience or where they are familiar with. That is, people perceive control over their judgment in their area of expertise. Moreover, web design elements and information available on a website cannot influence experts, because they already have their own knowledge and information. Therefore, experts feel in control with their situations, which will lead to less uncertainty feelings, and hence, to a lower need for control.

Chapter 4: The effect of the need for control on consumers' purchase decision

In earlier sections is explained what the influence is of uncertainty on consumers' need for control. In the present chapter the effect of this relationship on consumer purchase decision making in the e-commerce will be explained. As mentioned before, the locus of control has been found to be the most useful predictor in consumer behavior (Busseri et al. 1998, Lefcourt 1982), therefore in this study this construct will be used as moderator to describe the effect of the need for control on consumer purchase decision making in the e-commerce. This will be done by explaining the two dimensions of locus of control: the internal locus of control and the external locus of control. Internals differ in their purchase decision making process from externals; therefore they will both make different purchase decisions.

4.1 The need for control and consumer purchase decision

In the first chapter, the influence of uncertainty on the consumers' need for control is explained. It stated that consumers have a need for control due to their uncertainty feelings, and that when people feel like they perceive control over the web design and information, their uncertainty feelings will be reduced. Now this effect on consumer purchase decision making will be explained.

Previous studies found that consumers' control positively influences the purchase decision people make (Manstaed and Van Eeklen 1998; Taylor and Todd 1995; Terry and O'Leary 1995). Moreover, web design and information lead to an increase in consumers' control; therefore, this will also have a positive effect on consumer purchase decision making (Song and Zahedi 2005). That is, when consumers perceive control over web design and information, they are able to make the right purchase decision due to decreased uncertainty feelings.

Nonetheless, consumers have a different perception of control. Some consumers believe that they can control the result of their own behavior and actions (internal locus of control), while others believe that the result of their behavior and actions is determined by external factors (external locus of control) (Lefcourt 1982).

Thus, in the next paragraph the locus of control and its moderating effect on the relationship between the need for control and consumer purchase decision making in the e-commerce will be explained.

4.2 The locus of control

In this section the locus of control construct will be explained. At first, the internal locus of control will be discussed, after that, we will explain the external locus of control.

A behavior is controlled internal when individuals expect that their own actions produce expected outcomes, and that they have control over their own behavior. These individuals, also called “internals”, are very action oriented (Hollenbeck, Williams and Klein1989), since when they feel uncertain; they will always put some active attention to uncertain outcomes to reduce it. That is, internals may be more likely to perform a behavior and will commit to risky and uncertain situations earlier (Brenders 1987). This is the case because of the fact that these consumers act in accordance with their own behavior, and follow their own goals (Philips and Gully 1997).

In contradiction, consumers with a high external locus of control, “externals”, generally expect that outcomes are due to external variables, and that these variables control their environment and events. These external systems of control will lead to a reduction of randomness in consumer behavior, and because uncertainty is a perception of randomness, those will also lead to a reduction of perceived uncertainty feelings (Kay et al. 2008).

Moreover, externals believe that others control the decisions they make and that they cannot influence their decisions themselves (Levenson 1981). They think that because the environment is already controlled, they cannot do anything to change it, and thus, those consumers are not likely to become capable in the skills necessary to complete their own goals and to be effective problem solvers (Larson, Piersel, Imao and Allen 1990). Therefore, those consumers will avoid uncertain and difficult situations in which they have to put some action (Busseri et al, 1998).

4.3 The moderating effect of the locus of control

As described in the previous sections, consumers have a need for control, which positively influences consumer purchase decision making. However, the perception of control differs between individuals (Lefcourt 1966; Rotter 1966), dependent on consumers’ expectancies of whether they control their own behavior. Therefore, in this section, the moderating role of the locus of control will be explained.

Aspinwall and Taylor (1992) have shown that consumers can make purchase decisions in different ways. That is, internals differ in their consumer purchase decision making process from

externals. Internals use the Internet in a goal-directed manner; they are more likely to solve their uncertainty problem, and actively seek out information to reduce uncertainty (Zimmerman and Rappaport 1988). According to Busseri et al. (1998), strategic shopping involves a purchase decision making process; internals think that following this process can minimize uncertainty in making purchase decisions. Thus, we can argue that internals will put more effort and time in shopping online and thus may come to view successful shopping as less difficult.

Moreover, consumers perceive control over web design and information when the website is easy to use and when they have the ability to complete a purchase task, because of the useful web design elements and information available on the website. And as mentioned earlier, this will positively influence consumers' purchase decision. However, internals are confident about their own ability toward performing a behavior (Conner and Armitage 1998). They prefer to gain control in the e-commerce through the self (Hoffman, Novak and Schlosser 2003), and they make decisions about buying products online on their own. Therefore, internals perceive a reduction in their need for control over web design and information. Nonetheless, since internals are going through a strategic and knowledgeable shopping process, and actively seek out their information to make a decision, they are able to make the right purchase decision, which will give them satisfaction (Hoffman et al. 2003).

In contradiction, external controlled consumers do not engage in the buying process That is, they do not look for information to reduce their uncertainty. These consumers will not bring personal resources to their decision making, and therefore, they have less product knowledge and less developed shopping skills, and therefore their purchase decision is more impulsive (Dessart and Kuylen 1986). The more external consumers are, the less knowledge they have to exert themselves when purchasing products (Busseri et al. 1998). That is, control of externals is provided by external forces, and therefore, they cannot influence it themselves. Thus, web design and information will not have an influence on externals, because externals believe this cannot give them control over a website. Therefore, in contradiction with internals, externals do not constantly make the right purchase decisions, because their decisions are impulsive, and thus, they have a lower satisfaction with the things they buy than internals.

4.4 Conclusion

Summarizing, consumers' need for control influences consumer purchase decision making. But, this perception of control differs between consumers. Internals have control over their own

behavior, goals, and actions, while externals expect that control is exerted by external forces. Moreover, internals are very active in searching for information to reduce their uncertainty feelings, and they will go through a strategic buying process before making a purchase decision. They prefer to gain control themselves, and therefore perceive a reduction in their need for control over web design and information. However, because they put many effort and time in making decisions, and they control uncertain situations themselves, they will make the right purchase decision. Web design and information will not have an influence on externals, because they believe this cannot give them control. Therefore, their purchase decision is more impulsive, because they do not look for information, and do not engage in buying processes, because they think they cannot do anything themselves. Thus, they are not always making the right purchase decision.

Chapter 5: Conclusions

This last chapter contains the conclusion, limitations, suggestions for future research, and the managerial recommendations. The first section will deal with the conclusion that can be given from this study; an answer on the research question will be given. Section two will discuss the limitations and suggestions for further research. The final section will give the managerial recommendations from the results of this study.

5.1 Conclusion

This paper investigates how feelings of uncertainty influence consumers' need for control and how this relationship affect consumer purchase decision making in the e-commerce.

To start with, this study has shown the relationship between uncertainty and the need for control. Uncertainty is the primary barrier for consumers to not buy products in online stores. This uncertainty arises from the perceived information asymmetry, that is, sellers of internet stores have more information about the products and the website than consumers. Buyers cannot physically touch the product or have direct contact with the seller, and therefore they cannot measure the actual product or seller quality. This will make consumers uncertain about buying products in the e-commerce. Earlier research has mentioned that people who are uncertain need control (Weary and Edwards 1994), that is, increasing uncertainty arises from a lack of control. Therefore, consumers need control to reduce their uncertainty feelings towards purchase decision making in the e-commerce. This uncertainty can be reduced by control over web design and information on a website. When consumers believe a website is easy to use, and they can complete their purchase task, or perceive the information on a website as useful, the perceived information asymmetry will be reduced, and thus the uncertainty feelings of consumers. Thus, uncertain people have a need for control to reduce these negative feelings.

Next to that, the relationship between uncertainty and the need for control is moderated by consumer expertise. Consumers with an amount of expertise can use their prior experiences and brand or product familiarity to make purchase decisions with less feelings of uncertainty. Furthermore, consumers prefer to bet on their judgment in situations in which they have some prior experience or where they are familiar with. That is, people perceive control over their judgment in their area of expertise. Moreover, web design elements and information available on a website cannot influence experts, because they already have their own knowledge and

information. Therefore, experts feel in control with their situations, which will lead to less uncertainty feelings, and hence, to a lower need for control.

Finally, the relationship between the need for control on consumer purchase decision making is explained, and the moderating role on this relationship. It is found that the need for control has a positive relationship with consumer purchase decision making. But, consumers have a different perception of control. People with an internal locus of control, "internals", have control over their own behavior, goals, and actions. Whereas people with an external locus of control, "externals", expect that control is exerted by external forces. Internals and externals make purchase decisions in a different way. Internals are very active in searching for information to reduce their uncertainty feelings, and they will go through a strategic buying process before making a purchase decision. They prefer to gain control themselves, and therefore perceive a reduction in their need for control over web design and information. However, because they put many effort and time in making decisions, and they control uncertain situations themselves, they will make the right purchase decision.

In contradiction, externals do not engage in the buying process. Therefore, they do not look for information and make impulsive decisions, because they think they cannot control anything themselves. Thus, web design and information will not have an influence on externals, because they believe this cannot give them control. Thus, externals perceive have a lower need for control over web design and information, and because they make impulsive decisions, they are not always making the right purchase decisions.

5.2 Limitations and suggestions for future research

This study has several limitations that create some interesting opportunities for further research. At first, perceived information asymmetry is mentioned as a source of uncertainty, because of the hidden information and moral hazard problems. Besides this source, there are some others sources which lead to an increase of uncertainty (Pavlou et al. 2007), but which are not mentioned in this study, namely: information privacy, fears of seller opportunism, and information security concerns. Therefore, future research could examine how consumers need control over these sources as well as over perceived information asymmetry.

Secondly, only the effect of one moderating variable on the relationship between the need for control and consumer purchase decision making in the e-commerce is investigated. In further research it can be searched for some other variables which influence these relationships. For

example, purchase involvement has been found to strongly influence consumer purchase decision making. When a product has high involvement, people will search for more information than for a low involvement product. Therefore, in further research, the moderating role of purchase involvement between the need for control and consumer purchase decision making in the e-commerce could be examined.

Furthermore, also in addition to consumer expertise can other variables be used to influence the relationship between uncertainty and the need for control. For example, gender can be examined as a moderator in future research.

Finally, in this study, the external locus of control construct is discussed in general. But earlier research (Kay et al. 2008) has mentioned different external systems: chance, powerful others, and governmental power. Therefore, future research can examine whether these dimensions have a different impact on the relationship between the need for control and consumer purchase decision making in the e-commerce.

5.3 Managerial recommendations

In this final section of the research study an overview of recommendations will be given which managers could use to manage consumers' perceived uncertainty feelings in the e-commerce. Since consumer uncertainty will be reduced by consumers' control over website information and web design, managers of Internet stores can focus on these two predictors. That is, managers are advised to build a website with which consumers feel familiar and comfortable, and which is easy to use and to navigate. Managers may provide website features to enable consumers to easily find what they need, find some information about it, and quickly purchase it. Moreover, managers may put useful information on the website, both about the products they offer as about the seller themselves. Because when consumers feel well informed, their perceived uncertainty feelings will reduce and they will earlier make the decision to buy a product.

Furthermore, managers have to take into account that consumers have different kind of perceptions of control, and therefore, make different decisions and go through different processes when making a decision. Some consumers have high internal control; those people will go through a buying process before making the decision to buy a product, while externals make impulsive buying decisions. Therefore, managers must take into account that internals want to make comparisons between products, and managers must give internals the possibility to complete each state of the buying process on their website. However, externals make impulsive

decisions; therefore, managers can also put a short explanation of each product on the website, so that externals do not have to put time and effort in their purchase decision.

Finally, consumers with expertise will have less uncertainty feelings than people without expertise. This expertise will be gained from prior knowledge and experience, or product or brand familiarity. Therefore, managers may sell products or brands that are familiar with many people. That is, well-known products are better liked by consumers, and will reduce consumers' uncertainty feelings, and hence, consumers will earlier buy the product.

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