MASTER THESIS

The effect of review valence, seller type and product involvement on the formation of online trust, risk and intentions when buying second-hand products online

Tom van Urk
S1882171

Faculty of Behavioural, Management and Social Sciences (BMS)

SUPERVISORS
Dr. Ardion Beldad (first supervisor)
Dr. Sjoerd de Vries (second supervisor)

VERSION 1

19-11-2019
Abstract

Every year the growth of online e-commerce is increasing at the expense of the traditional retail channels. With the increased popularity of the second-hand economy, multiple e-commerce platforms started to show interest in the resale market (e.g., Bol.com, marktplaats). Therefore, it will be interesting for e-commerce businesses to know how online trust and risk are developed in relation to second-hand shopping.

The unique element of this research is the focus on the exchange of second-hand products between buyer and seller instead of brand new products in the Netherlands. Second-hand products are a particularly interesting subject due to the lack of prior research.

The objective of this research is to find out how Dutch consumers experience second-hand shopping situations. For example, the effect of positive and negative reviews on seller trust. Therefore, a $2\times2\times2$ experimental research was conducted with three different manipulated conditions: type of seller (company seller versus individual seller), review valence (negative valence versus positive valence), type of product (high involvement versus low involvement).

The manipulated conditions were incorporated in an experimental survey to measure the effects on the mediators (seller trust and risk perception), dependent variable (purchase intention) and the covariates (attitude towards second-hand shopping and attitude towards online shopping). For this experiment, a total number of 243 millennial respondents participated in an online survey, where participants answered questions about the presented seller information.

This study shows that type of seller has no significant effect on the formation of seller trust. Whereas, product involvement only showed an effect on perceived risk. In addition, review valence showed a larger effect on seller trust and perceived risk than seller type and product involvement did. Also, consumers’ with a positive attitude towards second-hand shopping are more inclined to trust the seller than consumers with a negative attitude.

To conclude, the practical implication are intended to give companies and experts insights in understanding the formation of online seller trust in a second-hand e-commerce market.

Keywords
Online trust, E-commerce, Online shopping, Internet Marketing, Second-hand products
# TABLE OF CONTENTS

## 1. INTRODUCTION

## 2. THEORETICAL FRAMEWORK

2.1. THE INCREASED POPULARITY OF ONLINE SECOND-HAND SHOPPING

2.2 THE ROLE OF SELLER TRUST, PERCEIVED RISK AND PURCHASE INTENTION

2.3 TYPE OF SELLER (COMPANY SELLER VS. INDIVIDUAL SELLER )

2.4 REVIEW VALENCE (POSITIVE VS. NEGATIVE RATING)

2.5 PRODUCT INVOLVEMENT (HIGH INVOLVEMENT PRODUCTS VS. LOW INVOLVEMENT PRODUCTS)

2.6 INTERACTION EFFECTS

2.7 MEDIATING EFFECT OF SELLER TRUST AND PERCEIVED RISK

2.8 THE EFFECT OF ATTITUDE TOWARDS ONLINE SHOPPING AND SECOND-HAND SHOPPING

2.9 RESEARCH MODEL

## 3. METHOD SECTION

3.1 RESEARCH DESIGN

3.2 PROCEDURE

3.3 PRE-TEST

3.4 STIMULI MATERIALS

3.5 MANIPULATION CHECK

3.5.1 SELLER TYPE MANIPULATION CHECK

3.5.2 REVIEW VALENCE AND PRICE MANIPULATION CHECK

3.6 PARTICIPANTS

3.7 MEASUREMENT

3.8 RELIABILITY AND VALIDITY OF THE CONSTRUCTS

## 4. RESULTS

4.1 MAIN EFFECTS

4.1.1 MAIN EFFECT OF SELLER TYPE ON DEPENDENT VARIABLES

4.1.2 MAIN EFFECT OF REVIEW VALENCE ON DEPENDENT VARIABLES

4.1.3 MAIN EFFECT OF INVOLVEMENT ON DEPENDENT VARIABLES

4.1.4 EFFECT OF ATTITUDE TOWARDS ONLINE SECOND-HAND SHOPPING AND ATTITUDE TOWARDS ONLINE SHOPPING ON DEPENDENT VARIABLES

4.2 INTERACTION EFFECTS

4.3 THE EFFECT OF SELLER TRUST AND PERCEIVED RISK ON PURCHASE INTENTIONS

4.4 MEDIATING EFFECTS

4.4.1 MEDIATING EFFECT OF SELLER TRUST BETWEEN SELLER TYPE AND PURCHASE INTENTION

4.4.2 MEDIATING EFFECT OF SELLER TRUST BETWEEN REVIEW VALENCE AND PURCHASE INTENTION

4.4.3 MEDIATING EFFECT OF PERCEIVED RISK BETWEEN REVIEW VALENCE AND PURCHASE INTENTION
1. Introduction

The increased online consumption has influenced the overall consumer behaviour in the last decade. Consequently, consumer behaviour changed over time and consumers started buying second-hand products at online stores instead of physical stores. Furthermore, from a societal standpoint, people increasingly started to care more about climate change and the negative effects on the environment. Remarkably, the younger generations are prominently visible in leading this change, with the millennial generation and Gen Z adopting second-hand products 2.5 times faster than any other generation (Thredup, 2019). This shift has changed the way society lives, changed their buying behaviour and will decide their behaviour in the future.

The growing interest of consumers in second-hand shopping did not go unnoticed by e-commerce companies. As a result, multiple alternatives for the exchange of second-hand products emerged on the Dutch market (e.g., Bol.com, Coolblue and Marktplaats). These alternatives gave consumers and companies the ability to exchange second-hand products on a single e-commerce platform. However, researchers showed that the intangible nature of online shopping caused consumers’ to perceive more risks and that the lack of online trust was one of the main reasons to refrain from buying (M. K. Lee & Turban, 2001; Pavlou, 2003). This is especially the case when consumers are browsing online for second-hand products, because consumers have to make additional inferences about the condition of a second-hand product.

A tool that helps consumers with making inferences about the selling party when shopping online are consumer reviews. The communication direction of those consumers reviews, also known as valence, can either be positive or negative (Zou, Yu, & Hao, 2011). Various researchers explored online consumer reviews, or electronic word-of-mouth and their effects on consumer decision making. However, these studies found inconsistent results between the valence of online reviews on consumers’ intentions and purchase behaviour (Chevalier & Mayzlin, 2006; Lin, Fang, & Tu, 2010). In addition, researchers did not investigate the effect of online consumer reviews on the formation of trust and perceived risk in a second-hand product market. This study aims to fill that gap.

This study explores the effects of consumer reviews on the formation of trust, risk and purchase intention in an experimental setting. The experiment is set up in the style of an already well-known e-commerce platform Bol.com with second-hand products sellers, manipulated review valence and products. The research model has a 2x2x2 experimental design and was conducted with three different manipulated conditions: type of seller (company seller versus individual seller), review valence (negative valence versus positive valence), type of product (high involvement versus low involvement). The manipulations conditions measured the effects on the mediators (seller trust and risk perception), dependent variable (purchase intention) and the covariates (attitude towards second-hand shopping and attitude towards online shopping).

The central research question is as follows:

*To what extent do type of seller, review valence and product involvement influence purchase intention through the mediation effect of seller trust and perceived risk when buying second-hand products on an e-marketplace?*

The relevancy of this study can be explained in different ways. For instance, there is academic relevance because this study extends previous research of review valence in combination with the effects of online trust, risk and intentions. And, studies never researched this in a second-hand shopping environment. Also, this study gives practical implications for e-commerce platforms and their employees in understanding consumer reviews and the effects of review valence on trust, risk and intentions in a second-hand shopping context. The next chapter will thoroughly discuss the suggested theoretical framework.
2. Theoretical framework

2.1. The increased popularity of online second-hand shopping

In recent years, the increased awareness, change of lifestyle and consumption shift influenced the overall shopping behaviour of internet shoppers (Padmavathy, Swapana, & Paul, 2019). Surprisingly, the millennial and Gen Z generations are prominently visible in the adopting second-hand products quicker than other generations (Thredup, 2019).

The upcoming popularity of second-hand shopping gave e-commerce companies interesting business opportunities. For example, Amazon started to offer an intermediary service for American buyers and sellers of second-hand products. Similarly, Dutch companies began to offer a similar intermediary service for Dutch consumers (e.g., Bol.com, Cool blue and Marktplaats). Furthermore, E-commerce intermediaries provide essentially the same services as traditional markets in matching buyers and sellers. Intermediaries facilitate transactions, provide institutional infrastructures, but in a different way and environment (Giaglis, Klein, & O'Keefe, 2002).

Guiot and Roux (2010) defined second-hand shopping as the way of obtaining or receiving second-hand products through means and locations of exchange that are mostly different from new product shopping. The lack of online trust is one of the most frequently mentioned reasons for online shoppers to stop buying products from online stores (M. K. Lee & Turban, 2001). Moreover, the online exchange of second-hand products comes with additional risks. For instance, second-hand product buyers may perceive more risks, because the buyer also has to assess the reported state of the second-hand product. In reality, the state of the second-hand product can be reported differently from its actual state by the product seller. This is also supported by Ghose (2009), who claimed that uncertainties arise about the condition of second-hand product when the buyer is not able to physically investigate the product until delivery. Furthermore, the buyer relies on the self-reported state of the product to assess its quality, because the selling party may not report the true condition of the second-hand product (Ghose, 2009).

Consumers can have various motives to buy second-hand products: convenience motives, economic motivation, hedonic motivation and utilitarian motivation (Guiot & Roux, 2010; Padmavathy et al., 2019; Roux & Guiot, 2008). The convenience motivations are characterized as the time and effort shoppers can save. For example, convenience-oriented consumers value saving time and effort and therefore often choosing for online channels instead of brick-and-mortar shops. Economic motivations are defined as shoppers who are motivated to save money (Roux & Guiot, 2008). For instance, consumers who are economically driven are price oriented and value saving money. Hedonic motivations are described as the urge shoppers have for nostalgic pleasure and the desire to be unique (Guiot & Roux, 2010). While, utilitarian motivated consumers are task-oriented and use their cognitive judgements to value information about the product, seller or selling platform (Padmavathy et al., 2019).

However, studies regarding second-hand shopping are still surprisingly limited. Looking at online reviews, most studies focus on purchase uncertainties related to either the product or the seller. Also, most researchers ignored the aspects of motivations of second-hand shoppers (Padmavathy et al., 2019). Furthermore, Verhagen, Meents, and Tan (2006) claimed that the relationship between the concepts of perceived risk and intention to purchase are somewhat unexplored. This study aims to further explore the concepts of trust, risk and intentions in a second-hand shopping context.
2.2 The role of seller trust, perceived risk and purchase intention

Research shows that the intangible nature of online shopping causes consumers to perceive more risks and that the lack of online trust is one of the main reasons consumers refrain from buying product online (M. K. Lee & Turban, 2001; Pavlou, 2003).

In the literature, multiple definitions of trust have been discussed. Wang and Emurian (2005) defined trust as “The confidence and willingness to rely on an exchange partner. Additionally, Pavlou & Gefen (2004) defined seller trust as the expectation that the community of sellers of an e-commerce platform are: reliable, honest and dependable. This study aims at the previous mentioned aspects of seller trust.

Trust in a website is established when consumers have positive impressions, and accept vulnerability with that website (Bart, Shankar, Sultan, & Urban, 2005). Due to the nature of the e-commerce market, online companies rely on the performance of their websites (Wang & Emurian, 2005). Additionally, online trust visualizes the consumers perception of a website, including the websites information believability, delivery on expectations and how confident the website commands (Bart et al., 2005).

However, trust in electronic marketplaces is a lot more complex, because their business models focuses on two different types of parties: the intermediary and the seller community. For instance, buyers have to trust both the seller community and the e-commerce platform (Pavlou & Gefen, 2004). Moreover, for online transactions to be successful, trust in dyadic relationships between buyer and seller need to be established. Dyadic trust is established when the buyer has positive impressions of the seller, and the feeling that the seller will not engage into opportunistic behaviour (Doney & Cannon, 1997).

Verhagen et al. (2006) specified two types of trust: intermediary trust and seller trust. Intermediary trust is explained as the mediating party or ‘care-taker’, while seller trust focuses on the transaction partner (Verhagen et al., 2006). In this study, consumers have to trust bol.com as the mediating party but also the seller of the second-hand product.

Chen and Barnes (2007) claimed that trust is seen as one of the main uncertainty reduction mechanisms. And, trust is needed to overcome uncertainties when dealing with the other parties (Pavlou & Gefen, 2004). Therefore, creating online trust can positively influence online consumers purchase intentions. Purchase behaviour is affected by trust and risk perceptions of a selling party, but are also related to the intermediary (Verhagen et al., 2006). According to Jarvenpaa, Tractinsky, and Saarinen (1999) trust in an online marketplaces influences the consumers’ behaviour and perceived risk, and ultimately their purchase intention. To summarize, when looking at the theory of reasoned action (TRA), the antecedent belief trust develops in a positive attitude which leads to a purchase attitude and ultimately results in a purchase intention (Jarvenpaa et al., 1999; Pavlou & Gefen, 2004). On the contrary, the lack of trust is frequently why consumers refrain from buying. Therefore:

$$H_0: \text{Trust in a seller is expected to influence purchase intention: (a) a lower trust level leads to a lower purchase intention, and (b) a higher trust level leads to a higher purchase intention}$$

Electronic marketplaces are continuously challenged with behavioural uncertainties of the impersonal and distant nature of e-commerce (Pavlou, 2003). Also, e-commerce platforms need to be aware that people have various levels of risk perception (Sjöberg, 2000). For instance, e-commerce platforms like Bol.com need to understand that buyers and sellers have different needs, characteristics and perceptions of risk.

When consumers engage into purchase behaviour two types of risk can be observed: intermediary risk and seller risk (Verhagen et al., 2006). Verhagen et all (2006) defined intermediary risk as the probability of losing something due to the failure of the intermediary to protect clients against fraudulent or opportunistic behaviour. Similarly to the concepts of trust, intermediary risk is
about the uncertainty of the intermediary platform, whether seller risk is about the risk associated with the seller.

Pavlou (2003) defined behavioural risk as the observable uncertainties that occur if online sellers act opportunistically. Also, Verhagen et al. (2006) defined seller risk as the uncertainties consumers feel when the selling party refrains from its willingness and ability to perform. Additionally, seller risk arises when a buyer of a second-hand product feels uncertain about the selling party and their willingness to perform (Grabner-Kraeuter, 2002; Hirshleifer & Riley, 1979).

Consumers’ experience intermediary risk when electronic marketplaces fail to execute their institutional mechanisms to protect their buyers and sellers. Intermediaries like Bol.com use various safety mechanisms to decrease opportunistic behaviour (e.g., assurances, contracts, certifications and consumer reviews) (Verhagen et al., 2006). Although, regardless of the intermediary’s control on the security and privacy, sellers still have the possibility to commit opportunistic behaviour (Pavlou, 2003).

In risk literature, the conceptualization of perceived risk is widely known and divided in two general elements: consequences and uncertainties (Verhagen et al., 2006). Furthermore, different types of risk are predominant when shopping online: financial, product and information risk (Jacoby & Kaplan, 1972; Kim, Ferrin, & Rao, 2008). Financial risk occurs when consumers experience a financial loss when shopping online. Additionally, product risk is about the product itself (e.g., when the second-hand product seller and information risk involves a violation of the consumers privacy (Kim et al., 2008). However, people vary in the way they evaluate people and situations, especially in an online environment (Sjöberg, 2000). In this study, seller risk is measured by evaluating the financial risk, product risk and information risk involving the seller.

Pavlou and Gefen (2004) explained purchase intention as the activity that occurs when individuals are willing and planning to transact. According to the theory of reasoned action, consumers with lower perceptions of risk are more likely to buy a product (Pavlou, 2003). Also, when e-commerce platforms reduce risks it likely to increase the consumers’ purchase intention (Jarvenpaa et al., 1999). On the contrary, higher levels of perceived risk have been associated negatively with the purchase intentions (Pavlou, 2003). This results into the following hypothesis:

\[ H_2a \text{ Risk perception is expected to influence purchase intention: (a) a lower risk perception leads to a higher purchase intention, and (b) a higher risk perception leads to a lower purchase intention} \]
2.3 Type of seller (company seller vs. individual seller)

E-commerce platforms offer individuals and companies various opportunities to sell their second-hand products. Generally, three parties are involved with these transactions: the second-hand product seller, second-hand product buyer and the e-commerce platform. On these e-commerce platforms, two types of second-hand product sellers are differentiated: individual sellers and companies sellers. Individual sellers are consumers that use the e-commerce platform to find a buyer for their product. While, organizations usually use the e-commerce platform as an additional sales channel. Furthermore, companies may have an advantage over individuals because customers might be more familiar with a company.

In order to gain trust consumers tend to evaluate the characteristics of a seller before buying the actual product. In this study, sellers’ trust refers to the feeling that a seller of an online marketplace is reliable, trustworthy and honest (Verhagen et al., 2006). Furthermore, trust in a second-hand seller develops over time and is based on the sellers observations of these characteristics (Bart et al., 2005). Consequently, a positive evaluation of the seller plays a significant role in building trust and strengthens the relationship between buyer and seller (Wang & Emurian, 2005). Without a positive seller evaluation, the consumer might experience a negative review valence.

Online marketplaces are vulnerable to risks because they involve transactions over the internet. For example, it is riskier for customers to shop online compared to offline shopping (Kim et al., 2008). Moreover, several types of risk are predominant when online shopping on an e-commerce platform: financial risk, product and information risk (Kim et al., 2008). First, financial risk occurs when the consumer assumes it suffers from a financial loss regarding the seller or platform (e.g., doubts about a safe transaction environment). Second, product risk involves around the product itself (e.g., the wrong product is delivered). Third, information risk happens when a consumers’ privacy gets violated (Kim et al., 2008). Therefore, it is essential that individual and company sellers take the responsibility to reduce any of the aforementioned risks to build a trusting relationship with the buyer.

Consumers generally use peripheral cues in order to judge information and to assess the credibility of online information. For instance, information about the characteristics of a message or source (Metzger, Flanagan, & Zwarun, 2003). Consumers need information or simple cues to be able to access the seller’s credibility. Surprisingly, existing research on the topic of individual and company sellers are still limited. However, when comparing individual and company sellers, a few cues stand out that may inform the buyer about the characteristics of the seller: perceived size, providing customer service, perceived reputation and offline presence. It is expected that these indications give companies an advantage over individuals and make it easier for the consumer to evaluate and trust the seller.

The first indication that gives companies an advantage over individuals is perceived size. Perceived size is described as the individuals’ perception of the size of an organization (Koufaris & Hampton-Sosa, 2004). Organization size shapes the consumers’ view of the trustworthiness of an organization, and customer trust is significantly better when a company is known and has a good reputation (Beldad, De Jong, & Steehouder, 2010; Koufaris & Hampton-Sosa, 2004). In general, customers assume that companies have more competencies and capabilities to provide customer service (Koufaris & Hampton-Sosa, 2004).

Another factor that favours companies is the ability to offer customer service. Generally, e-commerce companies offer customers services in the form of an e-service. De Ruyter, Wetzels, and Kleijnjen (2001) defined e-service as an interactive, content based internet service, made for customers with the goal of building a better relationship between company and customer. In order to build and maintain customer relationships, it is crucial that e-commerce sellers have an effective customer service (Archer & Gebauer, 2000). In particular, e-services that customers’ value and contribute to a good customers relationship. For example, e-services that facilitate a secure payment environment, quick response times and informs customers with updated information about the delivery process (King, Chung, Lee, & Turban, 1999). Also, De Ruyter et al. (2001) considered trust as
a relationship building block which relates to the objective of an e-service, as in strengthening the relationship between company and customer.

Another factor that give companies an advantage over individuals is perceived reputation. Beldad et al. (2010) defined reputation in an online context in two ways. First, as a collective measurement of trustworthiness in accordance with consumers reviews or seller ratings. Second, as an indication of the sellers credibility. Furthermore, a positive evaluation usually results in a positive organizational reputation, whether a negative evaluation results into a negative reputation. Ultimately, leading into a more trusting and open relationship between the consumer and company (Beldad et al., 2010).

A fourth potential advantage is offline presence. It is expected that consumers’ trust online companies over individuals because companies have the ability to promote their trustworthiness with offline presence (Beldad et al., 2010). Furthermore, individual sellers generally do not have offline presence, while companies may have offline presence in the form of brick-and-mortar stores. Also, Wu, Wu, Sun, and Yang (2013) found that seller uncertainties are a main concern for consumers in online markets, and that the majority of the online sellers have limited awareness and offline presence (e.g., individual sellers), which results into uncertainty, and leads to difficult seller assessments. Therefore, it is more easily to assess a company seller because individual sellers have limited offline presence and awareness.

To summarize, companies have more means to be evaluated and trusted by customers based on different factors. First, organization size shapes the consumers’ view of the trustworthiness of an organization, and customer trust is significantly better when a company is known. Second, companies exclusively have the ability to provide customer support, which results in more seller trust. Third, company sellers’ are more likely to be trusted because customers may know about the reputation of the company. Fourth, companies are generally represented both online and offline with brick-and-mortar stores. Also, companies are more likely to be more known by customers because of their offline presence, which may lead to more trustworthiness (e.g., by word-of-mouth). Additionally, individual sellers have limited awareness and offline presence, which lead to uncertainty. This results in the following hypothesis:

H₃a Consumers’ trust in company sellers is higher as opposed to individual sellers

2.4 Review valance (positive vs. negative rating)

The digital aspect of e-commerce creates several risks but also creates opportunities for online buyers and sellers (Bauman, 2016). In order to reduce these risk, it is important that e-vendors establish consumer trust to allow effective communication on their e-commerce platforms (S. Wang, Beatty, & Foxx, 2004). As a result, quick establishment of trust would create higher possibilities of communication effectiveness with individuals (S. Wang et al., 2004). Therefore, review valence plays a big role in informing customers about the possible risks and trustworthiness of the seller.

In this study, review valence refers to the extent to which seller reviews on an e-commerce platforms are being evaluated positively or negatively by consumers. In particular, when consumers are looking at a positive or negative seller rating. When evaluating a seller online, consumers can either have a positive or negative valence.

Kusumasondjaja, Shank, and Marchegiani (2012) defined valence as the positive or negative information orientation of an individual towards a certain situation or object. For instance, positive or negative information is likely to have an effect on how individuals will respond (Ilgen, Fisher, & Taylor, 1979). Also, review valence acts as consumer recommendation that influences the decision-making process and purchase decisions (Bickart & Schindler, 2001). On websites, review valence is expected to signal seller quality and e-commerce platforms present it either as a numerical ranking or in a textual form (Zou et al., 2011). And, these online reviews are either classified as positive or negative reviews (Lee, Rodgers, & Kim, 2009).
Various researchers found inconsistent relationships between the valence of online reviews and consumers’ purchase behaviour and intentions. For instance, Lin, Fang and Tu (2010) found a positive relationship between customer satisfaction and behaviour intentions. But, Chevalier and Mayzlin (2006) found a negative relation between valence and consumer behaviour. Inconsistencies were also observed by researchers about whether positive or negative valence has a stronger impact on consumer responses. Some researchers discuss that feedback is perceived more accurately and recalled more easily by individuals when it is positive rather than negative (Snyder & Cowles, 1979; Snyder, Shenkel, & Lowery, 1977). Also, stronger consumer responses are expected when for example products are being reviewed positively by other consumers (Jones, Sinclair, & Courneya, 2003; Klayman & Ha, 1987). On the contrary, consumers in a neutral position are more inclined to be salient about negative information than positive information (Mizerski, 1982). Additionally, other studies also found that negative reviewed information had a greater impact on consumer responses than positive reviewed information did (Ba & Pavlou, 2002; Pavlou & Dimoka, 2006). While various researchers found contradictory results on the effect of message valence on consumer responses. It is clear that both positive and negative messages affect consumer responses.

According to Anderson (1998), positive valenced communications are characterized by novel, vivid and pleasant experiences, while negative valenced communication consist of complaining and unpleasant descriptions. In a study about online hotel reviews, Sparks and Browning (2011) found that trust ratings were higher in a positive valenced condition than in a negative valenced condition. Additionally, in a study about the impact of online reviews on consumer trust, researchers found that a positive online store review leads to a higher perceived trustworthiness (Utz, Kerkhof, & Van Den Bos, 2012). And, online consumers mainly depend on online seller reviews to reduce transaction risks (Wu & Gaytán, 2013) However, in comparison to positive information, negative information generates risk (Lee, Park, & Han, 2008). Also, consumers are more inclined to evaluate negative information in order to reduce associated risk (Lee & Koo, 2012). In general, positive review valence seem to positively impact consumer behaviour, while negative review valence negatively influences consumer behaviour (Vermeulen & Seegers, 2009). This results in the following hypotheses:

H₄a A negative review valence results in a lower seller trust than a positive review valence

H₄b A negative review valence results in a higher risk perception than a positive review valence

2.5 Product involvement (high involvement products vs. low involvement products)

The construct of product involvement is considered as an important factor by consumer behaviour researchers, who focused research mainly on the influence of product involvement on risk perceptions and consumers’ purchase decisions (Hong, 2015). However, research in the context of second-hand shopping and, especially second-hand products is still limited.

In this study, the scope of product involvement will focus on two types of product involvement in a second-hand shopping context: high involvement products and low involvement products. In which, the low involvement product is represented as a second-hand book, and the high involvement as a second-hand laptop.

According to Hong (2015), product involvement can be defined as: “a consumer’s perception of the relevance or importance of a product class, based on his or her inherent needs, values, and interests, and it reflects the internal motivational state of the consumer, encompassing some arousal, interest, or drive induced by the product class” (p. 2). Furthermore, involvement plays an important role in the way consumers process information (Mitchell, 1981). Personal involvement has shown to influence various behavioural outcomes, like the processing of information and search behaviour. For instance, higher involved consumers tend to be more motivated to actively process store- and product-related information (Warrington & Shim, 2000). Moreover, higher involvement consumers are expected to actively gather and process product and service information, while lower
involvement consumers do not (Hong, 2015). Also, it is expected that satisfied higher involvement consumers develop brand loyalties quicker (Warrington & Shim, 2000). Wu and Gaytán (2013) suggested that when the state of risk is high (e.g., buying high involvement products), consumers depend more on eWOM signals (e.g., consumer reviews) to reduce purchase risks. This is also supported by Lee and Huddleston (2006), who stated that consumer’s perceive purchasing decisions as more risky when the product has a higher price and, therefore, rely more on seller reviews during risk assessment when online shopping. Moreover, consumers with lower levels of involvement are likely to be less risk-averse and rely more on secondary cues (Prendergast, Tsang, & Chan, 2010).

Online products like airline tickets and laptops evoke more feelings of risk for online buyers, resulting into more perceived uncertainty and, making initial trust in a seller very important (Koufaris & Hampton-Sosa, 2004). To conclude, it is expected that buying second-hand laptops (high involvement) is more risky for consumers than second-hand books (low involvement). Therefore:

\[ H_5a \text{ Higher involvement products raise a higher risk perception than low involvement products} \]

2.6 Interaction effects

According to the previous chapters, researchers focused exclusively on seller type, review valence and product involvement without considering interaction effects. These days, electronic word-of-mouth (eWOM) like product reviews are one of the most sought after in relation to product information (Wu et al., 2013). In order to reduce purchase uncertainties, consumers are actively searching for eWOM signals on e-commerce platforms.

In offline markets, purchase uncertainties primarily focus on the product alone, when in online markets the focus is on the product and seller (Wu et al., 2013). Therefore, to reduce these uncertainties, consumers not only assess the seller but also the product they are buying.

The relationship between review valence and seller type

In an online context, consumers consistently encounter both positive and negative seller reviews. Multiple researchers have found differences between positive and negative reviews on the effects of cognitive trust and perceived review credibility (Xu, 2014), review attribution (Qiu, Pang, & Lim, 2012), message adoption (Lee & Koo, 2012), brand recommendation (Lee et al., 2009), and product sales (Dellarocas, Zhang, & Awad, 2007). In relation to seller type, it is possible that review valence moderates between company and individual sellers on seller trust and perceived risk. For instance, when consumers are confronted with a negative review, it is expected that consumers pay more attention to the sellers information and eWOM signals.

In online markets, seller uncertainty is especially unique for sellers because they have limited offline presence and awareness an online setting (e.g., individual sellers), which results in unpredictable seller assessments (Wu et al., 2013). Therefore, company sellers may have more means to reduce perceived risk due to their offline presence and customer service. Since it is easier for customers to assess a company seller, it is expected that negative review

Next to perceived risk, seller trust is also an important factor in case of a negative review valence. Therefore, sellers of online marketplaces are expected to be reliable, trustworthy and honest (Verhagen et al., 2006). The development of trust in an online seller is based on the perceived size of an organization and their reputation (Jarvenpaa, Tractinsky, & Vitale, 2000). Consequently, companies are able to provide consumers with more information to be able to assess the credibility of company: perceived size, able to provide customer service, perceived reputation and offline presence. Therefore, the follow hypotheses are formulated:

\[ H_6a \text{ Type of seller moderates the effect of review valence on the development of seller trust} \]
H₆b Type of seller and review valence interact such that company sellers create higher feelings of trust than individual sellers when a buyer is confronted with a negative review valence.

H₆c Type of seller and review valence interact such that company sellers create lower feelings of perceived risk than individual sellers when a buyer is confronted with a negative review valence.

The relationship between review valence and product involvement

Next to the previous mentioned moderation effects of review valence, product involvement is also expected to interact with review valence. Studies in the past focused on product involvement and have found multiple differences between low involvement and high involvement on the effects of online product recommendations (Senecal & Nantel, 2004), product judgement (Pan & Chiou, 2011) and online review impact (Park & Lee, 2009). Additionally, Lin, Wu, and Chen (2013) found a moderating effect of product involvement on the relationship between eWOM and Purchase intention.

Consumers with higher levels of involvement are likely to be more risk-averse and need more information to assess the seller credibility. As a result, higher involved consumers are more actively assessing store, product and seller information in relation to lower involved consumers (Warrington & Shim, 2000). Moreover, when the product complexity is high (e.g., high involvement products), product uncertainty is more noticeable (Wu et al., 2013). And, higher feelings of trust are needed when high involved consumers are confronted with a negative review valence. Also, higher involved consumers are more risk averse in relation to lower involved consumers. To summarize, looking at the previous mentioned studies, it can be assumed that product involvement moderates between the relationship of review valence and seller trust and the relationship of review valence and perceived risk. This resulted in the following hypotheses:

H₆d Product involvement moderates the effect of the review valence on the development of perceived risk.

H₆e Product involvement and review valence interact such that higher involvement products need higher feelings of trust than low involvement products when a buyer is confronted with negative review valence.

H₆f Product involvement and review valence interact such that higher involvement products evoke higher feelings of perceived risk than lower involvement products when a buyer is confronted with a negative review valence.

2.7 Mediating effect of seller trust and perceived risk

According to the theory of the previous chapters, the direct effects of the independent variables are likely to have an effect on the mediating variables seller trust and perceived risk. Additionally, Bart et al. (2005) claimed that online trust is mediated in a relationship between websites antecedents, consumer characteristics and behavioural intentions. Furthermore, based on Ajzen (1991) theory of planned behaviour, motivational factors are expected to influence intention which ultimately lead to behaviour. Gefen, Karahanna, and Straub (2003) demonstrated a mediating effect of trust in their modified TAM model. Also, two studies found a mediating effect of perceptions of risk on purchase intention (Jarvenpaa et al., 1999; Pavlou, 2003). In this study, motivational factors like type of seller, review valence and product involvement are expected to influence seller trust and perceived risk. Therefore, it is expected that attitudes of seller trust and perceived risk mediate between the relationship of seller type, review valence, product involvement and purchase intention.
H₇a. *The effect of seller type on purchase intention is mediated by seller trust*

H₇b. *The effect of review valence on purchase intention is mediated by seller trust*

H₇c. *The effect of review valence on purchase intention is mediated by perceived risk*

H₇d. *The effect of product involvement on purchase intention is mediated by perceived risk*

2.8 The effect of attitude towards online shopping and second-hand shopping
Consumers experience various uncertainties when shopping online (e.g., sellers, product or websites related uncertainties). Additionally, Yao-Hua Tan (2000) claimed that trust plays a big role in mitigating these feeling of uncertainty. Due to the uncertain nature of online shopping, research regarding online consumer behaviour is expected to benefit from studies about technology and trust issues (Van der Heijden, Verhagen, & Creemers, 2003).

Generally, the consumers information-seeking behaviour is defined by the trade-off between the costs and benefits of decision (Hauser & Wernerfelt, 1990). Afterwards, this information-seeking behaviour results either into a positive or negative attitude towards the situation. In this study, the technology-oriented models TAM (technology acceptance models) and TRA (theory of reasoned action) are conceptualized to research attitude towards online shopping and second-hand shopping. Davis (1989) originally developed a theory to analyse the acceptance of technology on the work floor. Additionally, according to Fishbein and Ajzen (1977) theory of reasoned action, the TAM model was further developed. Based on the TRA, consumers form their attitudes based on their beliefs, which result into intentions (Van der Heijden et al., 2003). For example, a positive attitude towards online shopping or second-hand shopping is expected to lead to more seller trust. On the contrary, negative attitudes are expected to result into lower levels of seller trust. To conclude, attitudes towards online shopping and second-hand shopping are expected to have an effect on seller trust.

Attitude towards online shopping and second-hand shopping constructs are based on the trust and technology antecedents of the TAM and TRA: 1) perceived usefulness, 2) perceived ease-of-use, 3) trust in an online store, 4) perceived risk (Hernández Ortega, Jiménez Martínez, & José Martín De Hoyos, 2006; Van der Heijden et al., 2003).

H₈a *It is expected that controlling for attitude towards online shopping the variable has a significant effect on seller trust*

H₈b *It is expected that controlling for attitude towards online second-hand shopping the variable has a significant effect on seller trust*
2.9 Research model

According to the theoretical framework, literature research and formulated hypotheses a research model was constructed with three independent variables (seller type, review valence and product involvement), two mediating variables (seller trust and perceived risk), two covariates (attitude towards online shopping and attitude towards second-hand shopping) and one dependent variable (purchase intention).
3. Method section

3.1 Research design
To properly test the research model and formulated hypothesis, a 2x2x2 factorial experimental design was implemented. According to the research model, eight different conditions were created (see research model). The three independent variables were manipulated and incorporated in an experimental design in the following way: seller type (company or individual condition), review valence (positive or negative condition) and product involvement (high or low involvement condition). Additionally, these conditions were tested on two mediating variables: seller trust and perceived risk, two covariates: attitude towards online shopping and attitude towards second hand shopping and on the dependent variable: purchase intention. Table 1 shows an overview of the conditions.

<table>
<thead>
<tr>
<th>Overview conditions</th>
<th>Seller type</th>
<th>Review valence</th>
<th>Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CO/NE/LO</td>
<td>Company</td>
<td>Negative</td>
<td>Low</td>
</tr>
<tr>
<td>2. CO/NE/HI</td>
<td>Company</td>
<td>Negative</td>
<td>High</td>
</tr>
<tr>
<td>3. CO/PO/LO</td>
<td>Company</td>
<td>Positive</td>
<td>Low</td>
</tr>
<tr>
<td>4. CO/PO/HI</td>
<td>Company</td>
<td>Positive</td>
<td>High</td>
</tr>
<tr>
<td>5. IN/NE/LO</td>
<td>Individual</td>
<td>Negative</td>
<td>Low</td>
</tr>
<tr>
<td>6. IN/NE/HI</td>
<td>Individual</td>
<td>Negative</td>
<td>High</td>
</tr>
<tr>
<td>7. IN/PO/LO</td>
<td>Individual</td>
<td>Positive</td>
<td>Low</td>
</tr>
<tr>
<td>8. IN/PO/HI</td>
<td>Individual</td>
<td>Positive</td>
<td>High</td>
</tr>
</tbody>
</table>

3.2 Procedure
To start the research procedure, an experimental survey was created and conducted in the survey software tool Qualtrics. Participants for this survey have been gathered using a snowball sampling method, which means participants were randomly chosen within the research population. According to the central theorem limit, a minimum sample size of 30 was required in order to have a normal distribution among all conditions (Chang, Huang, & Wu, 2006). To ensure that the survey covered every scenario, a minimum number of 240 participants had to be collected. This study was focused on the millennial generation, with Dutch participants in the age group of 18 to 35 years old. Furthermore, this study was conducted to extend research on the topic of review valence and second-hand shopping behaviour in the Netherlands. And, because millennials seemingly adopt second-hand products faster than any other generation (Thredup, 2019). Before conducting the survey, the content was adjusted and finalized according to the outcome of the pretest.

3.3 Pre-test
A pre-test was conducted to assess the suitability of the manipulated conditions, questions and overall understanding of the survey. Moreover, two analysis were conducted: think aloud analysis and a t-test.

Ten selected participants were asked to go through the survey according to the think-aloud principle. The selected people were instructed to record their voice and think aloud while progressing through the survey. To be more precise, the goal was to observe the participants to
make sure they understand the questions, manipulated conditions to recognize any possible mistakes in the survey. Therefore, the survey was adjusted accordingly to the think-aloud analysis: introduction was made shorter, scenario instructions more clear, rephrased certain sentences and improved the low involvement conditions by enlarging the image of the used product.

A t-test was conducted to discover if the manipulated conditions work as intended. A number of 22 participants fully completed the pre-test survey. Observing the t-test results, the differences between the seller and involvement conditions were minimal and no significant differences have been found. On the contrary, the review valence conditions did show a significant difference between the two conditions. To conclude, the small sample size may be a possible reason for the insignificant t-test results.

### 3.4 Stimuli materials

The eight different conditions were created to simulate a scenario in which a buyer would look at the sellers information before potentially buying the presented second-hand product. The stimuli style was adopted from a well-known Dutch e-commerce platform Bol.com. This was done to ensure a more familiar shopping environment.

Three independent variables were incorporated into the scenario and manipulated in the following way: *seller type* was either presented as a company seller or individual seller. The company seller was displayed as a made-up company named winkel.nl. Whereas, the individual seller was presented as a fictive person named Thomas de Jong. *Review valence* was displayed with two different seller ratings. The negative rating that was used was a 3.5, displaying a negative review valence. On the other hand, the positive rating was presented as an 8.5, showing a positive review valence. Furthermore, a 10-point system was chosen to present the negative and positive seller rating to the participant (1= lowest, 10= highest). *Product involvement* was shown in the scenario as two different second-hand products. The low involvement product that was chosen was a book. And, the high involvement product was presented as a laptop (see figure 1 and 2).

The webpage was adjusted regarding to the conditions by formatting and deleting unnecessary objects in the Firefox extension Print Edit WE. An example of the eight conditions can be found in the appendix A.
3.5 Manipulation check

A total of 244 respondents fully completed the survey. Respondents were equally distributed among the eight different conditions. To determine if the conditions were correctly manipulated a set of three different manipulation check questions were created.

3.5.1 Seller type manipulation check

For the seller type manipulation check, participants had to answer two questions about whether they saw an individual or company in the presented scenario. Consequently, participants had two answering options for the manipulations questions; yes (1) and no (2). After conducting the manipulation check, 16 participants were excluded from the final data analysis because they failed to answer the two manipulation check questions.

3.5.2 Review valence and price manipulation check

For the review valence and price manipulation check, a t-test was performed to test whether both variables were manipulated correctly. Furthermore, a seven-point Likert scale was used to measure the effects of the positive and negative conditions (1 = lowest, 7 = highest). The manipulation check for review valence showed that the positive condition ($M=5.68, SD=.95$) was received more positively than the negative condition ($M=4.23, SD=1.68$). And, the observable difference between groups was significant $t(226)= -8.04, p=.000$.

The manipulation check for price manipulation showed that the low price condition ($M=2.44, SD=.58$) was perceived with a lower mean than the higher price condition ($M=3.49, SD=.72$). Moreover, the difference between groups was significant $t(226)= -11.10, p=.000$.

To measure the price manipulation, a five-point Likert scale was used to measure the different conditions (1 = strongly disagree, 5 = strongly agree).

To conclude, the review valence and price manipulation questions showed that the conditions worked as intended. After ruling out 16 participants, 228 respondents were taken into consideration for the data analysis.

<table>
<thead>
<tr>
<th>Manipulation check constructs</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Review valence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>4.23</td>
<td>1.68</td>
</tr>
<tr>
<td>Positive</td>
<td>5.68</td>
<td>.95</td>
</tr>
<tr>
<td><strong>Price manipulation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low price</td>
<td>2.44</td>
<td>.58</td>
</tr>
<tr>
<td>High price</td>
<td>3.49</td>
<td>.72</td>
</tr>
</tbody>
</table>

*Note: Review Valence scale is a 7-point Likert scale (1 = lowest, 7 = highest). Price manipulation scale is a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).*

3.6 Participants

After conducting the manipulation analysis, 228 respondents made it to the final research sample. Looking at table 3, the composition of the groups range from 23 (CO/NE/LO) to 35 respondents.
Additionally, the gender of majority of the research groups were female and had a higher education level (HBO or University degree). Purchasing frequency revealed that most participants shop a few times a month on the internet. Looking at age, the research groups have an average age of 23 years. An overview of the demographics of the participants can be found in Table 3.

<table>
<thead>
<tr>
<th>Demographics overview</th>
<th>CO/NE/LO</th>
<th>CO/NE/HI</th>
<th>CO/PO/LO</th>
<th>CO/PO/HI</th>
<th>IN/NE/LO</th>
<th>IN/NE/HI</th>
<th>IN/PO/LO</th>
<th>IN/PO/HI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
<td>17.4</td>
<td>9</td>
<td>29</td>
<td>16</td>
<td>50</td>
<td>13</td>
<td>37.1</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>82.6</td>
<td>22</td>
<td>71</td>
<td>16</td>
<td>50</td>
<td>22</td>
<td>62.9</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
<td>31</td>
<td>100</td>
<td>32</td>
<td>100</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vmbo</td>
<td>1</td>
<td>4.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Havo (mms)</td>
<td>4</td>
<td>17.4</td>
<td>2</td>
<td>6.5</td>
<td>6</td>
<td>20</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>Vwo, gym, atheneum (hbs, lyceum)</td>
<td>2</td>
<td>8.7</td>
<td>2</td>
<td>6.5</td>
<td>2</td>
<td>5.7</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Mbo (mts, meao, pdb, mba)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hbo (hs, heao, associate degree)</td>
<td>7</td>
<td>30.4</td>
<td>11</td>
<td>35.5</td>
<td>12</td>
<td>37.5</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>University (bsc, msc or phd)</td>
<td>9</td>
<td>39.1</td>
<td>16</td>
<td>51.7</td>
<td>17</td>
<td>53.1</td>
<td>11</td>
<td>36.7</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
<td>31</td>
<td>100</td>
<td>32</td>
<td>100</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
<td>Purchasing frequency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than once a month</td>
<td>5</td>
<td>21.7</td>
<td>9</td>
<td>29</td>
<td>9</td>
<td>28.1</td>
<td>7</td>
<td>23.3</td>
</tr>
<tr>
<td>Few times a month</td>
<td>13</td>
<td>56.5</td>
<td>21</td>
<td>67.7</td>
<td>20</td>
<td>62.5</td>
<td>19</td>
<td>63.3</td>
</tr>
<tr>
<td>Few times a week</td>
<td>5</td>
<td>21.7</td>
<td>3</td>
<td>9.4</td>
<td>4</td>
<td>13.3</td>
<td>3</td>
<td>8.6</td>
</tr>
<tr>
<td>Once a day</td>
<td>1</td>
<td>3.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
<td>31</td>
<td>100</td>
<td>32</td>
<td>100</td>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

3.7 Measurement

To assess every construct properly, the covariates, mediators and dependant variables were conceptualized into measurable constructs. Additionally, a five-point Likert scale was used to measure every question, from (1) strongly disagree to (5) strongly agree. Also, the original scales have been translated from English to Dutch by two-way translation method.

The attitude towards online shopping have been measured by using an already existing scale suggested by Hernández Ortega et al. (2006). The attitude towards second-hand online shopping construct was measured by using a combination of the already existing scales by Van der Heijden et al. (2003) and van der Heijden, Verhagen, and Creemers (2001). The three items of these scales were adjusted from online attitude towards the internet to online second-hand shopping. The seller trust construct was adopted from Verhagen et al. (2006). Furthermore, the four items were rephrased and the beginning of the sentences were changed to (I feel, I think, in my opinion and I expect). The perceived risk construct have been measured by an already existing scales suggested by Verhagen et al. (2006). The four items have been rephrased and adjusted to seller risk. Finally, the construct of purchase intention is derived from Yoo and Donthu (2001). The already measured scales consists out of 4 items. An overview of the items can be found in table 4.

3.8 Reliability and validity of the constructs

The reliability of the five constructs are measured by the Cronbach’s Alpha. Accordingly, the Cronbach’s alpha is used to measure internal consistency within a construct. Thus, making sure the
constructs are all measuring the same attributes. According to Nunnally and Bernstein (1978) a minimum level of .7 is suggested to provide internal consistency within a construct. In conclusion, the various constructs have a Cronbach’s alpha value from .88 to .96 which makes them internal consistent and suitable for further analysis.

Following the reliability analysis, a factor analysis was conducted to make sure every construct was loading in the respective factor. Looking at the factor analysis, no items had to be left out for attitude towards online shopping, attitude towards second-hand shopping, seller trust, perceived risk and purchase intention. The overall overview of the Cronbach’s Alpha and factor analysis can be found in table 4.

Table 4: Factor analysis and Cronbach’s alpha

<table>
<thead>
<tr>
<th>Constructs</th>
<th>α</th>
<th>Items</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards Online Shopping</td>
<td>.88</td>
<td>1. Using the internet to do my shopping a good idea</td>
<td>.867</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. My general opinion of electronic commerce is positive</td>
<td>.855</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Using the internet to purchase a product seems like a good idea to me</td>
<td>.888</td>
</tr>
<tr>
<td>Attitude towards Second-Hand Online Shopping</td>
<td>.93</td>
<td>1. I would have positive feelings towards buying second-hand products online</td>
<td>.879</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. The thought of buying a second-hand product online is appealing to me</td>
<td>.913</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. It would be a good idea to buy a second-hand product on the internet</td>
<td>.901</td>
</tr>
<tr>
<td>Seller Trust</td>
<td>.75</td>
<td>1. I feel like the seller of this product is dependable</td>
<td>.897</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I think the seller of this product is reliable</td>
<td>.845</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. In my opinion the seller of this product is honest</td>
<td>.883</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. I expect the seller of this product to be trustworthy</td>
<td>.854</td>
</tr>
<tr>
<td>Perceived Risk</td>
<td>.92</td>
<td>1. I may have become concerned about whether the seller will commit fraud</td>
<td>.846</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I feel like I have become concerned about whether the seller will swindle</td>
<td>.856</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. I believe I became concerned about whether the seller’s product will not perform as expected</td>
<td>.797</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. I think I became concerned about whether the seller will behave opportunistic</td>
<td>.855</td>
</tr>
<tr>
<td>Purchase intention</td>
<td>.96</td>
<td>1. I will definitely buy from this seller in the near future</td>
<td>.870</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I intend to purchase through this seller in the near future</td>
<td>.919</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. It is likely that I will purchase through this seller in the near future</td>
<td>.920</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. I expect to purchase through this seller in the near future</td>
<td>.921</td>
</tr>
</tbody>
</table>

Extraction method: Principal component analysis.
Rotation method: Varimax with Kaiser Normalization.
1. Rotation converged in 5 iterations.
4. Results

4.1 Main effects

A two-way between groups multivariate analysis of covariance (MANCOVA) was conducted to research the effect of three independent variables: seller type, review valence and product involvement on seller trust and perceived risk. Moreover, the effect of the two covariates have been included in the model: attitude toward online second hand shopping and attitude towards online shopping.

The MANCOVA analysis displayed no significant main effect of seller type. However, the analysis showed a statistical main effect of review valence on seller trust and perceived risk and a main effect of involvement on perceived risk. Looking at the covariates, only attitude towards online second-hand shopping showed a significant result.

Table 5

<table>
<thead>
<tr>
<th>Multivariate test of covariance (MANCOVA)</th>
<th>F-value(df)</th>
<th>Wilks’ Lambda</th>
<th>p-value</th>
<th>Partial eta-squared (np2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seller type (IV)</td>
<td>.228 (2, 217)</td>
<td>.99</td>
<td>.796</td>
<td>.002</td>
</tr>
<tr>
<td>Review valence (IV)</td>
<td>10.26 (2, 217)</td>
<td>.91</td>
<td>&lt;.000*</td>
<td>.086</td>
</tr>
<tr>
<td>Product involvement (IV)</td>
<td>10.14 (2, 217)</td>
<td>.92</td>
<td>&lt;.000*</td>
<td>.085</td>
</tr>
<tr>
<td>Attitude towards online second-hand shopping (CO)</td>
<td>3.48 (2, 217)</td>
<td>.97</td>
<td>&lt;.033*</td>
<td>.031</td>
</tr>
<tr>
<td>Attitude towards online shopping (CO)</td>
<td>1.13 (2, 217)</td>
<td>.99</td>
<td>.326</td>
<td>.010</td>
</tr>
<tr>
<td>Seller type * Review valence</td>
<td>.525 (2, 217)</td>
<td>.99</td>
<td>.592</td>
<td>.005</td>
</tr>
<tr>
<td>Review valence * Product involvement</td>
<td>.869 (2, 217)</td>
<td>.99</td>
<td>.421</td>
<td>.008</td>
</tr>
<tr>
<td>Involvement * Seller type</td>
<td>1.136 (2, 217)</td>
<td>.99</td>
<td>.323</td>
<td>.010</td>
</tr>
<tr>
<td>Seller type * Review valence * Involvement</td>
<td>.303 (2, 217)</td>
<td>.99</td>
<td>.739</td>
<td>.003</td>
</tr>
</tbody>
</table>

Note: IV = independent variable, CO = Covariate

*Significant at an Alpha level <.05

4.1.1 Main effect of seller type on dependent variables

The independent variable seller type showed no significant differences between the two groups (individual vs. company seller): $F (2, 217)=.228, p=.796; Wilks’ Lambda=.99; partial eta squared=.002. Therefore, the $H_{3a}$ hypothesis is not supported.

4.1.2 Main effect of review valence on dependent variables

The statistical analysis of review valence showed a significant difference between the two groups (negative vs. positive valence): $F (2, 217)=10.26, p=.000; Wilks’ Lambda=.91; partial eta squared=.086. Additionally, review valence reached statistical significance, using an alpha level of .05 on seller trust: $F (7, 220)=19.74, p=.000, partial eta squared=.083, and perceived risk: $F (7, 220)=11.50, p=.001, partial eta squared=.050$.

The inspection of the mean scores showed lower levels of seller trust for the negative valence group ($M=3.34, SD=.965$) than the positive valence group ($M=3.84, SD=.534$). Furthermore, the mean scores showed higher levels of perceived risk for the negative valence group ($M=2.86, SD=1.011$) than the positive valence group ($M=2.43, SD=.785$). To conclude, these results imply that hypothesis $H_{4a}$ and $H_{4b}$ are statistically supported.
Table 6 MANCOVA

<table>
<thead>
<tr>
<th>MANCOVA results</th>
<th>F-value(df)</th>
<th>p-value</th>
<th>Partial eta-squared (ηp²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seller type (IV)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seller trust</td>
<td>.059 (7, 220)</td>
<td>.809</td>
<td>.000</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>.103 (7, 220)</td>
<td>.716</td>
<td>.001</td>
</tr>
<tr>
<td>Review valence (IV)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seller trust</td>
<td>19.74 (7, 220)</td>
<td>&lt;.000*</td>
<td>.083</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>11.50 (7, 220)</td>
<td>&lt;.001*</td>
<td>.050</td>
</tr>
<tr>
<td>Involvement (IV)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seller trust</td>
<td>0.160 (7, 220)</td>
<td>.690</td>
<td>.001</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>14.83 (7, 220)</td>
<td>&lt;.000*</td>
<td>.064</td>
</tr>
<tr>
<td>Attitude towards online second-hand shopping (CO)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seller trust</td>
<td>6.81 (7, 220)</td>
<td>&lt;.010*</td>
<td>.030</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>3.56 (7, 220)</td>
<td>.061</td>
<td>.016</td>
</tr>
<tr>
<td>Attitude towards online shopping (CO)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seller trust</td>
<td>.684 (7, 220)</td>
<td>.409</td>
<td>.003</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>.269 (7, 220)</td>
<td>.605</td>
<td>.001</td>
</tr>
</tbody>
</table>

*Significant at an alpha <.05

4.1.3 Main effect of involvement on dependent variables

The statistical analysis of involvement showed a significant difference between the two groups (low vs. high involvement): $F(2, 217)=10.14, p=.000; \text{Wilks'} \lambda=.92; \text{partial eta squared}=.085$. When the results for the variables were analysed separately, the following results reached statistical significance. The effect of involvement only reached statistical significance on perceived risk: $F(7, 220)=14.83, p=.000$, partial eta squared=.064. The mean scores showed that the higher involvement product reported slightly higher levels of perceived risk ($M=2.87, SD=.856$) than the lower involvement product ($M=2.42, SD=.939$). This result implies that hypothesis $H₅a$ is supported.

Table 6 Mean scores

<table>
<thead>
<tr>
<th>Mean scores MANCOVA</th>
<th>Seller trust</th>
<th>Perceived risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>n M SD</td>
<td>n M SD</td>
<td></td>
</tr>
<tr>
<td>Type of Seller</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company</td>
<td>116 3.62 .808</td>
<td>116 2.66 .937</td>
</tr>
<tr>
<td>Individual</td>
<td>112 3.57 .817</td>
<td>112 2.62 .916</td>
</tr>
<tr>
<td>Review Valence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>117 3.84 .534</td>
<td>117 2.43 .785</td>
</tr>
<tr>
<td>Negative</td>
<td>111 3.34 .965</td>
<td>111 2.86 1.011</td>
</tr>
<tr>
<td>Involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High involvement</td>
<td>113 3.58 .734</td>
<td>113 2.87 .856</td>
</tr>
<tr>
<td>Low involvement</td>
<td>115 3.61 .884</td>
<td>115 2.42 .939</td>
</tr>
</tbody>
</table>

Note: n = sample size, M = mean, SD = Standard deviation

4.1.4 Effect of attitude towards online second-hand shopping and attitude towards online shopping on dependent variables

When looking at the covariates, attitude towards second hand shopping showed a statistical difference: $F(2, 217)=3.48, p=.033; \text{Wilks'} \lambda=.97; \text{partial eta squared}=.031$. In contrast, attitude towards online shopping showed no statistical difference. Observing the effect of attitude towards second hand shopping on the dependent variables separately, only the effect on seller trust,
by using an alpha level of .05, showed a significant result: $F(7, 220)=6.81$, $p=.010$, partial eta squared=.03.

An inspection of the mean scores on seller trust showed the following differences between the two groups: Negative attitude towards second hand shopping ($M=3.40$, $SD=.967$) trusted the seller less often in general when looking at the group with a positive attitude ($M=3.71$, $SD=.788$). To conclude, these results indicate that hypothesis $H_8b$ is supported. On the contrary, hypothesis $H_8a$ for attitude towards online shopping is rejected.

### 4.2 Interaction effects
Observing table 6, no significant one-way or two-way interaction effects were found when inspecting the multivariate analysis of covariance. Therefore, the moderation hypothesis $H_6a$ and $H_6d$ are not supported. Also, the examination of the interaction plot showed no interaction effect between the variables. Moreover, hypothesis $H_6b$, $H_6c$, $H_6e$ and $H_6f$ are not supported.

### 4.3 The effect of seller trust and perceived risk on purchase intentions
The linear regression analysis established that seller trust could significantly predict purchase intentions, $F(1, 226)= 44.62$, $p=.000$. Furthermore, seller trust accounted for 16.5% of the explained variability in purchase intention. The regression equation was: predicted purchase intention =.886+.495x (seller trust). When looking at perceived risk, the linear regression analysis showed a significant prediction effect of perceived risk on purchase intentions, $F(1, 226)= 44.62$, $p=.000$. Furthermore, perceived risk accounted for 15.2% of the explained variability in purchase intention. And, the regression equation was: predicted purchase intention =3.777-.401x (perceived risk).

![Figure 1. Effect of seller trust on purchase intention](image1.png)

![Figure 2. Effect of perceived risk on purchase intention](image2.png)

As can be seen in figure 1, trust in a seller is expected to influence purchase intention. Consequently, higher levels of trust lead to higher levels of purchase intention, and vice versa. Therefore, hypothesis $H_1a$ is supported. Observing figure 2, perceived risk is also expected to influence purchase intention. Lower risk perception are likely to lead to a purchase intention, while a higher risk perception leads to a lower purchase intention. To conclude, hypothesis $H_2a$ is supported.
4.4 Mediating effects
A mediation analysis was conducted in Process v3.3 by Hayes (2016) to make sure that the mediation variables work as intended and are suitable for the MANOVA analysis. Model 4 of the PROCESS macro was used to investigate the mediating effects of seller trust and perceived risk between the independent variables seller type, review valence, involvement and the dependent variable purchase intention.

4.4.1 Mediating effect of seller trust between seller type and purchase intention
Looking at figure 3, there is no significant effect of seller type on seller trust (path a) when looking at the effect size and p value: \( b = -.051, p = .663 \). However, there is an observable effect of seller trust on purchase intention (path b) when looking at the effect size and p value: \( b = .052, p < .000 \). Also, the direct effect of seller type on purchase did not show a significant result: \( b = .069, p = .588 \). Therefore, the mediating analysis did not show a mediation effect of seller trust between seller type and purchase intention, \( B = -.026, BCa CI [-.1413, .0868] \). To conclude, hypothesis \( H_7a \) is rejected.

4.4.2 Mediating effect of seller trust between review valence and purchase intention
Observing figure 4, there is a significant effect of review valence on seller trust (path a) when looking at the effect size and p value: \( B = .493, p < .000 \). Furthermore, there is a noticeable effect of seller trust on purchase intention (path b) when looking at the effect size and p value: \( B = .450, p < .000 \). However, the direct effect of review valence on purchase did not show a significant result: \( b = .055, p = .651 \). Even though the direct effect (path c) was not significant \( b = .055, p = .651 \), the indirect effect showed a bigger effect than the direct effect and the confidence interval did not cross zero \( b = .242, BCa CI [.1186, .3713] \). Therefore, hypothesis \( H_7b \) is supported and a mediation effect can be assumed.
4.4.3 Mediating effect of perceived risk between review valence and purchase intention

Looking at figure 5, there is a significant effect of review valence on perceived risk (path a) when looking at the effect size and p value: \( b = -0.424, p = .001 \). Moreover, there is an observable effect of perceived risk on purchase intention (path b) when observing the effect size and p value: \( b = -0.425, p < .000 \). However, the direct effect of review valence on purchase intention did not show a significant result: \( b = .116, p = .330 \). Even though the direct effect (path c) was not significant \( b = .116, p = .330 \), the indirect effect revealed a bigger effect than the direct effect and the confidence interval did not cross zero \( b = .180, BCa CI [.0678, .3086] \). To conclude, hypothesis H₇c is supported and a mediation effect can be assumed.

4.4.4 Mediating effect of perceived risk between involvement and purchase intention

Considering figure 6, there is an observable significant effect of involvement on perceived risk (path a) when looking at the effect size and p value: \( b = .450, p = .000 \). Furthermore, there is an effect of perceived risk on purchase intention (path b): \( b = -0.429, p < .000 \). On the contrary, the direct effect of involvement on purchase intention did not show a significant result: \( b = -0.078, p = .513 \). However, the direct effect has a bigger effect on purchase intention \( b = -0.078, p = .513 \) than the indirect effect and the confidence interval did not cross zero \( b = -0.051, BCa CI [-.3134, .1570] \). To conclude, hypothesis H₇d is supported.
Figure 6. Mediating effect of perceived risk between involvement and purchase intention
### 4.5 Overview hypotheses

<table>
<thead>
<tr>
<th>Overview hypotheses</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁a Trust in a seller is expected to influence purchase intention: (a) a lower trust level leads to a lower purchase intention, and (b) a higher trust level leads to a higher purchase intention</td>
<td>Supported</td>
</tr>
<tr>
<td>H₂a Risk perception is expected to influence purchase intention: (a) a lower risk perception leads to a higher purchase intention, and (b) a higher risk perception leads to a lower purchase intention</td>
<td>Supported</td>
</tr>
<tr>
<td>H₃a Consumers' trust in company sellers is higher as opposed to individual sellers</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₄a A negative review valence results in a lower seller trust than a positive review valence</td>
<td>Supported</td>
</tr>
<tr>
<td>H₄b A negative review valence results in a higher risk perception than a positive review valence</td>
<td>Supported</td>
</tr>
<tr>
<td>H₅a Higher involvement products raise a higher risk perception than low involvement products</td>
<td>Supported</td>
</tr>
<tr>
<td>H₆a Type of seller moderates the effect of review valence on the development of seller trust</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₆b Type of seller and review valence interact such that company sellers create higher feelings of trust than individual sellers when a buyer is confronted with a negative review valence.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₆c Type of seller and review valence interact such that company sellers create lower feelings of perceived risk than individual sellers when a buyer is confronted with a negative review valence.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₆d Product involvement moderates the effect of the review valence on the development of perceived risk.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₆e Product involvement and review valence interact such that higher involvement products need higher feelings of trust than low involvement products when a buyer is confronted with negative review valence.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₆f Product involvement and review valence interact such that higher involvement products evoke higher feelings of perceived risk than lower involvement products when a buyer is confronted with a negative review valence.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₇a The effect of seller type on purchase intention is mediated by seller trust</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₇b The effect of review valence on purchase intention is mediated by seller trust</td>
<td>Supported</td>
</tr>
<tr>
<td>H₇c The effect of review valence on purchase intention is mediated by perceived risk</td>
<td>Supported</td>
</tr>
<tr>
<td>H₇d The effect of product involvement on purchase intention is mediated by perceived risk</td>
<td>Supported</td>
</tr>
<tr>
<td>H₈a It is expected that controlling for attitude towards online shopping the variable has a significant effect on seller trust</td>
<td>Not supported</td>
</tr>
<tr>
<td>H₈b It is expected that controlling for attitude towards online second-hand shopping the variable has a significant effect on seller trust</td>
<td>Supported</td>
</tr>
</tbody>
</table>
5. General discussion

This study researched the effects of consumer reviews on the formation of trust, risk and purchase intention in an experimental setting. The experiment consisted of the following variables: seller type (individual seller vs. company seller), review valence (negative vs. positive), product involvement (low vs. high). Consequently, eight different conditions were created to measure the effect on seller trust, perceived risk and purchase intention. Also, the effect of attitude towards online shopping and second-hand shopping were considered. This chapter discusses the general results, followed by the implications, future research and conclusion.

5.1 Discussion of main effects

The outcome of data analysis revealed no significant main effect of seller type on seller trust. Also, no significant differences have been found between company and individual sellers on the formation of seller trust. A possible explanation for this result is that online consumers have two targets of trust, the intermediary and seller (Verhagen et al., 2006). Therefore, it is expected that participants prioritize the intermediary’s safety nets, guarantees or regulations over that of the seller (Shapiro, 1987).

Review valence operates as a consumer recommendation that influences the consumers’ decision-making process and purchase decisions and is expected to signal seller quality (Bickart & Schindler, 2001; Zou et al., 2011). The results demonstrated two main effects of review valence on seller trust and perceived risk. First, negative review valence affects seller trust more negatively than a positive review valence. These findings are in line with previous research about online reviews that explained that levels of trust were higher in a positive valenced condition than in a negative valenced condition (Sparks & Browning, 2011). And, in a study about the effect of online reviews on consumer trust, researchers showed that positive store reviews result in higher levels of perceived trustworthiness (Utz et al., 2012). Second, negative review valence resulted in higher feelings of risk than a positive review valence. These findings are explained by the fact that online consumers more actively process negative information, which, in turn leads to more feelings of risk (Lee & Koo, 2012; Lee et al., 2008). Also, negative information seemed to negatively influence consumer behaviour (Vermeulen & Seegers, 2009).

Furthermore, results show that there is a main effect of product involvement on perceived risk. In which, a high involvement product raised a higher risk perception than a low involvement product. This is supported by Koufaris and Hampton-Sosa (2004), who stated that big tickets items like laptops and airline tickets evoke more feelings of risk. Furthermore, Lee and Huddleston (2006) stated that consumer’s perceive purchasing decisions as more risky when the product has a higher price and, therefore, rely more on seller reviews during risk assessment when online shopping.

The theorized effects of seller trust and perceived risk on purchase intention were supported. Therefore, lower level of trust lead to lower purchase intentions, and higher levels of trust lead to higher purchase intentions. This claim is supported by Jarvenpaa et al. (1999), who showed that feelings of trust influence the consumers’ behaviour and eventually purchase intention. Also, a lower risk perception leads to higher purchase intentions, and a higher risk perception leads to a lower purchase intention. According to the theory of reasoned action, consumers with lower perceptions of risk are more likely to buy a product and higher levels of perceived risk have been associated negatively with the purchase intentions (Pavlov, 2003).

Also, no significant support was found for the direct effect of attitude towards online shopping on seller trust. This insignificant result might be explained by the fact that an attitude towards online shopping is not necessary a positive attitude towards second-hand shopping. For example, it is possible that a consumer who has a positive attitude towards online-shopping never bought a second-hand product online.

However, attitude towards second-hand shopping showed a significant direct effect on seller trust. This significant results is supported by the Theory of reasoned actions, because consumers
form their attitudes based on their beliefs, which result into intentions (Van der Heijden et al., 2003). Therefore, a higher attitude towards second-hand shopping leads to more seller trust, and results into purchase intentions.

5.2 Discussion of interaction effects
No significant interaction effects were found between seller type and review valence or review valence and product involvement on seller trust or perceived risk. In other words, a negative review valence has the same effect on company and individual sellers on the formation of seller trust and perceived risk. This is in line with the study of Lee and Youn (2009), who found no interaction effect between eWOM platforms and eWOM valence. Another explanation for this effect is that consumers have two targets of trust when buying second-hand products online, the intermediary and seller (Verhagen et al., 2006). The consumer might consider the intermediary as the most important trusting target because of the intermediary’s safety nets, guarantees or regulations (Shapiro, 1987).

Also, no significant interaction effects were found between product involvement and review valence on seller trust or perceived risk. An explanation could be that, regardless of the level of product involvement, a negative review valence has the same effect on seller trust and perceived risk.

5.3 Discussion of mediation effects
In line with the theory of planned behaviour Ajzen (1991), a significant mediating effect was found of seller trust between review valence and purchase intention. This is also supported by Gefen et al. (2003) who demonstrated a mediating effect of trust in their TAM model. For instance, a positive review valence of a second-hand seller develops into feelings of trust, which lead to intentions to purchase. Also, both mediating effects are supported by Verhagen et al. (2006) who showed that both trust and perceived risk affect purchase intentions. Supported by the theory of planned behaviour Ajzen (1991), a significant mediating effect was shown between review valence, perceived risk and purchase intention. Furthermore, researchers found that perceptions of risk have an effect on purchase intention (Jarvenpaa et al., 1999; Pavlou, 2003). This effect demonstrated that a positive review valence leads to lower feelings of risk which results into a purchase intention. However, no significant effect was found for a mediation effect between seller type, seller trust and purchase intention. A possible reason for this was an insignificant direct effect of seller type on seller trust.

Also, no mediation effect was found between involvement and perceived risk. This is also supported by the theory of planned behaviour Ajzen (1991), who showed that both trust and perceived risk affect purchase intentions. Supported by the theory of planned behaviour Ajzen (1991), a significant mediating effect was shown between review valence, perceived risk and purchase intention. Furthermore, researchers found that perceptions of risk have an effect on purchase intention (Jarvenpaa et al., 1999; Pavlou, 2003). This effect demonstrated that a positive review valence leads to lower feelings of risk which results into a purchase intention. However, no significant effect was found for a mediation effect between seller type, seller trust and purchase intention. A possible reason for this was an insignificant direct effect of seller type on seller trust.

5.4 Practical & theoretical implications and future research
As mentioned in the introduction, this study shows practical implications for e-commerce platforms and their employees in understanding the effects of review valence on seller trust and perceived risk. Additionally, this study gives insights in understanding the behaviour of the Dutch millennial generation and their thoughts of second-hand shopping.

First of all, this study indicates that type of seller has little impact on the formation of seller trust. There are no clear observable differences between second-hand individual sellers and company sellers. This shows e-commerce companies that consumers’ perceive individual and company sellers equally on their platforms, which means that other factors are expected to influence seller trust.

Second, the findings show that review valence is a dominant factor over the other independent variables and not really influenced by product involvement or the type of seller. Accordingly, e-commerce platforms should be aware that review valence (eWOM) is also an important factor in second-hand shopping.

Third, this study shows that consumers’ with a positive attitude towards second-hand shopper are better able to make inferences about the information of the seller than those with a negative attitude. In the conducted experiment, this group was better able to differentiate positive and negative valenced reviews and able to evaluate a second-hand product seller’s trust. To prevent
inexperienced buyers from making mistakes, it is suggested that e-commerce platforms and their employees inform inexperienced second-hand product buyers about the ins and outs of second-hand shopping.

Finally, this experiment demonstrates that participants experienced difference levels of risks when buying a second-hand book or second-hand laptop. In order to reduce these levels of risk, the e-commerce platform may provide additional safety nets, guarantees or regulations for high involvement second-hand products.

This research aimed to make several theoretical contributions. Furthermore, this study was the first to focus on the combination of review valence, type of seller and product involvement and measured the effect of seller trust and perceived risk in a second-hand shopping context. For example, literature about the construct of product involvement is still limited for second-hand products. This study also confirms the importance of online reviews and show the importance of eWOM for consumers. For instance, review valence has more impact on seller trust and perceived risk than type of seller and product involvement had in a second-hand shopping context. Finally, a set of scales was designed to measure the attitude towards second-hand shopping.

While the results of the experiment showed significant effects of most of the hypotheses, the study also showed several limitations. This research was focused on a Dutch millennial research group with participants aged between 18 and 35 years old. To draw a more elaborate conclusion, this study could be extended by including more generations like the baby boom generation and generation X. A second limitation is that this research was only focused on Dutch participants, different results may be expected for other countries and cultures. For example, a study could be conducted to research the difference between European and Asian countries.

Also, this study was only focused on second-hand products, it might be interesting for researchers to include new products to compare the effects of review valence on seller trust and perceived risk. For instance, a study with new and second-hand laptops to research the differences on the formation of trust, risk and purchase intention.

5.5 Conclusion
This study showed no significant difference between individual and company sellers on seller trust. Additionally, seller trust had no mediating effect between seller type and purchase intentions. On the contrary, a significant main effect was found for review valence on the mediating variables seller trust and perceived risk. Positive and negative valenced conditions show a different effects on seller trust and perceived risk. Moreover, a mediating effect is found between review valence, seller trust and purchase intention and between review valence, perceived risk and purchase intention. Product involvement had a direct effect on perceived risk, and participants experienced different levels of risk between situations of high involvement and low involvement. Additionally, perceived risk showed a mediating effect between product involvement and purchase intention. Both seller type and product involvement show no moderating effect on the relation between review valence and seller trust or review valence and perceived risk. Also, no interaction effects have been found. Finally, attitude towards online second-hand shopping had a significant effect on seller trust, while attitude towards online shopping had not.

To summarize, this study showed that review valence had a bigger effect on seller trust and perceived risk than seller type and product involvement. Also, consumers with a positive attitude towards second-hand shopping are more inclined to trust the seller in the same situation. Therefore, this study gives practical and theoretical implications to researchers, employees and companies about second-hand shopping.
6. Literature


Lin, Fang, & Tu. (2010). Predicting consumer repurchase intentions to shop online. JCP, 5(10), 1527-1533.


Lin, C.-Y., Fang, K., & Tu, C.-C. (2010). Predicting consumer repurchase intentions to shop online. JCP, 5(10), 1527-1533.


7.1 Appendix A – Stimuli overview

Figure 1. Company seller, negative review valence, high involvement

Figure 2. Individual seller, negative review valence, high involvement
Figure 3. Company seller, positive review valence, high involvement

Figure 4. Individual seller, positive review valence, high involvement
Figure 5. Company seller, negative review valence, low involvement

Figure 6. Individual seller, negative review valence, low involvement
Figure 7. Company seller, positive review valence, low involvement

Figure 8. Individual seller, positive review valence, high involvement
Introduction text

Beste respondent,

Allereerst bedankt voor uw interesse in dit onderzoek. Voor mijn masterscriptie aan de Universiteit Twente doe ik onderzoek naar het kopen van tweedehands producten op het internet. Hierover zult uw een aantal vragen gaan beantwoorden. Het onderzoek richt zich op mensen die tussen de 18 en 35 jaar oud zijn en zal maximaal 5 á 6 minuten van uw tijd in beslag nemen.

Nadat u een aantal algemene vragen heeft beantwoordt zult u een specifieke situatie zien over het kopen van een tweedehands product. De situatie zal kort worden uitgelegd op de pagina ervoor. Vervolgens zullen verschillende vragen aan uw worden gesteld over deze situatie. Deze enquête is in te vullen op zowel een computer als een tablet (mobiel wordt niet ondersteund).

Uw antwoordt op de enquête zal strikt vertrouwelijk zijn en gegevens van dit onderzoek zullen anoniem worden gerapporteerd. Uw informatie wordt gecodeerd en blijft daardoor vertrouwelijk. Daarnaast maak u kans op één van de twee Bol.com cadeau kaarten ter waarde van €15.

Bedankt voor u tijd! De enquête begint nadat u rechtsonder op de rode knop hebt geklikt.

Tom van Urk
MsC student Marketing Communications
Questions

Q2 Wat is uw geslacht?

○ Man (1)

○ Vrouw (2)

Q3 Wat is uw hoogst genoten opleiding?

○ Vmbo (1)

○ Havo (mms) (2)

○ Vwo, gymnasium, atheneum (hbs, lycceum) (3)

○ Mbo (mts, meao, middenstandsdiploma, pdb, mba) (4)

○ Hbo (hts, heao, associate degree) (5)

○ Universitaire opleiding (bsc, msc of phd) (6)

Q4 Wat is uw leeftijd?

○

Q5 Geef hieronder aan in hoeverre u het eens of oneens bent met de volgende stellingen.

<table>
<thead>
<tr>
<th>Sterk mee eens (1)</th>
<th>Oneens (2)</th>
<th>Niet eens maar ook niet oneens (3)</th>
<th>Eens (4)</th>
<th>Sterk mee eens (5)</th>
</tr>
</thead>
</table>

40
Het internet gebruiken om een product te kopen is een goed plan. (1)

Over het algemeen sta ik positief tegenover electronic commerce (alle vormen van handel op het internet). (2)

Het lijkt mij een goed idee om een artikel te kopen via het internet. (3)

Q8 Hoe vaak koopt u producten op het internet?

- Minder dan één keer per maand (1)
- Een paar keer per maand (2)
- Een paar keer per week (3)
- Eenmaal per dag (4)

Q72 Geef hieronder aan in hoeverre u eens of oneens bent met de volgende stellingen.
Ik zou positief staan tegenover het kopen van tweedehands producten via het internet. (1)

De gedachte om online een tweedehands artikel te kopen spreekt mij aan. (2)

Het zou een goed idee zijn om een tweedehands product op het internet te kopen. (3)

Q12 Hoe vaak heeft u in het verleden tweedehands producten gekocht op het internet?

- Geen (1)
- 1 á 2 keer (6)
- 3 á 4 keer (7)
- 5 á 10 keer (8)
- 10 keer of meer (9)

Geef hieronder aan in hoeverre u eens of oneens bent met de volgende stellingen.

<table>
<thead>
<tr>
<th>Sterk mee oneens (1)</th>
<th>Oneens (2)</th>
<th>Niet eens maar ook niet oneens (3)</th>
<th>Eens (4)</th>
<th>Sterk mee eens (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

42
Ik denk dat online tweedehands winkelen gemakkelijk is. (1)

Ik kan geld besparen door online tweedehands producten te kopen. (2)

Ik kan tijd besparen door online tweedehands artikelen te kopen. (3)

Ik kan sneller tweedehands producten op het internet kopen dan in traditionele winkels. (4)

Ik krijg een ruimere keuze aan tweedehands producten als ik online winkelen opzichte van traditionele winkels. (5)

Ik hoef het huis niet te verlaten als ik online tweedehands artikelen koop. (6)

Ik kan in de privacy van mijn huis winkelen terwijl ik online tweedehands producten koop. (7)

**Instructions stimuli**

Op de volgende pagina zal u kijken naar een specifieke situatie op een e-commerce platform. Probeer uzelf in te leven in de volgende situatie: u bent een consument die geïnteresseerd is in het
Geïllustreerd product en u probeert de verkoper van het product te evalueren. Zorg ervoor dat u de informatie op de webpagina aandachtig tot u neemt voordat u verdergaat naar de daaropvolgende vragen (U kunt daarna niet meer terug naar deze situatie).

☐ Ik heb de tekst hierboven gelezen (4)

**Q30 De verkoper in het scenario was een persoon.**

☐ Ja (1)

☐ Nee (2)

**Q31 De verkoper in het scenario was een bedrijf.**

☐ Ja (1)

☐ Nee (2)

**Q32 De beoordeling van de verkoper was.**

<table>
<thead>
<tr>
<th></th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>6 (6)</th>
<th>7 (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negatief</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Q33 De beoordeling van de verkoper door de klanten was.**

<table>
<thead>
<tr>
<th></th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>6 (6)</th>
<th>7 (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongunstig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Q74 Geef hieronder aan in hoeverre u het eens of oneens bent met de volgende vragen over het scenario.

<table>
<thead>
<tr>
<th></th>
<th>Sterk mee oneens (1)</th>
<th>Oneens (2)</th>
<th>Niet eens maar ook niet oneens (3)</th>
<th>Eens (4)</th>
<th>Sterk mee eens (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Het product dat ik heb gezien valt in een hoge prijs categorie. (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Het product dat ik heb gezien valt in een lage prijs categorie. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Het product dat ik heb gezien zorgt ervoor dat ik verschillende factoren moet overwegen voordat ik het zou kopen. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Het kopen van het product zou financieel riskant voor mij zijn. (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gezien de tweedehands status denk ik dat het product duur is. (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gezien de tweedehands status denk ik dat het product goedkoop is. (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q76 Geef hieronder aan of u eens of oneens bent met de volgende stellingen.

<table>
<thead>
<tr>
<th></th>
<th>Sterk mee oneens (1)</th>
<th>Oneens (2)</th>
<th>Niet eens maar ook niet oneens (3)</th>
<th>Eens (4)</th>
<th>Sterk mee eens (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ik heb het gevoel dat de verkoper van het product betrouwbaar is. (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ik denk dat de verkoper van het artikel deugdelijk is. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naar mijn mening is de verkoper van dit product eerlijk. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ik verwacht dat de verkoper van dit artikel te vertrouwen is. (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q77 Geef hieronder aan of u eens of oneens bent met de volgende stellingen.
Ik ben wellicht bezorgd geworden over de vraag of de verkoper fraude zal plegen. (1)

Ik heb het gevoel dat ik bezorgd ben geworden over of de verkoper mij zal oplichten. (2)

Ik geloof dat ik mij zorgen ben gaan maken of het product van de verkoper niet zal presteren zoals verwacht. (3)

Ik denk dat ik mij zorgen begin te maken over of de verkoper zich opportunistisch zou gedragen. (4)

Q78 Geef hieronder aan of u eens of oneens bent met de volgende stellingen.

<table>
<thead>
<tr>
<th></th>
<th>Sterk mee oneens (1)</th>
<th>Oneens (2)</th>
<th>Niet eens maar ook niet oneens (3)</th>
<th>Eens (4)</th>
<th>Sterk mee eens (5)</th>
</tr>
</thead>
</table>

47
Ik zal in de nabije toekomst zeer zeker het artikel van deze verkoper kopen.

(1)

Ik ben van plan om in de nabije toekomst het product via deze verkoper te kopen. (2)

Waarschijnlijk zal ik in de nabije toekomst het artikel via deze verkoper kopen. (3)

Ik verwacht in de nabije toekomst het product via deze verkoper te kopen. (4)