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Master Thesis Marketing

***The effect of a negative review on consumer trust and purchase intention given  
context dependent factors***

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## Abstract

Customers nowadays have the opportunity to search a wide variety of information about products they seek for. Numerous companies offer information about their products and opinions of prior customers on their products. However, some companies only offer the positive opinions of their products, leading to a misleading product image. Therefore, this research investigates the effect of a negative review on consumer trust and purchase intention, given context dependent factors, in order to examine why companies, present only positive sides of their products. This research focuses on the effect of negative reviews on consumer trust and purchase intention based on two types of products, high-involvement versus low-involvement products, two types of reviews, short versus extensive reviews and different consumer characteristics, experienced versus not experienced. The conceptual framework used in this study is a moderated mediation model. To test these findings this study uses a 2x2x2 between subject design. A pre-study was conducted to test whether respondents viewed a short review as a short one, and if there were differences in involvement for the two products. The study investigates firstly the effect of a negative review and context dependent factors on consumer trust (mediator), using PROCESS macro with using 5000 bootstrap samples. After that, the effect of consumer trust (mediator) on purchase intention was investigated. The results showed significant effects negative effects of a negative review, high-involvement products, and positive effects of customer familiarity on consumer trust at a 95%-confidence level. Furthermore, it showed significant negative effects of review characteristics on consumer trust at a 95%-confidence level. The mediation analysis showed a positive significant effect of consumer trust on purchase intention at a 99%-confidence level. After investigating the total, direct and indirect effects of a negative review on purchase intention, the analysis showed significant partial mediation of a negative review on purchase intention through consumer trust. The study also shows moderation effects of product, consumer and review characteristics on purchase intention through consumer trust.

**Keywords: Consumer trust, Purchase intention, Negative reviews, Amazon, mediation, moderation.**

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## 1. Introduction and research question

With the introduction and the rise of the internet, people have been able to get access to a wide stream of information in just a matter of time. Information about product specifications and product reviews can be read by potential customers, so that they can get a feeling about what the product will be like. Evidence has shown that reviews can be incredibly important for both new products and services, as reviews do have an influence on buying decision of consumers (Devedi et al., 2017). According to Cui, Lui & Guo (2012), the number of reviews also has a positive effect on early sales. However, this effect decreases over time. This implies that reviews are especially important for new developed products. As most websites also present reviews about previous experiences of people, both negative as well as positive, depending on the rating previous users give, customers already can get information about whether the product is something they are looking for or not. According to Utz, Kerkhof & Van Den Bos (2012), reviews are an incredibly important factor for brands too, as people tend to rely heavily on those reviews. While some companies give access to all kind of reviews, both negative and positive, (e.g., Amazon) some companies only show positive reviews on their website. However, people also appreciate negative reviews, as that gives a more realistic overview about a product or service than only positive reviews. So, what drives these companies to only show positive reviews? Are they afraid of the consequences of negative reviews on their trust scores and sales? To determine the effect of a negative review this research focuses on the effect of negative reviews on consumer trust and ultimately purchase intention, given context dependent factors. Therefore, the main research question in this research is:

*What is the effect of negative reviews on consumer trust and purchase intention, given different context dependent factors?*

Prior research showed that credibility and purchase intention are positively correlated (Jiménez & Mendoza, 2013). The term *credibility* has been defined by prior researchers into twelve different dimensions (Gaziano & McGrath, 1986). These dimensions are the following according to them: fair, biased, tell the whole story, are accurate, respect people's privacy, watch out after people's interests, are concerned about the community's well-being, separate facts, and opinion, can be trusted, are concerned about the public interest, are factual and have well-trained reporters. While some of these dimensions do not matter regarding reviews, most actually do. Therefore, companies that only show positive reviews possibly would decrease their credibility level as that would not tell the whole story about the product, brand, or company. In addition, prior research showed that negative reviews indeed are perceived useful by consumers. However, this was only the case for Utilitarian products (Sen & Lerman, 2007). Utilitarian products are products that provide instrumental, functional, or practical utilities for customers (Lu, Liu & Fang, 2016). Besides that, the effect of reviews also depended on brand level. Ho-Dac et al. (2013) found that weak brands are not hold back by negative reviews compared to positive reviews. So, a positive review had a greater effect on weaker brands than negative reviews had. However, the effect of both positive and negative reviews on trustworthiness among different products is still undetermined (Doh & Hwang, 2009). They concluded that one negative (1-star) review could be harmful for a product, however, one negative review in a 10-message set was less harmful. However, what happens if only one negative review has been read by consumers?

This research tries to answer the gap in the literature that currently exists by looking at the effect of only one negative review in a setting of two different types of products (high versus low involvement products), and two types of review characteristics (short versus long reviews) to see if results are similar or different compared to prior research. Besides that, this research will also focus on consumer characteristics that can influence customers opinions about reviews, which is the familiarity of the consumer with the product or similar products. Lastly, this research will further scope in on the effect of a negative review on consumer trust, and its mediation effect on purchase intention. This study uses a moderated mediation model, with consumer trust as a

mediator and context dependent factors as consumer, product, and review characteristics as a moderator.

Besides scientific relevancy, this research also has managerial relevancy. Companies could possibly improve their credibility level and thus increase their sales numbers on both the short as long-term. While most companies tend to show (only) positive experiences customers had with their product, it is maybe beneficial for companies to also show negative experiences customers had. By identifying the effects of one negative review on two types of products, companies can change their review strategy. Showing these negative experiences could ultimately be a win-win situation for both the customer and the company. While customers will get more honest information about the product, the company would get potentially more satisfied customers, leading to less complaints and thus a better brand image in the eyes of the customer. Furthermore, the effect of a negative review on trust will be investigated. If a negative review does not deter trust of consumers towards the brand, product or service companies could show these negative reviews without having to worry about the consequences. If a negative review do disturb customer trust, companies should react immediately to avoid negativity among their customers.

The structure of this paper will be the following. First a theoretical section will be given where all relevant prior research will be discussed. Furthermore, five hypotheses will be given and explained given prior research. Then, the methodology will be discussed as well as the data. Both the data collection as well as sample characteristics will be discussed in that part. Then the results will be given, and each hypothesis will be discussed. Next, an overview of the results will be given of this research and the main research question will be answered. Lastly, both the limitations and further research areas will be discussed.

## 2. Literature review

The five hypotheses that will be discussed below have resulted into the following conceptual framework. In this research first the effect of a negative review on consumer trust and purchase intention will be investigated, using three moderators, namely product type, customers' prior experience, and the negative extensiveness. Next, the mediating effect of consumer trust will be investigated. Hypothesis 1 has been made to investigate the main effect of a negative review on consumer trust while hypothesis 2 measures the effect of the mediator 'consumer trust' on purchase intention. Hypotheses 3, 4 and 5 will investigate the moderation effect of each context dependent factor on consumer trust and ultimately purchase intention.

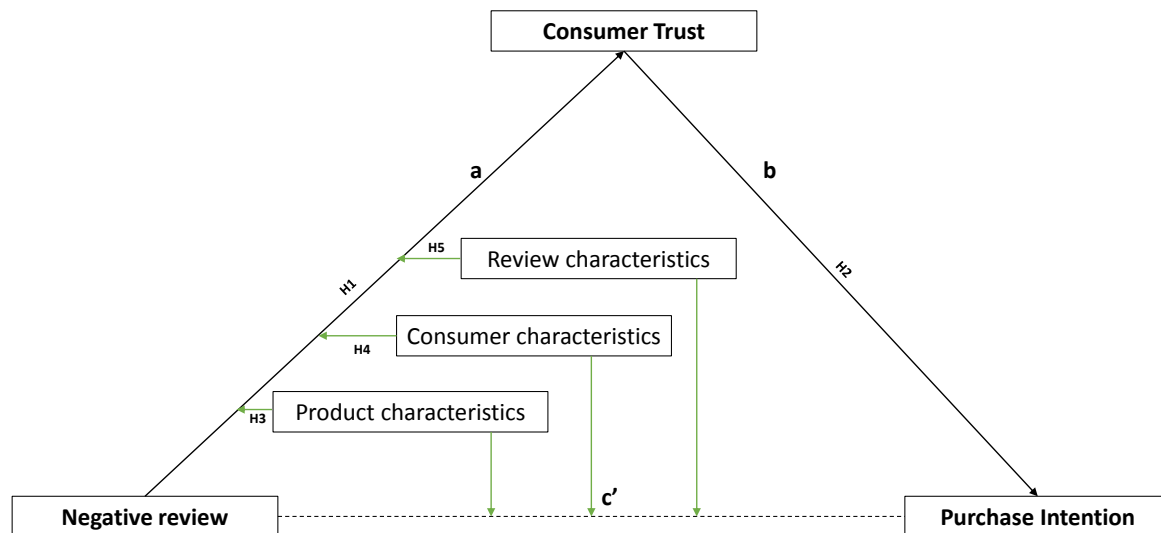


Figure 1. Conceptual framework



## 2.1 Consumer trust and purchase intention

Reading negative reviews obviously influence the trust of consumers towards the product. Online trust towards a company has become more important as consumers tend to buy more products online. With an increasing number of online shops worldwide it is important for companies to differentiate, so that customers find and spend time on your web shop. Reviews can break or make a person's purchase decision. Prior research has already shown that reviews can be a vital tool to increase sales. Chevalier & Mayzlin (2006) investigated the role of online ratings on book sales. The conclusion of their research was that book sales increased due to positive ratings given by consumers online. So, the higher the general ratings given by reviewers were, the higher the books sales were. Negative reviews on the other hand tend to deter customer trust too. Sparks & Brown (2011) investigated the role of review valence, both negative and positive, and found that positive reviews had led to significantly higher trust towards the hotel, compared to negative reviews. Prior research has also indicated that people tend to value negative reviews more than positive reviews, as consumers weight more importance on negative reviews compared to positive ones (Lee, Park & Han, 2008). Negative reviews will therefore reduce trust of consumers in products. Meyer et al. (1995) argues that there are three main factors that influence the perceived trust of a consumer towards a company. These are (1) ability, (2) benevolence and (3) integrity. Ability is defined by them as the group of skills, competencies and characteristics that enable a party to have an influence within some specific domain. Benevolence is defined as the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive. The last factor, namely integrity, involves the trustor's perception that the trustee adheres to a set principles that the trustor finds acceptable. He also mentions that all three concepts can be separable, even though there could be a relationship between those three. The findings of Meyer et al. (1995) are supported by Ling et al. (2010) too. They find that online trust also positively influences purchase intention significantly. This means that if people have more faith in a company or product, they are also much more likely to buy their products. The findings of Meyer et al. (1995) and Ling et al. (2010) led to the following hypothesis.

*Hypothesis 1: Reading a negative review will decrease the trust of consumers towards the product.*

As consumers use reviews to evaluate potential products it is important for companies to manage the negative reviews the company receives. Elseidi & El-Baz (2016) found that electronic word of mouth had a significant effect on brand image and purchase intention. While positive electronic word of mouth (eWOM) had a positive effect on purchase intention, negative eWOM had a negative effect on purchase intention and brand image. This view is also supported by Saleem & Ellahi (2017) as they found that negative electronic word of mouth had a negative effect on purchase intention for fashion products. Cheung & Lee (2008) found that negative eWOM results in lower purchase intention for consumers, while positive eWOM increase purchase intention. Therefore, negative reviews can be detrimental for companies' sales numbers. However, the effect of negative reviews had a greater effect on purchase intention than positive reviews do. In addition, Doh & Hwang (2009) concluded that negative reviews decrease purchase intention of consumers indeed. They had created several compositions of review sets and their results showed that the presence of negative reviews decreases purchase intention of consumers. Purchase intention has been defined as a kind of decision-making that studies the underlying reasoning to buy a product of a particular brand by the consumer (Shah et al., 2012). Ling et al. (2010) classifies purchase intention as one of the components of consumer cognitive behavior on how an individual consumer intent to buy a specific brand. The key factor hereby is that purchase intention predicts the actual behavior of customers according to Montañó & Kasprzyk (2015). The rule of thumb of purchase intention implies that 80% of the people that say that they will totally buy a product in a survey, will actually buy the product, while 30% of the people who say that they will probably buy the product, will actually buy the product. The presence of negative reviews will create doubt in consumer minds resulting in lower trust towards the company and thereby reducing the intention of customers to buy the product. As consumers have little trust, they tend to seek out for alternatives. If consumer trust is low, consumers won't buy products, thereby reducing their purchase intention. Given all these prior results, the second hypothesis is the following:

*Hypothesis 2: The effect of a negative review on purchase intention is mediated by consumer trust.*

## 2.2 Product characteristics

However, the role of negative reviews on consumer trust and purchase intention depends on several context dependent attributes too. The first context dependent attribute is the product type. In general, products can be defined into two different product types, namely high-involvement products, and low-involvement products. High-involvement products require the potential customer to be aware of price, quality, innovation and all the alternatives (Nayeem & Casidy, 2013), while low-involvement products require less extensive research done by the potential customer and are in general bought frequently by consumers, as these products are not of vital concern according to the customer (Ndubisi & Moi, 2006). Prior research indicated that for both high-involvement as well as low-involvement products a simple negative review can influence customer attitude negatively towards a product (Lee, Park & Han, 2008). Research in China indicated that customers, who had low-involvement with products tended to trust positive and negative reviews equally, while high-involvement consumers tended to trust negative reviews more compared to positive reviews. They also found out that customers who had low involvement with products tend to have higher purchase intention compared to high-involvement products, when having read a negative review. (Xue & Zhou, 2010). While for high-involvement products extensive research is necessary, low-involvement products do not need extensive research. As consumers for high-involvement products have a variety of alternatives, the effect of a negative review could 'force' them towards an alternative product reducing thereby their trust, and thereby purchase intention, for the product they had read a negative review of. High-involvement products typically also imply higher priced products. Expected price refers more towards the expectation people have regarding a certain experience. McCall & Lynn (2008) found that price had a significant influence on the purchase intention of consumers in the restaurant industry. This means that the higher the price will be, the lower the chance will be

that both expected price and real price are similar, resulting in a lower purchase intention. Reversed, the lower the price is, the higher the chance will be that both expected and real price will be similar, resulting in a higher purchase intention.

Higher prices also imply higher consumer risks and a higher “pain of buying” for consumers (Floyd et al, 2014). Purchased products that cannot deliver towards expectations will lead to lower consumer trust and purchase intention for a next purchase of the brand or company. This is due to the risk that a repeated purchase of the brand will result in the same outcome (Chiu et al., 2014). The effect of a failed purchase will have a greater negative effect on consumer trust for high-priced products, due to the inability to recover the value of the failed purchase. This means that for a consumer a failed cheap fast moving consumer good purchase, the recovery value less is than a high expensive flatscreen television for example. In short, both the monetary and psychological loss of a failed high-priced product are much higher, compared to low-priced products (Li & Hitt, 2010).

To mitigate this potential risk, consumers will seek and evaluate a variety of reviews, resulting in high involvement with products. However, due to the difference in price, it is expected that the effect of a negative review will be much greater for high-involved products, compared to low-involved products. Consumers will evaluate the presence of negative reviews more, leading to less consumer trust for high-involvement products, compared to low-involvement products. Less trust towards the product will ultimately lead to lower purchase intention (Doh & Hwang, 2009). Therefore, hypothesis two will be the following:

*Hypothesis 3: A negative review will have a greater negative effect on purchase intention for high-involvement products, compared to low-involvement products, due to lower consumer trust in the product or company.*

## 2.3 Customer characteristics

Furthermore, experience is also a great factor regarding negative reviews. Zhu & Chang (2015) found that product familiarity and experience are significant moderators for purchase intention. Customers that already have a positive experience regarding the product are more likely to buy a product again, due to having higher trust towards the product (Ling, Chai & Piew, 2010). Therefore, companies always try to satisfy customers in a way that they become loyal towards the company and brand and are thus more likely to be retained by the company. This is due to the fact that consumer satisfaction, consumer trust and purchase intention are positively correlated with each other (Maxham III, 2001).

But what happens with new customers? Prior research indicated that more and more customers use reviews to evaluate potential products they want to buy, without having any experience with the product or service offered by the company. New customers could be deterred by negative reviews they have read online, reducing their consumer trust. However, the effects of negative reviews can be mitigated if customers already have experience with the product or service offered by the company (Chatterjee, 2001). In their research they concluded that negative reviews could have greater negative consequences for customers that do not have any experience with the company or brand, compared to the ones that are familiar with the brand and company. Prior customer experience would mitigate the effect of negative reviews as experience give customers a reference point about the service or product. They create a baseline based on their previous experiences, thereby forming expectations on prior experiences. Customers that already had experience with the company or brand would see the review as “too bad to be true”, and therefore neglecting the information giving in a negative review more likely. As prior experience reduces the risk of a potential failed purchase, the effects of a negative review would be reduced. By reducing the risk of a potential failed purchase, customers are more likely to have higher purchase intentions (Samadi & Yaghoob-Nejadi, 2009). Therefore, hypothesis four is the following.

*Hypothesis 4: A negative review will have greater negative consequences on purchase intention for consumers that have zero experience with the company or brand compared to consumers who already have experience with the company or brand, due to lower consumer trust in the product or company.*

## 2.4 Review characteristics

As already discussed, many companies show reviews of their products on their own personal website. Mostly, these reviews are presented on a webpage, with five (5) to ten (10) reviews bundled together. This bundle, or review set, give consumers information about the product, and gives the opinions of other customers that already have experience with the product. This review set has incredibly high value for potential buyers as it gives some expectation for the product. Based on this information, customers will consider potentially buying the product as reviews in general are being used mainly during the consideration phase, while being not so much used during the choice phase (Jang, Prasad & Ratchford, 2012).

The ratings given by prior customers can vary much. Sometimes, only one 1-star rating occurs in the review set, while other times 5-star ratings are given by prior customers. Generally, web shops that present reviews of consumers, give reviewers the opportunity to write product reviews and rate products based on rating between one and five stars, where one-star reviews are extremely negative and five-star reviews are extremely positive. The number of negative reviews in the review set depends on the product and results in different consumer trust levels. Most customers that had written a review about a bad product do that with the intention to warn other customers about their bad experience (Wetzer, Zeelenberg & Pieters, 2007). By giving bad ratings and sharing their story, these reviewers try to influence other customers to be cautious buying the product, ultimately lowering the consumer trust, and purchase intention of potential consumer.

However, the way of convincing people can differ between negative reviews. While some reviews are written anonymously and consists of only a few words, some other negative reviews are written extensively sharing the whole story. Prior research already focused on the helpfulness of reviews for customers (Mudambi & Schuff, 2010). They, in particular, investigated the role of product type, rating and the number of words a review consisted of. They used Amazon data to investigate the role of both word length and rating and found out that for experienced goods customers found moderate (three-star) reviews were more helpful, while for search products, extreme ratings were much more important. In addition, they found that in general the longer the review was, the more helpful the review was perceived. However, this effect was greater for search products, compared to experienced goods. These extensive reviews are measured by the number of words a review consists of. So, the more extensive a review has been written, the more helpful it was for new customers. Therefore, negative reviews that share the extensive experience will have a greater impact on purchase intention than negative reviews that consist of only a few words, due to creating lower consumer trust. Therefore, the fifth and last hypothesis is the following:

*Hypothesis 5: The effect of a negative review on purchase intention will be greater for extensively written negative reviews, compared to less extensively written negative reviews, due to lower consumer trust in the product or company.*

### 3. Methodology

#### 3.1 Empirical design

This study follows a 2 x 2 x 2 between-subject design, manipulating for negative reviews, review characteristics and product characteristics. Respondents were divided among one of the eight conditions. The conditions were the following: (1) a neutral, short review about a low-involvement product; (2) a neutral, long review about a low-involvement product; (3) a neutral, long review about a high-involvement product; (4) a neutral, short review about a high-involvement product; (5) a negative, short review about a high-involvement product; (6) a negative, long review about a high-involvement product; (7) a negative, short review about a low-involvement product; (8) a negative, long review about a low-involvement product.

For consumer characteristics the average customer familiarity score was used. If respondents answered these four questions with an average higher than 4 out of 7, these respondents were deemed as familiar with the product. If respondents answered these four questions with an average with a 4 or lower out of 7, these respondents were deemed as not familiar with the product.

The respondents that were focused on a low-involvement product were shown either a negative 1-star, or neutral review about *L'Oréal Paris shampoo*, while the respondents that saw a high-involvement product were shown a negative 1-star, or neutral, review about a *Samsung RU7179 55' Inch television*. These products had been chosen as previous literature regarded these products as low and high-involvement products.

Furthermore, these specific items were chosen as numerous reviews had been written regarding each product differing from short to extensive reviews. Therefore, these products were regarded optimally usable for this study. Furthermore, to control for price levels these products were given a fictional price. The price range of the television was between \$399,00 and \$999,00; while the price range of the shampoo was between \$3,00 and \$14,00. The fictional price was given



randomly to each respondent and consisted of an integer value. These prices were based on looking at the average price of similar products.

Reviews about the two products were collected from the Amazon website. As Amazon is relatively new for Dutch consumers little reviews were written in Dutch. However, as Amazon is operating since 1998 in Germany, many reviews were written in German. These reviews have been translated to English using Amazon's translate service. However, minor adjustments were made in case of mistranslation issues. Furthermore, the survey has been translated to Dutch, so that people that have problems reading English reviews had the opportunity to participate in this study.

After respondents had been shown the product and a negative review for this product, respondents were firstly asked how they perceived the review. Next, respondents were asked how involved they were regarding the product. In addition, respondents were asked how extensively written they thought the review was. Moreover, respondents were asked how familiar they were with the product. Furthermore, respondents were asked how much trust they had in the company and brand. Lastly, respondents were asked how likely it would be that they would buy that specific product. All scales were converted to numeric values ranging from 1 to 7.

After they have answered questions about the review, respondents were asked some social-demographic questions. The first question was about their gender. The second question is about their age while the third question was about the country respondents are currently living. If they responded that they are currently living in The Netherlands, they received a follow-up question which asked Dutch respondents in which county they are living. Next, respondents were asked which highest education they had finished. At last, respondents were asked if they were married.

After filling in each question respondents were thanked thoroughly for their participation and time. The survey consisted of a maximum of 20 questions that respondents had been answering. The average time it took respondents to answer the survey was 7 minutes.

This research uses a total of two regression models, to determine firstly the moderated effect of product-, consumer-, and review characteristics on consumer trust. Next, the regression model was used to determine the mediation effect of consumer trust on purchase intention. The analysis was performed using PROCESS macro in SPSS using model 4 of Hayes (2022). All possible options that could be chosen in the survey were given a value between 1 and 7. The exact value per answer possibility can be seen in appendix A. This type of analysis was chosen as the dependent variable is based on an ordinal scale, and the independent variables are both interval (in case of price), nominal (in case of dummy variables, as and product characteristics, consumer characteristics, and review characteristics).

## 3.2 Variables and measurements

In this part all variables used in this study will be explained, as well as the scales used for each variable. See table 1 to view which question was asked and how each variable was measured.

### 3.2.1 Negative review

Respondents were divided into eight different groups, of which four groups received a negative review and four groups received a 'neutral' review. Respondents were then asked after they had read the review, how they perceived the review. The scale used for this question was a 7-point Likert scale reaching from extremely negative (7) to extremely positive (1). Next to that, a dummy variable was created that had a value of 1 for people who saw the negative review and 0 for people who saw the neutral review.

### 3.2.2 Product characteristics

Several studies focused on both high and low-involvement products. Wong, Polonsky & Garma (2008) used a digital camera and an automobile as high-involvement products. Martin (1998) on the other hand asked respondents to list products respondents were highly involved with, and product they were low involved with. This list made clear that respondents were highly involved with cars, watches, and shoes. On the other hand, respondents were less involved with books, food products and socks. Hameed, Madhavan & Arumugam (2020) found that televisions, mobile phones and laptops were high involvement products, while magazines, cool/energy drinks and snacks were low-involvement products. Lotfizadeh (2015) added shampoo also shampoo on the list of low-involvement products. This study focuses on shampoo as a low-involvement product, while using a television as high-involvement products, based on the findings of these previous studies. To check whether respondents did have a certain level of involvement, respondents will be asked four questions regarding their involvement for the product they will see. These questions were based on the research of Salma & Tashchian (1985), and these results were used during the pre-study. A dummy variable was created that had a value of 1 for the high-involvement product (television) and a value of 0 for the low-involvement product (shampoo).

### 3.2.3 Review characteristics

Reviews can differ very much from each other. Some are written very extensively, while others contain little information. In this study reviews are divided in a short review and an extensive review. An extensive review contained more words and information, compared to short reviews. Short reviews contain of maximum two sentences, while extensive reviews contain multiple sentences. Respondents were then asked how they perceived the review, ranging from extremely short, a value of 1, to extremely extensive, a value of 7. A dummy variable was created that had a value of 1 for the extensive reviews and a value of 0 for the short reviews.

### 3.2.4 Consumer characteristics

As previously explained consumer characteristics is about customer familiarity. Customer familiarity is the knowledge of customers of the brand, service, or product. To measure customer familiarity, respondents will be asked four questions related to the knowledge of the product, service, or brand. The average score of these four questions will ultimately determine the customer familiarity level of the respondent. All these four questions were asked by using a 7-point Likert scale. The questions used to measure customer familiarity are originated from the study performed by Kelting, Duhachek & Whitley (2017). The average of the four questions was taken as the average familiarity score, with 1 being someone who is not familiar with the product at all, and 7 being someone who knows the product perfectly. If respondents had an average familiarity score higher than 4 out of 7, these respondents were deemed as being familiar with the product, if respondents had a score of 4 or lower, these respondents were deemed as not familiar with the product.

### 3.2.5 Consumer trust

To measure consumer trust towards the brand, company, or product, four questions were asked to respondents. These questions are based on studies performed by Zboja (2018); Zboja, Clark & Haytko (2016); Sirdeshmukh, Singh & Sabol (2002) and Morgan & Hunt (1994). These four questions were asked using six 7-point Likert scale questions ranging from strongly disagreeing to strongly agreeing. The average of these four questions were be used to determine the level of trust a respondent had after reading the review, with 1 being someone who extremely distrust the product and company, and 7 being someone who extremely trust the product and company.

### 3.2.6 Purchase intention

Purchase intention was measured by asking respondents whether or not they would be likely to buy the product. This way of measuring purchase intention is originated from research done by White, Dahl & Ritchie (2016). However, to avoid confusion for respondents, it was chosen to

apply a seven-point Likert scale for this question, instead of a nine-point Likert scale used in the research of White, Dahl & Ritchie (2016), with 1 being in this case someone who is extremely unlikely to buy the product, and 7 being someone who is extremely likely to buy the product.

### 3.2.7. Overview table

To give an overview of each question asked for each variable please see table 1.

*Table 1. Overview of all questions, scales and sources for each variable used.*

Variable	Questions	Possible answers	Scale	Source
Negative review	1. According to me, the writer of this review is ... about this product.	Extremely negative to extreme positive	7-point Likert scale	
Consumer characteristics	<ol style="list-style-type: none"> <li>How familiar are you with _____?</li> <li>How clear of an idea do you have about which characteristics of _____ are important in providing you with maximum satisfaction?</li> <li>How much do you know about _____?</li> <li>How would you rate your knowledge about _____ relative to the rest of the population?</li> </ol>	<ol style="list-style-type: none"> <li>not at all familiar / extremely familiar</li> <li>not at all clear / extremely clear</li> <li>very little / a lot</li> <li>One of the least knowledgeable / One of the most knowledgeable</li> </ol>	7-point Likert-scale	Kelting, Duhachek & Whitler (2017)
Product characteristics	<ol style="list-style-type: none"> <li>In selecting from many types and brands of this product available in the market, would you say that:</li> <li>Do you think that the various types and brands of this product available in the market are all very alike or are all very different?</li> <li>How important would it be to you to make a right choice of this product?</li> <li>In making your selection of this product, how concerned would you be about the outcome of your choice?</li> </ol>	<ol style="list-style-type: none"> <li>I would not care at all as to which one to buy ... I would care a great deal as to which one to buy</li> <li>they are alike ... they are all different</li> <li>Not at all important ... Extremely important</li> <li>Not at all concerned ... very much concerned</li> </ol>	7-point Likert-scale	Slama & Tashchian (1985)
Consumer trust	<p>After seeing this review, the company of the television...</p> <ol style="list-style-type: none"> <li>Can be trusted all the time</li> <li>Is reliable</li> <li>Has high integrity.</li> </ol>	1. Strongly disagree to strongly agree	7-point Likert scale	Zboja, (2018); Zboja, Clark & Haytko (2016); Sirdeshmukh, Singh & Sabol (2002);

	4. Is competent			Morgan & Hunt (1994)
Purchase intention	4. How likely would you be to buy the (product)?	4. very unlikely to very likely	7-point Likert-scale	White, Dahl & Ritchie (2016)

### 3.3 Pre-study and manipulation check

To check whether respondents perceived short reviews as short reviews, and to check whether a difference was perceived between different products a pre-study was designed. The survey was distributed to a select group of people. The survey was sent to friends and family, and they were asked to distribute it further to their friend, colleagues, and family. 57 people had responded and filled in the survey. 56 (98,2%) people were living in The Netherlands. Out of the 57 people, 41 (71,9%) were male, while 16 people were female (28,1%). The average age of the people who participated in the pre-study was 33,1 years old, with the lowest age number being 17 years old and the highest age number being 80 years old.

The main purpose of the pre-study was to check whether a difference between length and involvement was perceived by respondents. The results will be discussed below.

Respondents were randomly divided into two types of products. Either they were asked to answer questions regarding a high-involvement product, which was the television, or they were asked to answer questions regarding a low-involvement product, which was shampoo. 28 people were shown a negative review about shampoo, while 29 people were shown a negative review about a television. Respondents were asked four questions to measure their involvement regarding a product. The average score of these four questions were used to measure their average involvement regarding the product, with 1 having extremely low involvement in the product and 7 having extremely high involvement in the product. The average involvement score was 5.664 out of 7 for high-involvement products and the average involvement score for the people who had to answer questions about shampoo was 2.670 out of 7. The standard error for high-involvement products was .167, while the standard error for low-involvement products

was .238. To test whether a statistical difference between both groups occurred an independent T-test was used with unequal variance, due to having to different groups. The T-test showed a t-value of -10.302 and a p-value of .000, which means that there is enough evidence to assume that participants perceived a significant difference in involvement for the two products.

Respondents were also randomly divided into two different types of review length, namely short versus extensive. Either they were asked to answer questions regarding one of the two products after seeing a short review, or after seeing an extensive review. Out of the 57 people, 28 people were shown an extensive negative review, while 29 people were shown a short negative review. Respondents were asked at last to value the length of the review using a 7-point Likert scale, with 1 being extremely short and 7 being extremely extensive. The average length score for people who saw an extensive review was 5.571 out of 7 and its standard error was .238. The average length score for people who saw a short review was 1.828 and its standard error was 0.192. Besides that, a T-test with unequal variance was conducted. The T-test showed a t-value of -12.224 and a p-value of 0.000. This means that there is enough evidence to conclude that participant perceived a significant difference between short and extensive reviews.

To measure the internal consistency between survey questions, Cronbach's alpha was determined for involvement, trust, and familiarity. To test involvement of respondents four questions were displayed. The scales used for involvement were reliable as Cronbach's alpha was 0.965. To test trust four questions were displayed to respondents. Also, this scale was reliable as Cronbach's alpha was 0.916. Lastly, to determine reliability of familiarity, four questions were displayed to respondents. Cronbach's alpha was 0.761 for familiarity, which means that also this scale is reliable.

As the pre-study showed significant differences in both perceived length and involvement, it can be concluded that both manipulations were perceived differently by respondents. Therefore, the pre-study showed that the real study could be continued. This is also backed-up by the fact that all scales to measure involvement, trust and familiarity were reliable as all had a Cronbach's alpha higher than 0.7.

### 3.4 Regression equations

This study examines the effect of negative reviews, moderated by product, consumer, and review characteristics on purchase intention, mediated by consumer trust. Therefore, this study uses the second type moderated mediation model (*How Can I Do Moderated Mediation in Stata? | Stata FAQ*, n.d.). This model is also used by Hayes (2013), which is model 4 in his study. The regression equations used in this study are the following:

(1) *Path A: ConsumerTrust<sub>ij</sub>*

$$\begin{aligned} &= \alpha_0 + \alpha_1 * NegativeReview_j + \alpha_2 * ProductCharacteristic_j + \alpha_3 \\ &* ConsumerCharacteristic_i + \alpha_4 * ReviewCharacteristic_j + \alpha_5 \\ &* NegativeReview_j * ProductCharacteristic_j + \alpha_6 * NegativeReview_j \\ &* ConsumerCharacteristic_i + \alpha_7 * NegativeReview_j \\ &* ReviewCharacteristic_j + \alpha_8 * Price_j + \varepsilon_{ij} \end{aligned}$$

Where consumer trust the average consumer trust of consumer *i* in product *j* is, being 1 if the consumer has extremely low trust in the product and 7 if the consumer has extremely high trust, negative review a dummy variable is being 1 if people have read a negative review about product *j* and 0 otherwise, product characteristic a dummy variable is that has a value of 1 if product *j* is a high-involvement product and 0 otherwise, consumer characteristic is a dummy variable being 1 if consumer *i* had an average familiarity score higher than 4, being 0 otherwise, price the price in euros of product *j* and  $\varepsilon$  the error term is of person *i* and  $\alpha_0$  the constant is.

(2) *Path B and C': PurchaseIntention<sub>ij</sub>*

$$\begin{aligned} &= \beta_0 + \beta_1 * ConsumerTrust_{ij} + \beta_2 * NegativeReview_j + \beta_3 \\ &* ProductCharacteristic_j + \beta_4 * ConsumerCharacteristic_i + \beta_5 \\ &* ReviewCharacteristic_j + \beta_6 * NegativeReview_j * ProductCharacteristic_j \\ &+ \beta_7 * NegativeReview_j * ConsumerCharacteristic_i + \beta_8 \\ &* NegativeReview_j * ReviewCharacteristic_j + \beta_9 * Price_j + \varepsilon_{ij} \end{aligned}$$



Where purchase intention the purchase intention of consumer  $i$  in product  $j$ , with 1 being extremely unlikely to purchase the product and 7 being extremely likely to buy the product, consumer trust the average consumer trust of consumer  $i$  in product  $j$  is, being 1 if the consumer has extremely low trust in the product and 7 if the consumer has extremely high trust, negative review a dummy variable is being 1 if people have read a negative review about product  $j$  and 0 otherwise, product characteristic a dummy variable is that has a value of 1 if product  $j$  is a high-involvement product and 0 otherwise, consumer characteristic is a dummy variable being 1 if consumer  $i$  had an average familiarity score higher than 4, being 0 otherwise, price the price in euros of product  $j$   $i$  and  $\varepsilon$  the error term is of person  $i$  and  $\beta_0$  the constant is.

### 3.5 Sample description

In this study data was collected by a survey between 28<sup>th</sup> of June and the 5<sup>th</sup> of August. Friends, colleagues, and family members were sent the survey and were asked to send the survey to other friends, colleagues' family member et cetera too. This method is called snowball sampling. Ultimately, data was collected of 330 people (including the pre-study results and incomplete answers). If respondents forgot to answer question(s), these results were excluded from the study. After deleting missing results, the study sample consisted of 241 people. The data was anonymized to avoid privacy concerns among respondents. Out of these 241 people, 71,8% was male and 28,2% was female. The average age was 36,8 years, and 237 (98,4%) respondents were living in The Netherlands at the moment of asking, of which 214 lived in 'Zuid-Holland', 90,3%. Furthermore, 2 (1,1%) respondents were living in Germany, 1 (0,5%) in Greece and 1 in France (0,5%). Furthermore, 55 people were married (22,8%) and 55 people had obtained a bachelor's degree (22,8%), 12 (5,0%) respondents had obtained a master's degree, and 1 respondent had obtained a Ph.D. (0.5%). To give a better overview of the characteristics of the respondents collected for this study please see table 2.

Table 2. Overview of characteristics per sub-group and total.

	NLS	NHS	NLE	NHE	CHE	CLS	CLE	CHS	Total
<b>Age</b>	38,9	38,6	35,9	37,1	37,7	31,5	35,4	35,2	36,8
<b>Male</b>	69,2%	60,5%	78,9%	66,7%	64,7%	63,2%	95%	90%	71,8%
<b>Married</b>	23,1%	21,1%	28,9%	33,3%	29,4%	0,5%	10%	15%	22,8%
<b>Bachelor or higher degree</b>	30,8%	31,6%	26,3%	33,3%	23,5%	21,0%	15%	40%	28,2%
<b>Netherlands</b>	94,8%	97,4%	97,4%	100%	100%	100%	100%	100%	98,3%
<b># Of respondents</b>	39	38	38	33	34	19	20	20	241

Table notes: This table gives an overview of the characteristics in percentages (excl. age) divided per group as well as the total sample. LS is the group of people who saw a low-involvement short review, HS is the group of people who saw a high-involvement short review, LS is the group of people who saw a low-involvement extensive review, HE is the group of people who saw a high-involvement extensive review, while CHE is the group who saw an extensive neutral review of a high-involvement product. CHS is the group who saw a short neutral review of a high-involvement product. CHE is the group who saw an extensive neutral review of a high-involvement product. CLE is the group who saw an extensive neutral review of a low-involvement product, while CLS is the group who saw a short neutral review of a low-involvement product.

## 4. Results

### 4.1 Cronbach's alpha and manipulation check

Respondents were randomly divided into one of the eight conditions that saw either saw a negative or neutral review about one of the two products. 93 people were shown a neutral review, while 148 people were shown a negative review. Respondents were asked one question to measure how they perceived the review. Respondents had the option to answer this question with 7 options, 1 being extremely positive and 7 being extremely negative. The average negativity score was 6.236 out of 7 for people who saw a negative review, while the average negativity score was 3.892 out of 7 for the people who had to read a neutral review. The standard error for the neutral review was 0.042, while the standard error for the people who saw a negative review 0.074 was. To test whether a statistical difference between both groups occurred a T-test was used with unequal variance. The T-test showed a value of -27.622 and a p-value of 0.000, which means that there is enough evidence to assume that participants perceived a significant difference in negativity.

Respondents were randomly divided into two types of products too. Either they were asked to answer questions regarding a high-involvement product, which was a television, or they were asked to answer questions regarding a low-involvement product, which was shampoo. 116 people were shown a review about shampoo, while 125 people were shown a review about a television. Respondents were asked four questions to measure their involvement regarding a product. The average score of these four questions were used to measure their average involvement regarding the product, with 1 having almost zero involvement for the product and 7 having extremely high involvement for the product. The average involvement score was 5.558 out of 7 for high-involvement products, while the average involvement score was 2.511 out of 7 for the people who had to answer questions about shampoo. The standard error for high-involvement products was 0.080, while the standard error for low-involvement products was 0.100. To test whether a statistical difference between both groups occurred a T-test was used with unequal variance, due to having to different groups. The T-test showed a value of -23.876

and a p-value of 0.000, which means that there is enough evidence to assume that participants perceived a significant difference in involvement for the two products.

Respondents were also randomly divided into two different types of review length, namely short and extensive. Either they were asked to answer questions regarding one of the two products after seeing a short review, or after seeing an extensive review. Out of the 241 people, 125 people were shown an extensive review, while 116 people were shown a short review. Respondents were asked at last to value the length of the review using a 7-point Likert scale, with 1 being extremely short and 7 being extremely extensive. The average length score for people who saw an extensive review was 5.144, with its standard error being 0.126. The average length score for people who saw a short review was 1.922, with its standard error being 0.088. Besides that, a T-test with unequal variance was designed as this is a between subjects' experiment. The T-test showed a t-value of -20.891 and a p-value of 0.000. This means that there is enough evidence to conclude that participant perceived a significant difference between short and extensive reviews.

To measure the internal consistency between survey questions, Cronbach's alpha was determined for involvement, trust, and familiarity. To test involvement of respondents four questions were displayed. The scales used for involvement were reliable as Cronbach's alpha was 0.940. To test trust four questions were displayed to respondents. Also, this scale was reliable as Cronbach's alpha was 0.963. Lastly, to determine reliability of familiarity, four questions were displayed to respondents. Cronbach's alpha was 0.860 for familiarity, which means that also this scale is reliable.

## 4.2 Analysis

To test hypotheses 1 to 5, a moderated mediation analysis was performed. PROCESS macro by Hayes (2022) was used to analyze the moderated mediation. Table 3 below shows the coefficients, p-values, standard errors and 95% bootstrap confidence intervals.

*Table 3. Regression results of variables on consumer trust*

<i>Variable</i>	<i>Criterion</i>	<i>Path</i>	<i>Est.</i>	<i>SE</i>	<i>P</i>	<i>LL</i>	<i>HL</i>
<i>Negative review (X)</i>	M: Consumer trust	A1	-1.466	.253	.000	-1.965	-.967
<i>Product characteristics (W1)</i>		A2	-.226	.453	.618	-1.118	.666
<i>Consumer characteristics (W2)</i>		A3	-.222	.264	.400	-.742	0.297
<i>Review characteristics (W3)</i>		A4	.096	.225	.668	-.346	.539
<i>X*W1</i>		A5	-.607	.299	.043	-1.195	-0.018
<i>X*W2</i>		A6	1.076	.341	.002	.404	1.747
<i>X*W3</i>		A7	-.619	.283	.030	-1.176	-.062
<i>Price</i>		A8	.001	.001	.348	-.001	.002
<i>Constant</i>				4.636	.204	.000	4.235
<b>R2</b>	0.473						
<i>Negative review (X)</i>	Y: Purchase intention	C'1	-.481	.212	.024	-.900	-.063
<i>Product characteristics (W1)</i>		C'2	-.033	.355	.926	-.733	.667
<i>Consumer characteristics (W2)</i>		C'3	.429	.207	.039	.021	.836
<i>Review characteristics (W3)</i>		C'4	.026	.176	.882	-.321	.373
<i>X*W1</i>		C'5	.456	.236	.055	-.009	.921
<i>X*W2</i>		C'6	-.195	.273	.475	-.732	.342
<i>X*W3</i>		C'7	.288	.224	.200	-.153	.729
<i>Price</i>		C'8	.000	.000	.311	-.001	.000
<i>M: Consumer trust</i>		B	.680	.051	.000	.579	.782
<i>Constant</i>				.367	.287	.202	-.198
<b>R2</b>	0.614						
<b>Indirect effect:</b>		A1*B	-.988	.147		-1.301	-.724
<i>X through M on Y</i>							
<i>W1 through M on Y</i>		A2*B	-.154	.268		-0.685	.378
<i>W2 through M on Y</i>		A3*B	-.151	.114		-.365	.083
<i>W3 through M on Y</i>		A4*B	.066	.090		-.110	.240
<i>X*W1 through M on Y</i>		A5*B	-.413	.174		-.747	-.065
<i>X*W2 through M on Y</i>		A6*B	.732	.241		.260	1.191

<i>X*W3 through M on Y</i>	A7*B	-.421	.171		-.772	-.098
<i>Price through M on Y</i>	A8*B	.000	.000		.000	.001
<b>Total effect:</b>	A1*B+C'1	-1.479	.263	.000	-1.996	-.962
<i>X on Y</i>						
<i>W1 on Y</i>	A2*B+C'8	-.187	.469	.691	-1.112	.738
<i>W2 on Y</i>	A3*B+C'8	.278	.273	.311	-.261	.816
<i>W3 on Y</i>	A4*B+C'8	.092	.233	.693	-.367	.551
<i>X*W1 on Y</i>	A5*B+C'8	.043	.310	.889	-.567	.653
<i>X*W2 on Y</i>	A6*B+C'8	.537	.353	.130	-.159	1.232
<i>X*W3 on Y</i>	A7*B+C'8	-.133	.293	.649	-.711	.444
<i>Price on Y</i>	A8*B+C'8	.000	.001	.879	-.001	.001
<b># Of observations</b>	241 (5000 bootstrap samples)					

*Table notes: The table give the coefficient results of the moderated mediation analysis using PROCESS macro by Hayes (2022), using 5000 bootstraps samples. In total 241 observations were used.*

The regression shows the main effect as well as the moderation effects of product, consumer, and review characteristics on consumer trust. Firstly, the main effect of a negative review on consumer trust will be discussed. Then a mediation analysis will be discussed. Lastly, the moderation effects of product, consumer and review characteristics on consumer trust and purchase intention will be discussed.

On average, a person in the sample who read a negative review had -1.466 points less average consumer trust in the product, compared to respondents that did read the neutral review. This result was significant on a 99%-confidence level as its p-value was .000, which is less than .01. The 95%-bootstrap confidence interval had a lower bound value of -1.965 and an upper bound value of -.967. The null of 0 does not fall between those values, which means that this value is statistically significant. This means that hypothesis 1 that reading a negative review decreases the trust of consumers towards the product can be supported. There is enough significance evidence to say that reading a negative review decreases consumer trust in the product.

Looking at the total effect of a negative review on purchase intention, a negative review, compared to a neutral review result in a lower purchase intention of -1.479. points. This coefficient is significant at a 95%-confidence interval as its p-value of .000 is lower than .05. The lower bound 95%-confidence interval coefficient is -1.966, while the upper bound coefficient -.962 is. Looking at this confidence interval, the null of 0, does not fall between these values, which means that based on bootstrapping this effect is indeed significant. This means that there is a significant negative relationship between negative review and purchase intention.

Looking at the effect of negative reviews on consumer trust we already concluded that there is a significant negative relationship between negative reviews and the mediator, consumer trust. Looking at the 95%-confidence interval coefficients, the null of 0 does not fall between these values which means that the effect of a negative review on consumer trust is indeed significant.

Looking at the indirect effect of a negative review on purchase intention through consumer trust it can be concluded that indeed the effect of negative review on purchase intention is mediated by consumer trust. The indirect effect has a coefficient of -.988. As the null of 0, does not fall between the bootstrap interval coefficients of -1.301 and -.724. The total effect of the main effect is -1.479, of which 66,8% is mediated  $(-.988/-1.479*100)$ . This means that there is enough statistical evidence that consumer trust partially significantly mediates the effect of a negative review on purchase intention.

Next, on average people in the sample who read a negative review of a high-involvement product rated their trust in the product lower by -.607 points, compared to respondent that read a negative review about a low-involvement product. This result was significant on a 95%-confidence level as its p-value was .043, which is less than 0.05. The lower bound 95% confidence interval was -1.195, while the upper bound confidence interval was -.018. However, looking at the total effect of the interaction effect of negative review \* product characteristics the regression coefficient of .043 is insignificant as its p-value (.889) exceeds .05. The indirect effect of the interaction between product characteristics and negative review is significant as the null

of 0 does not fall between the lower and upper bound of the bootstrap confidence intervals. Hayes (2013) already concluded that a significant total effect is not necessary for mediation. This means that based on the significant indirect effect the interaction between negative review and product characteristics on purchase intention is indeed mediated by consumer trust. This means that hypothesis 3, that reading a negative review will have a greater effect on purchase intention for high-involvement products, compared to low-involvement products, due to lower consumer trust in the product or company, can be supported. There is enough significance evidence to say that reading a negative review of a high-involvement product, compared to a low-involvement product, due to consumer trust results in lower purchase intention of -.413 point in the product. As the coefficients  $a_5 * b$  (indirect effect) and  $c'5$  (direct effect) is different significantly wise, this type is called indirect-only mediation (Memon et al., 2018). The direct effect of the interaction between negative review and product characteristic is insignificant leading to a insignificant total effect of the interaction on purchase intention.

Furthermore, consumer characteristics also have influence on consumer trust. On average a person that was familiar with the product rated their consumer trust higher compared to someone who had no experience with the product. A familiar consumer, compared to an unfamiliar consumer had on average a consumer trust score being .222 points higher. This result was statistically insignificant as its p-value of 0.400 is much higher than .05. This means that there is not enough evidence to say that consumer familiarity has an effect on consumer trust. However, looking at the effect of a negative review and consumer familiarity there is statistical evidence to say that when a person that is familiar with the product and has seen a negative review, its consumer trust increases by 1.076. This coefficient is significant at a 99%-confidence level as its p-value of .002 is less than .01. The lower bound 95%-bootstrap confidence interval level was .404, while the upper bound 95%-confidence interval level was 1.747. So, if a person in the sample is not familiar with the product and has seen a negative review, its consumer trust will be 1.076 lower compared to someone in the sample who had seen a negative review and had a was familiar with the product. Looking at the total effect of the interaction effect of negative review \* customer characteristics the regression coefficient gives a value of .537. The



p-value of .130 is higher than .05, and thus insignificant. Looking at the indirect effect we see that the indirect effect of the interaction between consumer characteristics and negative review is indeed mediated by consumer trust. The null of 0 does not fall between the bootstrap intervals, which means a significant indirect effect of the interaction through consumer trust. Therefore, hypothesis 4, which was that a negative review will have greater negative consequences on consumer trust for consumers that have zero experience with the company or brand compared to consumers who already have experience with the company or brand, due to lower consumer trust, can be supported. Also, here indirect-only mediation occurs, as the indirect effect is significant, but the direct effect is not.

Moreover, also review characteristics influenced consumer trust in products. On average a respondent in the survey that had seen an extensive negative review reported lower consumer trust of -.619 point on average. This coefficient was significant at a 95%-confidence level as its p-value of 0.030 was higher than .05. The lower bound 95%-confidence interval level was -1.176, while the upper bound 95%-confidence interval level was -.062. So, reading an extensive negative review compared to a short negative review results in lower reported consumer trust of -.619 point. Looking at the total effect of the interaction between negative review and review characteristics, the coefficient of -.133 has a p-value of .649 ( $>.05$ ), thus insignificant. The indirect effect however is significant as the null of 0 does not fall between the bootstrap intervals. Therefore, these results are enough to support hypothesis 5 that, the effect of a negative review on purchase intention will be greater for extensively written negative reviews, compared to less extensively written negative reviews, due to lower consumer trust. This is another form of indirect-only mediation.

In addition, the effect of price on consumer trust is insignificant, as its p-value of 0.348 is much higher than .05. This means that there is not enough evidence to say that price has an effect on consumer trust. On average if the price of a product would increase by 1 euro, the trust of consumers in the product would increase by .001 points. However, as this coefficient is insignificant, this value is unreliable.

Lastly, the constant of 4.236 is the value of a person if all other values have a value of zero. This means that negative review, product characteristics, consumer characteristics, review characteristics, and price would have a value of zero. The constant is significant as the p-value of .000 is less than .05. However, as the lowest price in this used in this research €3,00 is, the constant cannot be interpreted, as not all values can take a value of 0.

To conclude, hypotheses 1 and 2 can be supported based on this analysis. Hypothesis 3,4,5 can be supported too as the interaction terms all show significant indirect effects on purchase intention. Furthermore, product, consumer and review characteristics do moderate the effect of a negative review on consumer trust.

## 5. Conclusion and recommendations

### 5.1 Conclusion

The rise of internet has led to an enormous stream of information towards consumer, leading to a more transparent conversation between companies with their products and the consumer. Potential consumers can search on the internet and find in no-time information about the product and reviews of other customers. The aim of this research was to determine the effect of a negative review on consumer trust and purchase intention. Therefore, the research question was the following:

*What is the effect of negative reviews on consumer trust and purchase intention, given different context dependent factors?*

This research has given several results. Firstly, the most important results found in literature will be discussed, before discussing the results of the own study. Lastly, a conclusion will be given to answer the main research question.

The effect of reviews has been investigated in the past by many researchers. Sparks & Brown (2011) found that reading a positive review compared to a negative review result in higher trust towards a company. Furthermore, Chevalier & Mayzlin (2006) found that higher consumer trust leads to more sales. Therefore, reading a negative review will decrease consumer trust and thus purchase intention. Besides that, product characteristics tend to moderate the effect of a negative review on consumer trust. Prior research showed that there are two types of products, namely high-involved products, and low-involved products. High-involvement products require the potential customer to be aware of price, quality, innovation and all the alternatives (Nayeem & Casidy, 2013), while low-involvement products require less extensive research done by the potential customer and are in general bought frequently by consumers, as these products are not of vital concern according to the customer (Ndubisi & Moi, 2006). Therefore, reading a negative review of a low-involvement product would decrease consumer trust by less as these

products are not of vital concern. Additionally, previous research also indicated the influence of experience as a moderator of negative reviews on consumer trust. According to Chatterjee (2001) a negative review could have greater negative consequences for customers that do not have any experience with the company or brand, compared to the ones that are familiar with the brand and company. Therefore, the effect of a negative review would have more effect on trust for consumers without any experience. Lastly, also the review characteristics influences the effect of a negative review on trust. According to Mudambi & Schuff (2010), the longer a review is the more helpful a review would be for consumers. Therefore, an extensive negative review would warn consumers more, leading to lower consumer trust.

All these findings have led to the following path worth figure for this research. Figure 2 gives a summary of the results of this study.

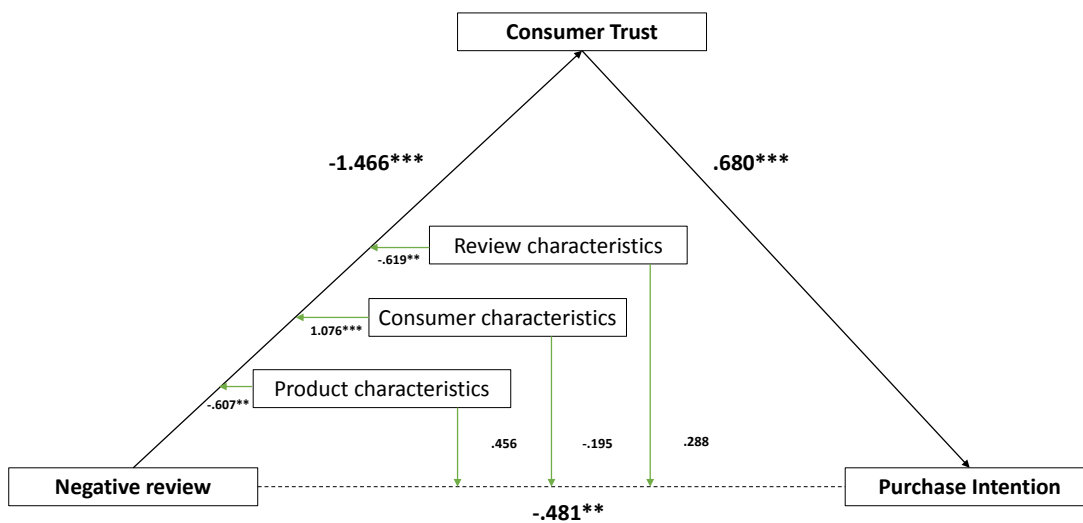


Figure 2. Overview of the results. Notes: The figure gives the coefficient results of the moderated mediation analysis using PROCESS macro by Hayes (2022), using 5000 bootstraps samples. In total 241 observations were used.  $P < 0.01$ \*\*\*;  $p < 0.05$ \*\*;  $p < 0.1$ \*

Based on these results the first hypothesis that reading a negative review will decrease the trust of consumers towards the product, can be supported. The regression showed that reading a negative review, compared to reading a neutral review leads to a decrease of reported consumer trust of -1.466. This result was statistically significant at a 99%-confidence level as its p-value of .000 is less than .01. These findings support the results of Sparks & Brown (2011). So, having read a negative review decreases consumer trust indeed.

Hypothesis 2, the effect of a negative review on purchase intention is mediated by consumer trust, could also be supported based on the regression results. The regression showed first a significant negative total effect of a negative review on purchase intention ( $p=.000$ ). Next, the analysis showed a significant effect of a negative review on consumer trust ( $p=.000$ ), as the coefficient is -1.466. In addition, the effect of a negative review on purchase intention looking at path C'1, is still significant although in smaller magnitude. Therefore, partial mediation exists. Lastly, looking at the indirect effect of X on Y through M, the coefficient of -.988 is significant as the null of 0, does not fall between the bootstrap interval levels (LB=-1.301, UB=-.724). Looking at the interaction effects, it can be concluded that these are also mediated by consumer trust. Based on the fact that the null of 0, does not fall between each bootstrap confidence interval, it can be said that moderated mediation exists. Therefore, there is enough statistical evidence to say that the effect of negative review on purchase intention is significantly partially mediated. These results support prior by Saleem & Ellahi (2017) and Cheung & Lee (2008). Negative reviews indeed reduce purchase intention, albeit partially through consumer trust. Maxham III (2001) is also supported as consumer trust and purchase intention are positively correlated.

Hypothesis 3, which is a negative review will have a greater effect on consumer trust for high-involvement products, compared to low-involvement products, due to lower consumer trust could be supported. The regression showed that on average in the sample reading a negative review about a high-involvement product, compared to a low-involvement product resulted in lower reported consumer trust of -.607 point. This coefficient was significant at a 95%-confidence level as its p-value of .043 < .01. However, looking at the total effect, the regression coefficient

of .043 was insignificant as the p-value was higher than .05. So, a negative review does indeed have a greater effect on consumer trust for high-involvement products, compared to low-involvement products, however it does not influence purchase intention directly. Indirect-only mediation occurs for the interaction between negative review and product characteristics, as only the indirect effect is significant. This supports prior research as consumers indeed perceive negative reviews of two types of products differently. Floyd et al. (2014) already showed that consumers have higher risk towards high-involvement products. This higher risk ultimately leads to lower trust in the product if consumer have read a negative review, and thus purchase intention.

Furthermore, hypothesis 4, a negative review will have greater negative consequences on purchase intention for consumers that have zero experience with the company or brand compared to consumers who already have experience with the company or brand, due to lower consumer trust, could be supported too based on these findings. On average respondents that had read a negative review in the sample reported higher consumer trust levels if they were familiar with the product. If a person that was deemed familiar, their reported consumer trust would increase by 1.076 more if they had read a negative review, compared to a person that was not familiar. These results were significant at a 99%-confidence level, which means that a negative review has less impact on consumers with high familiarity with the product. The total effect of the interaction term between negative review and consumer characteristics on purchase intention was insignificant. The indirect effect of the interaction between negative review and consumer characteristics was significant as the null of zero did not fall between the bootstrap confidence intervals (LB=.260; UB=1.191). The results show that the effect of a negative review on consumer trust can be partially mitigated if the consumer already have experience with the product. Therefore, this study supports the findings of Chatterjee (2001). In addition, these finding show a positive indirect-only mediation of the interaction between negative review and consumer characteristics through consumer trust on purchase intention.

Lastly, hypothesis 5, the effect of a negative review on purchase intention will be greater for extensively written negative reviews, compared to less extensively written negative reviews, due to lower consumer trust could be supported. Based on the results reading an extensive negative review resulted in -.619 reported consumer trust. This result was significant at a 95%-confidence level, meaning that the more extensive written a negative review is, the more detrimental impact it has on consumer trust. The total effect on of the interaction term between negative review and review characteristics showed insignificant values. This is due to an insignificant direct effect of the interaction between review characteristics and negative review on purchase intention. The indirect effect of the interaction between review characteristics and negative on purchase intention through consumer trust is significant as the null of 0 does not fall between the bootstrap confidence intervals (LB=-.772T; UB=-.098). The view of Mudambi & Schuff (2010) that the length of the review has a positive effect on helpfulness of a review can indeed be supported. The length of a review helps other customers to learn more about the product. Longer and more detailed negative review leads to lower consumer trust and thereby purchase intention.

## 5.2 Managerial implications

The results show that the effect of a single negative review can already be detrimental to consumer trust. This means that companies should avoid extreme negative reviews, as lower consumer trust leads to lower purchase intention. The effect of a negative review is much greater for consumers that do not have any experience with the product, meaning that new companies, or newer products, should try to avoid negative reviews. Companies could try to reach out to customers with a bad experience and offer them some customer service to solve the problems they have experienced. Furthermore, the length of a negative review also has an effect on consumer trust. This means that consumers are more warned by a more extensively written review. This means that if customers intend to warn other customer not to buy this specific product, they better write a more extensively. Lastly, consumers are more careful about high-involvement products, than low-involvement products, which indicates that manufacturers of high-involvement products have to be more careful avoiding negative reviews than low-

involvement product manufactures. Overall, reading a single negative review is already detrimental for consumer trust and purchase intention. On the other hand, however, the total effect of product, consumer and review characteristics on purchase intention is not significantly, which means that there are also other factors influencing purchase intention.

### 5.3 Recommendations and further research

Further research could scope in towards the high-involvement, low-involvement discussing. As this research only used one product per category, further research could investigate multiple different high-involvement and low-involvement products. Moreover, further research could investigate the effect of 2-star reviews on purchase intention and consumer trust. Furthermore, this research primarily used Dutch data, however there might be a cultural difference leading to different perceptions. Therefore, this research could also be done performed in a foreign country. Moreover, a different setting could also be thought of. This research focused on the effect of a single negative review on purchase intention, however further research could also investigate the effect of a single negative review and two positive reviews on consumer trust and purchase intention. Lastly, further research could scope in on the effect of consumer trust on purchase intention. This study showed a significant partial mediation of consumer trust; however, further research could scope in on the effect of a negative review on consumer trust, based on the moderators using a different model with interaction effect only present on path a.

### 5.4 Limitations

This research also has some limitations. Firstly, the sample is not a clearly representative of the Dutch population. The average age of the sample is lower than the average age of the population for example. Primarily, the group above 65 years old is underrepresented. In addition, the internal validity is not fully secured due to possible omitted variable bias. Some variables influence the effect on consumer trust and purchase intention; however, these are not included in this research. Therefore, results could be either overly positively biased or negatively biased. Moreover, this research used modified negative Amazon reviews, instead of real negative



reviews. Therefore, the external validity is not fully secured too. Furthermore, due to insignificant values of the second regression, these coefficients might be misleading. Lastly, the eight treatment groups do not consist of the same number of people. Therefore, p-values and standard errors are higher for some variables than they would've been in case that each group consists of the same number of people.

## 5.5 Reflection

During this research I learned several things. Firstly, I learned to develop a research question, and based on this research question to find interesting literature. Furthermore, I learned to formulate hypotheses based on this literature. Furthermore, I learned to create a survey, using a between subject-design, and how to use embedded data in Qualtrics. In addition, I learned how to code data from Qualtrics in Stata, using a codebook and a do-file. Furthermore, I learned how to work and cooperate together with a professor to finalize this thesis. Lastly, I learned how to use SPSS'PROCESS macro for a moderated mediation analysis, using bootstrap sampling, as I haven't worked with that during my bachelor and master.

## 6. Bibliography

1. Chatterjee, P. (2001). Online reviews: do consumers use them?
2. Cheung, C. M., & Lee, M. K. (2008). Online consumer reviews: does negative electronic word-of-mouth hurt more?. *AMCIS 2008 Proceedings*, 143.
3. Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of marketing research*, 43(3), 345-354.
4. Chiu, C. M., Wang, E. T., Fang, Y. H., & Huang, H. Y. (2014). Understanding customers' repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal*, 24(1), 85-114.
5. Cui, G., Lui, H. K., & Guo, X. (2012). The effect of online consumer reviews on new product sales. *International Journal of Electronic Commerce*, 17(1), 39-58.
6. Devedi, P., Sujatha, R., & Pathak, R. (2017). A study on parameters of online reviews content that influence consumers buying behaviour-an Indian perspective. *Journal of Business and Retail Management Research*, 11(4).
7. Doh, S. J., & Hwang, J. S. (2009). How consumers evaluate eWOM (electronic word-of-mouth) messages. *Cyberpsychology & behavior*, 12(2), 193-197.
8. Elseidi, R. I., & El-Baz, D. (2016). Electronic word of mouth effects on consumers' brand attitudes, brand image and purchase intention: an empirical study in Egypt. *The Business & Management Review*, 7(5), 268.
9. Floyd, K., Freling, R., Alhoqail, S., Cho, H. Y., & Freling, T. (2014). How online product reviews affect retail sales: A meta-analysis. *Journal of Retailing*, 90(2), 217-232.
10. Gaziano, C., & McGrath, K. (1986). Measuring the concept of credibility. *Journalism quarterly*, 63(3), 451-462.
11. Hameed, S. S., Madhavan, S., & Arumugam, T. (2020). Is consumer behaviour varying towards low and high involvement products even sports celebrity endorsed. *International Journal of Scientific and Technology Research*, 9(3), 4848-4852.
12. Hayes, A.F. (2013) *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, NY: Guilford Press

13. Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd edition). New York: The Guilford Press.
14. Ho-Dac, N. N., Carson, S. J., & Moore, W. L. (2013). The effects of positive and negative online customer reviews: do brand strength and category maturity matter?. *Journal of marketing*, 77(6), 37-53.
15. Jang, S., Prasad, A., & Ratchford, B. T. (2012). How consumers use product reviews in the purchase decision process. *Marketing letters*, 23(3), 825-838.
16. Jiménez, F. R., & Mendoza, N. A. (2013). Too popular to ignore: The influence of online reviews on purchase intentions of search and experience products. *Journal of Interactive Marketing*, 27(3), 226-235.
17. Kelting, Katie, Adam Duhachek, and Kimberly Whitler (2017), "Can Copycat Private Labels Improve the Consumer's Shopping Experience? A Fluency Explanation," *Journal of the Academy of Marketing Science* , 45 (4), 569-585.
18. Lee, J., Park, D. H., & Han, I. (2008). The effect of negative online consumer reviews on product attitude: An information processing view. *Electronic commerce research and applications*, 7(3), 341-352.
19. Li, X., & Hitt, L. M. (2010). Price effects in online product reviews: An analytical model and empirical analysis. *MIS quarterly*, 809-831.
20. Ling, K. C., Chai, L. T., & Piew, T. H. (2010). The effects of shopping orientations, online trust and prior online purchase experience toward customers' online purchase intention. *International business research*, 3(3), 63.
21. Lotfizadeh, F., & Lotfizadeh, F. (2015). Comparing High-involvement and Low-involvement Products: Brand Perspective. *International Journal of Management, Accounting and Economics*, 2(5), 404-413.
22. Lu, J., Liu, Z., & Fang, Z. (2016). Hedonic products for you, utilitarian products for me. *Judgment & Decision Making*, 11(4).
23. Martin, C.L. (1998), "Relationship marketing: a high-involvement product attribute approach", *Journal of Product & Brand Management*, Vol. 7 No. 1, pp. 6-26. <https://doi.org/10.1108/10610429810209700>

24. Maxham III, J. G. (2001). Service recovery's influence on consumer satisfaction, positive word-of-mouth, and purchase intentions. *Journal of business research*, 54(1), 11-24.
25. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of management review*, 20(3), 709-734.
26. McCall, M., & Lynn, A. (2008). The effects of restaurant menu item descriptions on perceptions of quality, price, and purchase intention. *Journal of foodservice business research*, 11(4), 439-445.
27. Memon, M. A., Jun, H. C., Ting, H., & Francis, C. W. (2018). Mediation analysis issues and recommendations. *Journal of Applied Structural Equation Modeling*, 2(1), i-ix.
28. Montano, D. E., & Kasprzyk, D. (2015). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. *Health behavior: Theory, research and practice*, 70(4), 231.
29. Morgan, Robert M. and Shelby D. Hunt (1994), "The Commitment -Trust Theory of Relationship Marketing," *Journal of Marketing* , 58 (July), 20-38.
30. Mudambi, S. M., & Schuff, D. (2010). Research note: What makes a helpful online review? A study of customer reviews on Amazon. com. *MIS quarterly*, 185-200.
31. Nayeem, T., & Casidy, R. (2013). The role of external influences in high involvement purchase behaviour. *Marketing Intelligence & Planning*.
32. Saleem, A., & Ellahi, A. (2017). Influence of electronic word of mouth on purchase intention of fashion products in social networking websites. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 11(2), 597-622.
33. Samadi, M., & Yaghoob-Nejadi, A. (2009). A survey of the effect of consumers' perceived risk on purchase intention in e-shopping. *Business Intelligence Journal*, 2(2), 261-275
34. Savolainen, R. (1999). The role of the Internet in information seeking. Putting the networked services in context. *Information processing & management*, 35(6), 765-782.
35. Schoenmueller, V., Netzer, O., & Stahl, F. (2020). The polarity of online reviews: Prevalence, drivers and implications. *Journal of Marketing Research*, 57(5), 853-877.
36. Sen, S., & Lerman, D. (2007). Why are you telling me this? An examination into negative consumer reviews on the web. *Journal of interactive marketing*, 21(4), 76-94.

37. Shah, S. S. H., Aziz, J., Jaffari, A. R., Waris, S., Ejaz, W., Fatima, M., & Sherazi, S. K. (2012). The impact of brands on consumer purchase intentions. *Asian Journal of Business Management*, 4(2), 105-110.
38. Sirdeshmukh, Deepak, Jagdip Singh, and Barry Sabol (2002 ), “ Consumer Trust, Value, and Loyalty in Relational Exchanges ,” *Journal of Marketing* , 66 (January), 15-37.
39. Slama, Mark, E., and Armen Tashchian. (1985). “Selected Socio-economic and Demographic Characteristics Associated With Purchasing Involvement.” *Journal of Marketing*, 49, 72–82.
40. Sparks, B. A., & Browning, V. (2011). The impact of online reviews on hotel booking intentions and perception of trust. *Tourism management*, 32(6), 1310-1323.
41. *How can I do moderated mediation in Stata? | Stata FAQ.* (n.d.). Stats.Oarc.Ucla.Edu. Retrieved 17 July 2022, from <https://stats.oarc.ucla.edu/stata/faq/how-can-i-do-moderated-mediation-in-stata/>
42. Utz, S., Kerkhof, P., & Van Den Bos, J. (2012). Consumers rule: How consumer reviews influence perceived trustworthiness of online stores. *Electronic Commerce Research and Applications*, 11(1), 49-58.
43. Wetzer, I. M., Zeelenberg, M., & Pieters, R. (2007). “Never eat in that restaurant, I did!”: Exploring why people engage in negative word-of-mouth communication. *Psychology & Marketing*, 24(8), 661-680.
44. White, Katherine, Lily Lin, Darren W. Dahl, and Robin J. B. Ritchie (2016), "When Do Consumers Avoid Imperfections? Superficial Packaging Damage as a Contamination Cue," *Journal of Marketing Research*, 53 (1), 110-123.
45. Wong, C. Y., Polonsky, M. J., & Garma, R. (2008). The impact of consumer ethnocentrism and country of origin sub-components for high involvement products on young Chinese consumers’ product assessments. *Asia Pacific journal of marketing and logistics*.
46. Xue, F., & Zhou, P. (2010). The effects of product involvement and prior experience on Chinese consumers’ responses to online word of mouth. *Journal of International Consumer Marketing*, 23(1), 45-58.
47. Zboja, James J. (2018), personal correspondence.

48. Zboja, James J., Ronald A. Clark, and Diana L. Haytko (2016), " An Offer You Can't Refuse: Consumer Perceptions of Sales Pressure," *Journal of the Academy of Marketing Science* , 44 (6),
49. Zhu, D. H., & Chang, Y. P. (2015). Effects of interactions and product information on initial purchase intention in product placement in social games: the moderating role of product familiarity. *Journal of Electronic Commerce Research*, 16(1), 22.

## Appendix A. Survey

### Survey flow

<b>EmbeddedData</b> Price Low = $\${rand://int/3:14}$ Price = $\${rand://int/399:999}$
<b>Standard: Block 5 (1 Question)</b>
<b>BlockRandomizer: 1 - Evenly Present Elements</b>
Standard: Long/high (14 Questions) Standard: Short negative review/high-involvement (14 Questions) Standard: Short/low (14 Questions) Standard: short/low/neutral (14 Questions) Standard: Long-Low (14 Questions) Standard: long/neutral/low (14 Questions) Standard: Neutral review/extensive/hihg (14 Questions) Standard: Neutral review/short/high (14 Questions)
<b>Block: Demographic questions (6 Questions)</b>

### Introduction.

**Thank you very much for participating in this research. The answers given by you are completely anonymous and will be solely used for academical purposes. My name is Tycho Kettenis and I'm currently doing the Masters program in Marketing at the Erasmus University in Rotterdam. For my thesis I'm especially interested into the topic of online reviews. Filling in this survey will help me very much for my thesis. Thank you once again for participating and don't forget there are no right or wrong answers. If you have any questions you can reach out to me by email, my email address is tychoket@gmail.com.**

Neutral, high-involvement, extensive review

You will be shown a review about a television. Please read the review carefully and answer the following questions about the product.

## **Samsung RU7179 55 Inch UHD Television € 842**



I bought the TV at an Amazon sale for 849 euros and I'm referring to this price in my rating. What does the UE55RU7179 offer for the money? Good workmanship, a good/clear image with beautiful/bright colors, super black levels and good contrast. The sound can also be heard, and buying a soundbar is not a must with this model. This model also has very low latency and a game mode, so gaming is really fun. I myself run a PS4 Pro and an Xbox One X on the TV and both run to my complete satisfaction. 4K at 60Hz incl. HDR, great! The smart apps such as Prime Video, YouTube etc. start and run quite quickly and so far I have not been able to identify any software problems on the TV. It's a pity that it doesn't have 4 HDMI inputs. So I had to connect my soundbar via an optical digital cable. I would have preferred ARC here, but I knew before I bought it that it only has 3 HDMI. The maximum brightness could also be a bit higher, but the good price has to come about somehow. But I find it pathetic that WiFi AC was dispensed with in 2019. The remote control also reflects the purchase price. The bottom keys are downright tiny and overall the keys are very close together. But the worst thing I find is the alleged Alexa compatibility. With the Samsung Smart Things Skill, the TV can only be switched on and off. That's kind of embarrassing for a Smart TV in 2022. Nevertheless, I give the TV and Amazon a neutral 3-stars, because it was delivered within a few days, it's really very good for the price paid and it has most of the things you need. If you want 4 HDMI, WiFi AC, more brightness and a more reasonable remote control, or full Alexa support, you'll have to spend a lot more and look elsewhere.



Neutral, high-involvement, short review

You will be shown a review about a television. Please read the review carefully and answer the following questions about the product.

## Samsung RU7179 55 Inch UHD Television € 854



Hendrick K.

★★★★☆ *Okayish*

Sound is fine, resolution could be better. If i would have to give this television a grade it would be a 6.

Neutral, low-involvement, short review

## **L 'Oréal Paris Elvive Low shampoo without foam and without sulfates - 400ml Color Vive €14**



**Caroline F.**



**It does the job!**

**I have used this shampoo for a week and it does the job. My hair isn't greasy anymore, however I have to use it daily which isn't nice.**

Neutral, low-involvement, extensive review

## **L'Oréal Paris Elvive Low shampoo without foam and without sulfates - 400ml Color Vive €10**



Francesca L.



**Solid purchase**

This is the first review I wrote I bought this shampoo because I have curly hair and I finally decided to take care of it properly: I started on the wrong foot, I have tried so many different shampoo, but I was never satisfied! After using this shampoo, my hair is finally not that greasy anymore! It shines nice in the sun, it isn't dry and gives my hair great volume. However, I bought this shampoo during a discount as I found the price of the shampoo somewhat expensive. Besides that this shampoo has to be used frequently, which isn't the best for my hair. I tried to use this shampoo once in three days, however I found out that my hair becomes too greasy not using it. Therefore, I recommend using this shampoo daily. Lastly, this shampoo doesn't smell the best. It does not have a fresh smell, more a general smell. To conclude, I would give this product a 6. It avoids greasy hair, albeit you have to use it daily. It is somewhat expensive if this product isn't in discount, and it doesn't have the freshest smell. So, it does the job, but nothing more!

Negative, low-involvement, short review

You will be shown a review about shampoo. Please read the review carefully and answer the following questions about the product.

## **L 'Oréal Paris Elvive Low shampoo without foam and without sulfates - 400ml Color Vive €7**



★☆☆☆☆ That's not good either

I have thin, wavy hair. With this product I hoped not to have to use anything else but without conditioner or mask my hair remain frizzy and pure electric. What a disappointment!

Negative, high-involvement, short review

You will be shown a review about a television. Please read the review carefully and answer the following questions about the product.

### **Samsung RU7179 55 Inch UHD Television € 842**



H.E.

★☆☆☆☆ *Very Poor*

***Speakers are absolute trash, sound is unacceptable. Much worse than my 3 years (!!)* old Hisense TV. Resolution is also worse. No Samsung anymore.**

Negative, high-involvement, extensive review

You will be shown a review about a television. Please read the review carefully and answer the following questions about the product.

## **Samsung RU7179 55 Inch UHD Television € 842**



**Christoph D.**

★☆☆☆☆ ***Sneaking advertisement is a no-go!***

Even before buying, I was aware that I was buying an "entry-level model", which is why I kept my expectations low. Nevertheless, I expected a little more. Especially the sound quality disappointed me and no possibilities to save the TV setting externally e.g. on the USB stick.

Actually, the device would have deserved more than one star, but because Samsung sneaks in advertising with the device and offers no option to turn that off, I can only award a maximum of one star for that. But I'd prefer to give 0 stars. Samsung Support writes: "I can fully understand your displeasure. However, we have no influence on the facts. However, I would be happy to forward your proposal to the development department in Korea."

By disabling the advertising, I only helped myself so that I switched off the automatic launch of SmartHub and Apps and additionally blocked the TV Plus app with PIN. This app is visible in the bar, but it does not start and therefore does not show ads.

Negative, low-involvement, extensive review

You will be shown a review about shampoo. Please read the review carefully and answer the following questions about the product.

## **L 'Oréal Paris Elvive Low shampoo without foam and without sulfates - 400ml Color Vive €7**



**Maria Rivola**

★☆☆☆☆ **Bad Buying**

This is the first negative review I leave. I bought this low shampoo because I have curly hair and I finally decided to take care of it properly: I started on the wrong foot, buying this product first! After using it, the hair was dirtier than before! The first time I pretended nothing and washed them after a few days; the second time, after drying them, I told myself that I couldn't walk around with such ugly, greasy, heavy and sticky hair, and I re-washed them with a regular shampoo. I am really disappointed, especially because the product was reviewed and publicized very well. I won't ever buy this product again! It's awful. I also advised anyone I know not to buy this product! I even had contact with the company about this product. They told me that I was an outlier and that it was just my problem. Unbelievable! I'll never buy anything from L'Oreal again. Absolutely shameful company! My hair looked really abysmal after using this product. I just want to warn you, don't ever buy this product!

Negative review perception, all products

**Please answer the following question**

	Extremely negative	Very negative	Negative	Neutral	Positive	Very positive	Extremely positive
According to me, the writer of this review is ... about this product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	7	6	5	4	3	2	1

Involvement check, high-involvement product

**Please answer the following question**

	I would not care at all as to which one to buy	I would not care a lot	I would not care	I would be neutral	I would care	I would care very much	I would care a great deal as to which one to buy
In selecting from many types and brands of this television available in the market, would you say that:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	They are alike	Very alike	More or less alike	Neutral	More or less unlike	Very unlike	They are all different
Do you think that the various types and brands of televisions available in the market are all very alike or are all very different?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	Not at all important	Very unimportant	Unimportant	Neutral	Important	Very important	Extremely important
How important would it be to you to make a right choice of this television?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	Not at all concerned	Not very concerned	Not concerned	Neutral	Concerned	Very concerned	Very much concerned
In making your selection of this television, how concerned would you be about the outcome of your choice?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7



Involvement check, low-involvement product

**Please answer the following question**

	I would not care at all as to which one to buy	I would not care a lot	I would not care	I would be neutral	I would care	I would care very much	I would care a great deal as to which one to buy
In selecting from many types and brands of shampoo available in the market, would you say that:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	They are alike	Very alike	More or less alike	Neutral	More or less unlike	Very unlike	They are all different
Do you think that the various types and brands of shampoo available in the market are all very alike or are all very different?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	Not at all important	Very unimportant	Unimportant	Neutral	Important	Very important	Extremely important
How important would it be to you to make a right choice of this shampoo?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	Not at all concerned	Not very concerned	Not concerned	Neutral	Concerned	Very concerned	Very much concerned
In making your selection of this shampoo, how concerned would you be about the outcome of your choice?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

Review length check, all products

**Please evaluate the following statement**

	Extremely short	Very short	Short	Medium	Extensive	Very Extensive	Extremely extensive
The length of this review is ... according to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

Consumer characteristics, high-involvement product

**Please answer the following question**

	Not at all familiar	Not too familiar	Not familiar	Neutral	Familiar	Very familiar	Extremely familiar
How familiar are you with this television?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	Not at all clear	Not very clear	Not clear	Neutral	Clear	Very Clear	Extremely clear
How clear of an idea do you have about which characteristics of a television are important in providing you with maximum satisfaction?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	Almost nothing	Very little	Little	Neutral	Much	Very much	Almost everything
How much do you know about televisions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	One of the least knowledgeable	A lot less knowledgeable	Less knowledgeable	Neutral	More knowledgeable	Much more knowledgeable	One of the most knowledgeable
How would you rate your knowledge about televisions relative to the rest of the population?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

Consumer characteristics, low-involvement product

**Please answer the following question**

	Not at all familiar	Not too familiar	Not familiar	Neutral	Familiar	Very familiar	Extremely familiar
How familiar are you with this shampoo?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	Not at all clear	Not very clear	Not clear	Neutral	Clear	Very Clear	Extremely clear
How clear of an idea do you have about which characteristics of shampoo are important in providing you with maximum satisfaction?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	Almost nothing	Very little	Little	Neutral	Much	Very much	Almost everything
How much do you know about shampoo?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

**Please answer the following question**

	One of the least knowledgeable	A lot less knowledgeable	Less knowledgeable	Neutral	More knowledgeable	Much more knowledgeable	One of the most knowledgeable
How would you rate your knowledge about shampoo relative to the rest of the population?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

Consumer trust, high-involvement product

**After seeing this review, the company of the television...**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Can be trusted all the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is reliable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has high integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is competent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

Consumer trust, low-involvement product

**After seeing this review, the company of this shampoo...**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Can be trusted all the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is reliable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has high integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is competent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7

Purchase intention, high involvement product

**How likely would you be to buy this shampoo?**

- Extremely unlikely 1
- Moderately unlikely 2
- Slightly unlikely 3
- Neither likely nor unlikely 4
- Slightly likely 5
- Moderately likely 6
- Extremely likely 7

Purchase intention, low-involvement product

**How likely would you be to buy this television?**

- Extremely unlikely 1
- Moderately unlikely 2
- Slightly unlikely 3
- Neither likely nor unlikely 4
- Slightly likely 5
- Moderately likely 6
- Extremely likely 7

## Demographic questions, all products

### What is your gender?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

### In which country are you currently living?

- The Netherlands
- Germany
- Belgium
- Other, namely

### In which county are you living?

- Zuid-Holland
- Noord-Holland
- Utrecht
- Overijssel
- Limburg
- Groningen
- Friesland
- Drenthe
- Noord-Brabant
- Zeeland
- Gelderland
- Flevoland

\* Only shown if respondents answered previous question with The Netherlands

### What is your age?

**What is your highest degree or level of education you have completed?**

- Elementary school
- High School
- MBO (Dutch)
- HBO (Dutch)
- Bachelor's degree
- Master's degree
- Ph.D. or higher
- Prefer not to say
- Other, namely

**Are you married?**

- Yes
- No
- Prefer not to say

Survey link: [https://erasmusuniversity.eu.qualtrics.com/jfe/form/SV\\_cTRt6gnW6rIA3GK](https://erasmusuniversity.eu.qualtrics.com/jfe/form/SV_cTRt6gnW6rIA3GK)

## Appendix B. Stata coding.

### \*Clear all

```
clear all
import excel "/Users/tycho/Downloads/Thesis survey Negative reviews_August 5,
2022_02.18.xlsx", sheet("Sheet0") firstrow
```

### \*Delete missing answers

```
drop in 1
destring Progress Durationinseconds PriceLow Price Q63, replace
drop if Progress<100
drop if Durationinseconds<60
```

### \*encode negativity

```
encode Q97_1, gen(N_Q97_1)
encode Q98_1, gen(N_Q98_1)
encode Q99_1, gen(N_Q99_1)
encode Q100_1, gen(N_Q100_1)
encode Q101_1, gen(N_Q101_1)
encode Q104_1, gen(N_Q104_1)
encode Q140_1, gen(N_Q140_1)
encode Q125_1, gen(N_Q125_1)
```

```
drop Q97_1
drop Q98_1
drop Q99_1
drop Q100_1
drop Q101_1
drop Q104_1
drop Q140_1
drop Q125_1
```

### \*Gen perceived\_Negativity

```
gen negativity_Q1=0
```

```
label list N_Q97_1
replace negativity_Q1=7 if N_Q97_1==1
replace negativity_Q1=5 if N_Q97_1==2
replace negativity_Q1=6 if N_Q97_1==3
```

```
label list N_Q98_1
replace negativity_Q1=7 if N_Q98_1==1
replace negativity_Q1=6 if N_Q98_1==2
```

```
label list N_Q99_1
replace negativity_Q1=7 if N_Q99_1==1
```

```
replace negativity_Q1=5 if N_Q99_1==2
replace negativity_Q1=6 if N_Q99_1==4
replace negativity_Q1=3 if N_Q99_1==3
```

```
label list N_Q100_1
replace negativity_Q1=7 if N_Q100_1==1
replace negativity_Q1=5 if N_Q100_1==2
replace negativity_Q1=4 if N_Q100_1==3
replace negativity_Q1=6 if N_Q100_1==4
replace negativity_Q1=1 if N_Q100_1==5
```

```
label list N_Q101_1
replace negativity_Q1=5 if N_Q101_1==1
replace negativity_Q1=4 if N_Q101_1==2
replace negativity_Q1=3 if N_Q101_1==3
replace negativity_Q1=2 if N_Q101_1==4
```

```
label list N_Q104_1
replace negativity_Q1=4 if N_Q104_1==1
replace negativity_Q1=3 if N_Q104_1==2
```

```
label list N_Q140_1
replace negativity_Q1=4 if N_Q140_1==1
```

```
label list N_Q125_1
replace negativity_Q1=4 if N_Q125_1==1
replace negativity_Q1=3 if N_Q125_1==2
```

#### \*Gen negativity dummy

```
gen negativity = 1 if N_Q97_1!=. | N_Q98_1!=. | N_Q99_1!=. | N_Q100_1!=.
replace negativity = 0 if N_Q101_1!=. | N_Q104_1!=. | N_Q125_1!=. | N_Q140_1!=.
```

#### \*drop respondents pre-study

```
drop if N_Q97_1==. & N_Q98_1==. & N_Q99_1==. & N_Q100_1==. & N_Q101_1==. &
N_Q104_1==. & N_Q125_1==. & N_Q140_1==.
```

```
drop N_Q97_1 N_Q98_1 N_Q99_1 N_Q100_1 N_Q101_1 N_Q104_1 N_Q125_1 N_Q140_1
```

#### \*Encode involvement Q1

```
encode Q23_1, gen(N_Q23_1)
encode Q33_1, gen(N_Q33_1)
encode Q43_1, gen(N_Q43_1)
encode Q53_1, gen(N_Q53_1)
encode Q86_1, gen(N_Q86_1)
encode Q105_1, gen(N_Q105_1)
encode Q141_1, gen(N_Q141_1)
```



```
encode Q126_1, gen(N_Q126_1)
```

```
drop Q23_1  
drop Q33_1  
drop Q43_1  
drop Q53_1  
drop Q86_1  
drop Q126_1  
drop Q141_1  
drop Q105_1
```

```
*Gen Involvement_Q1  
gen Involvement_Q1=0
```

```
label list N_Q23_1  
replace Involvement_Q1=4 if N_Q23_1==1  
replace Involvement_Q1=5 if N_Q23_1==2  
replace Involvement_Q1=7 if N_Q23_1==3  
replace Involvement_Q1=6 if N_Q23_1==4  
replace Involvement_Q1=2 if N_Q23_1==5
```

```
label list N_Q33_1  
replace Involvement_Q1=4 if N_Q33_1==1  
replace Involvement_Q1=5 if N_Q33_1==2  
replace Involvement_Q1=7 if N_Q33_1==3  
replace Involvement_Q1=6 if N_Q33_1==4
```

```
label list N_Q43_1  
replace Involvement_Q1=4 if N_Q43_1==1  
replace Involvement_Q1=5 if N_Q43_1==2  
replace Involvement_Q1=7 if N_Q43_1==3  
replace Involvement_Q1=6 if N_Q43_1==4  
replace Involvement_Q1=3 if N_Q43_1==5  
replace Involvement_Q1=2 if N_Q43_1==6  
replace Involvement_Q1=1 if N_Q43_1==7
```

```
label list N_Q53_1  
replace Involvement_Q1=4 if N_Q53_1==1  
replace Involvement_Q1=5 if N_Q53_1==2  
replace Involvement_Q1=6 if N_Q53_1==3  
replace Involvement_Q1=3 if N_Q53_1==4  
replace Involvement_Q1=2 if N_Q53_1==5  
replace Involvement_Q1=1 if N_Q53_1==6
```

```
label list N_Q86_1  
replace Involvement_Q1=4 if N_Q86_1==1
```

```
replace Involvement_Q1=5 if N_Q86_1==2
replace Involvement_Q1=7 if N_Q86_1==3
replace Involvement_Q1=6 if N_Q86_1==4
replace Involvement_Q1=1 if N_Q86_1==5
```

```
label list N_Q105_1
replace Involvement_Q1=4 if N_Q105_1==1
replace Involvement_Q1=5 if N_Q105_1==2
replace Involvement_Q1=7 if N_Q105_1==3
replace Involvement_Q1=6 if N_Q105_1==4
```

```
label list N_Q126_1
replace Involvement_Q1=3 if N_Q126_1==1
replace Involvement_Q1=2 if N_Q126_1==2
replace Involvement_Q1=1 if N_Q126_1==3
```

```
label list N_Q141_1
replace Involvement_Q1=3 if N_Q141_1==1
replace Involvement_Q1=2 if N_Q141_1==2
replace Involvement_Q1=1 if N_Q141_1==3
```

### \*Encode Involvement Q2

```
encode Q24_1, gen(N_Q24_1)
encode Q34_1, gen(N_Q34_1)
encode Q44_1, gen(N_Q44_1)
encode Q54_1, gen(N_Q54_1)
encode Q87_1, gen(N_Q87_1)
encode Q106_1, gen(N_Q106_1)
encode Q142_1, gen(N_Q142_1)
encode Q127_1, gen(N_Q127_1)
```

```
drop Q24_1
drop Q34_1
drop Q44_1
drop Q54_1
drop Q87_1
drop Q106_1
drop Q127_1
drop Q142_1
```

```
*Gen Involvement_Q2
gen Involvement_Q2=0
```

```
label list N_Q24_1
```

replace Involvement\_Q2=3 if N\_Q24\_1==1  
replace Involvement\_Q2=5 if N\_Q24\_1==2  
replace Involvement\_Q2=4 if N\_Q24\_1==3  
replace Involvement\_Q2=7 if N\_Q24\_1==4  
replace Involvement\_Q2=2 if N\_Q24\_1==5  
replace Involvement\_Q2=6 if N\_Q24\_1==6

label list N\_Q34\_1

replace Involvement\_Q2=3 if N\_Q34\_1==1  
replace Involvement\_Q2=5 if N\_Q34\_1==2  
replace Involvement\_Q2=4 if N\_Q34\_1==3  
replace Involvement\_Q2=7 if N\_Q34\_1==4  
replace Involvement\_Q2=2 if N\_Q34\_1==5  
replace Involvement\_Q2=6 if N\_Q34\_1==6

label list N\_Q44\_1

replace Involvement\_Q2=3 if N\_Q44\_1==1  
replace Involvement\_Q2=5 if N\_Q44\_1==2  
replace Involvement\_Q2=4 if N\_Q44\_1==3  
replace Involvement\_Q2=1 if N\_Q44\_1==4  
replace Involvement\_Q2=7 if N\_Q44\_1==5  
replace Involvement\_Q2=2 if N\_Q44\_1==6  
replace Involvement\_Q2=6 if N\_Q44\_1==7

label list N\_Q54\_1

replace Involvement\_Q2=3 if N\_Q54\_1==1  
replace Involvement\_Q2=5 if N\_Q54\_1==2  
replace Involvement\_Q2=4 if N\_Q54\_1==3  
replace Involvement\_Q2=1 if N\_Q54\_1==4  
replace Involvement\_Q2=7 if N\_Q54\_1==5  
replace Involvement\_Q2=2 if N\_Q54\_1==6  
replace Involvement\_Q2=6 if N\_Q54\_1==7

label list N\_Q87\_1

replace Involvement\_Q2=3 if N\_Q87\_1==1  
replace Involvement\_Q2=5 if N\_Q87\_1==2  
replace Involvement\_Q2=4 if N\_Q87\_1==3  
replace Involvement\_Q2=1 if N\_Q87\_1==4  
replace Involvement\_Q2=7 if N\_Q87\_1==5  
replace Involvement\_Q2=6 if N\_Q87\_1==6

label list N\_Q106\_1

replace Involvement\_Q2=5 if N\_Q106\_1==1  
replace Involvement\_Q2=7 if N\_Q106\_1==2  
replace Involvement\_Q2=6 if N\_Q106\_1==3

```
label list N_Q127_1
replace Involvement_Q2=3 if N_Q127_1==1
replace Involvement_Q2=4 if N_Q127_1==2
replace Involvement_Q2=1 if N_Q127_1==3
replace Involvement_Q2=2 if N_Q127_1==4
```

```
label list N_Q142_1
replace Involvement_Q2=3 if N_Q142_1==1
replace Involvement_Q2=4 if N_Q142_1==2
replace Involvement_Q2=1 if N_Q142_1==3
replace Involvement_Q2=2 if N_Q142_1==4
```

```
*Encode Involvement_Q3
encode Q25_1, gen(N_Q25_1)
encode Q35_1, gen(N_Q35_1)
encode Q45_1, gen(N_Q45_1)
encode Q55_1, gen(N_Q55_1)
encode Q88_1, gen(N_Q88_1)
encode Q107_1, gen(N_Q107_1)
encode Q128_1, gen(N_Q128_1)
encode Q143_1, gen(N_Q143_1)
```

```
drop Q25_1
drop Q35_1
drop Q45_1
drop Q55_1
drop Q88_1
drop Q128_1
drop Q143_1
drop Q107_1
```

```
*Gen Trust_Q3
gen Involvement_Q3=0
```

```
label list N_Q25_1
replace Involvement_Q3=7 if N_Q25_1==1
replace Involvement_Q3=5 if N_Q25_1==2
replace Involvement_Q3=4 if N_Q25_1==3
replace Involvement_Q3=3 if N_Q25_1==4
replace Involvement_Q3=6 if N_Q25_1==5
replace Involvement_Q3=2 if N_Q25_1==6
```

```
label list N_Q35_1
replace Involvement_Q3=7 if N_Q35_1==1
replace Involvement_Q3=5 if N_Q35_1==2
replace Involvement_Q3=6 if N_Q35_1==3
```

```
label list N_Q45_1
replace Involvement_Q3=7 if N_Q45_1==1
replace Involvement_Q3=5 if N_Q45_1==2
replace Involvement_Q3=4 if N_Q45_1==3
replace Involvement_Q3=1 if N_Q45_1==4
replace Involvement_Q3=3 if N_Q45_1==5
replace Involvement_Q3=6 if N_Q45_1==6
replace Involvement_Q3=2 if N_Q45_1==7
```

```
label list N_Q55_1
replace Involvement_Q3=5 if N_Q55_1==1
replace Involvement_Q3=4 if N_Q55_1==2
replace Involvement_Q3=1 if N_Q55_1==3
replace Involvement_Q3=3 if N_Q55_1==4
replace Involvement_Q3=2 if N_Q55_1==5
```

```
label list N_Q88_1
replace Involvement_Q3=7 if N_Q88_1==1
replace Involvement_Q3=5 if N_Q88_1==2
replace Involvement_Q3=1 if N_Q88_1==3
replace Involvement_Q3=6 if N_Q88_1==4
```

```
label list N_Q107_1
replace Involvement_Q3=7 if N_Q107_1==1
replace Involvement_Q3=5 if N_Q107_1==2
replace Involvement_Q3=6 if N_Q107_1==3
```

```
label list N_Q128_1
replace Involvement_Q3=1 if N_Q128_1==1
replace Involvement_Q3=3 if N_Q128_1==2
replace Involvement_Q3=2 if N_Q128_1==3
```

```
label list N_Q143_1
replace Involvement_Q3=4 if N_Q143_1==1
replace Involvement_Q3=1 if N_Q143_1==2
replace Involvement_Q3=3 if N_Q143_1==3
replace Involvement_Q3=2 if N_Q143_1==4
```

#### \*Encode Involvement\_Q4

```
encode Q26_1, gen(N_Q26_1)
encode Q36_1, gen(N_Q36_1)
encode Q46_1, gen(N_Q46_1)
encode Q56_1, gen(N_Q56_1)
encode Q89_1, gen(N_Q89_1)
encode Q108_1, gen(N_Q108_1)
```

```
encode Q129_1, gen(N_Q129_1)
encode Q144_1, gen(N_Q144_1)
```

```
drop Q26_1
drop Q36_1
drop Q46_1
drop Q56_1
drop Q89_1
drop Q108_1
drop Q129_1
drop Q144_1
```

```
*Gen Involvement_Q4
gen Involvement_Q4=0
```

```
label list N_Q26_1
replace Involvement_Q4=5 if N_Q26_1==1
replace Involvement_Q4=2 if N_Q26_1==2
replace Involvement_Q4=3 if N_Q26_1==3
replace Involvement_Q4=6 if N_Q26_1==4
replace Involvement_Q4=7 if N_Q26_1==5
```

```
label list N_Q36_1
replace Involvement_Q4=5 if N_Q36_1==1
replace Involvement_Q4=4 if N_Q36_1==2
replace Involvement_Q4=2 if N_Q36_1==3
replace Involvement_Q4=3 if N_Q36_1==4
replace Involvement_Q4=6 if N_Q36_1==5
replace Involvement_Q4=7 if N_Q36_1==6
```

```
label list N_Q46_1
replace Involvement_Q4=5 if N_Q46_1==1
replace Involvement_Q4=4 if N_Q46_1==2
replace Involvement_Q4=1 if N_Q46_1==3
replace Involvement_Q4=3 if N_Q46_1==4
replace Involvement_Q4=2 if N_Q46_1==5
replace Involvement_Q4=6 if N_Q46_1==6
```

```
label list N_Q56_1
replace Involvement_Q4=1 if N_Q56_1==1
replace Involvement_Q4=3 if N_Q56_1==2
replace Involvement_Q4=2 if N_Q56_1==3
```

```
label list N_Q89_1
replace Involvement_Q4=5 if N_Q89_1==1
replace Involvement_Q4=4 if N_Q89_1==2
```

```
replace Involvement_Q4=1 if N_Q89_1==3
replace Involvement_Q4=2 if N_Q89_1==4
replace Involvement_Q4=6 if N_Q89_1==5
replace Involvement_Q4=7 if N_Q89_1==6
```

```
label list N_Q108_1
replace Involvement_Q4=5 if N_Q108_1==1
replace Involvement_Q4=6 if N_Q108_1==2
replace Involvement_Q4=7 if N_Q108_1==3
```

```
label list N_Q129_1
replace Involvement_Q4=1 if N_Q129_1==1
replace Involvement_Q4=3 if N_Q129_1==2
replace Involvement_Q4=2 if N_Q129_1==3
```

```
label list N_Q144_1
replace Involvement_Q4=4 if N_Q144_1==1
replace Involvement_Q4=1 if N_Q144_1==2
replace Involvement_Q4=3 if N_Q144_1==3
replace Involvement_Q4=2 if N_Q144_1==3
```

#### \*Average Trust

```
gen Average_Involvement = (Involvement_Q1+ Involvement_Q2+ Involvement_Q3+
Involvement_Q4)/4
```

#### \*Gen involvement

```
gen involvement = 1 if N_Q23_1!=. | N_Q33_1!=. | N_Q108_1!=. | N_Q86_1!=.
replace involvement =0 if N_Q43_1!=. | N_Q53_1!=. | N_Q144_1!=. | N_Q129_1!=.
```

#### \*Drop Involvement\_Q1...Q4 strings

```
drop N_Q23_1 N_Q33_1 N_Q43_1 N_Q53_1 N_Q86_1 N_Q24_1 N_Q34_1 N_Q44_1
N_Q54_1 N_Q87_1 N_Q25_1 N_Q35_1 N_Q45_1 N_Q55_1 N_Q88_1 N_Q26_1 N_Q36_1
N_Q46_1 N_Q56_1 N_Q89_1 N_Q105_1 N_Q106_1 N_Q107_1 N_Q108_1 N_Q126_1
N_Q127_1 N_Q128_1 N_Q129_1 N_Q141_1 N_Q142_1 N_Q143_1 N_Q144_1
```

#### \*Gen Shown price

```
gen Shown_price=PriceLow if involvement==0
replace Shown_price=Price if involvement==1
drop PriceLow
drop Price
```

#### \*Encode perceived length

```
encode Q27_1, gen (N_Q27_1)
encode Q37_1, gen (N_Q37_1)
encode Q47_1, gen (N_Q47_1)
encode Q57_1, gen (N_Q57_1)
```

```
encode Q90_1, gen(N_Q90_1)
encode Q109_1, gen(N_Q109_1)
encode Q130_1, gen(N_Q130_1)
encode Q145_1, gen(N_Q145_1)
```

```
drop Q27_1
drop Q37_1
drop Q47_1
drop Q57_1
drop Q90_1
drop Q109_1
drop Q130_1
drop Q145_1
```

### \*Perceived length

```
gen perceived_length=0
```

```
label list N_Q27_1
replace perceived_length=5 if N_Q27_1==1
replace perceived_length=7 if N_Q27_1==2
replace perceived_length=4 if N_Q27_1==3
replace perceived_length=3 if N_Q27_1==4
replace perceived_length=6 if N_Q27_1==5
```

```
label list N_Q37_1
replace perceived_length=5 if N_Q37_1==1
replace perceived_length=1 if N_Q37_1==2
replace perceived_length=4 if N_Q37_1==3
replace perceived_length=3 if N_Q37_1==4
replace perceived_length=2 if N_Q37_1==5
```

```
label list N_Q47_1
replace perceived_length=1 if N_Q47_1==1
replace perceived_length=4 if N_Q47_1==2
replace perceived_length=3 if N_Q47_1==3
replace perceived_length=2 if N_Q47_1==4
```

```
label list N_Q57_1
replace perceived_length=5 if N_Q57_1==1
replace perceived_length=7 if N_Q57_1==2
replace perceived_length=4 if N_Q57_1==3
replace perceived_length=6 if N_Q57_1==4
replace perceived_length=3 if N_Q57_1==5
```

```
label list N_Q90_1
replace perceived_length=5 if N_Q90_1==1
```



replace perceived\_length=7 if N\_Q90\_1==2  
replace perceived\_length=4 if N\_Q90\_1==3  
replace perceived\_length=3 if N\_Q90\_1==4  
replace perceived\_length=6 if N\_Q90\_1==5

label list N\_Q109\_1  
replace perceived\_length=1 if N\_Q109\_1==1  
replace perceived\_length=2 if N\_Q109\_1==2

label list N\_Q130\_1  
replace perceived\_length=1 if N\_Q130\_1==1  
replace perceived\_length=2 if N\_Q130\_1==2

label list N\_Q145\_1  
replace perceived\_length=7 if N\_Q145\_1==1  
replace perceived\_length=6 if N\_Q145\_1==2

#### \*Gen extensiveness

gen Extensive = 1 if N\_Q27\_1!=. | N\_Q57\_1!=. | N\_Q90\_1!=. | N\_Q145\_1!=.  
replace Extensive = 0 if N\_Q37\_1!=. | N\_Q47\_1!=. | N\_Q109\_1!=. | N\_Q130\_1!=.

drop N\_Q27\_1 N\_Q37\_1 N\_Q47\_1 N\_Q57\_1 N\_Q90\_1 N\_Q109\_1 N\_Q130\_1 N\_Q145\_1

#### \*Encode Familiarity

encode Q28\_1, gen(N\_Q28\_1)  
encode Q29\_1, gen(N\_Q29\_1)  
encode Q210\_1, gen(N\_Q210\_1)  
encode Q211\_1, gen(N\_Q211\_1)  
encode Q38\_1, gen(N\_Q38\_1)  
encode Q39\_1, gen(N\_Q39\_1)  
encode Q310\_1, gen(N\_Q310\_1)  
encode Q311\_1, gen(N\_Q311\_1)  
encode Q48\_1, gen(N\_Q48\_1)  
encode Q49\_1, gen(N\_Q49\_1)  
encode Q410\_1, gen(N\_Q410\_1)  
encode Q411\_1, gen(N\_Q411\_1)  
encode Q58\_1, gen(N\_Q58\_1)  
encode Q59\_1, gen(N\_Q59\_1)  
encode Q510\_1, gen(N\_Q510\_1)  
encode Q511\_1, gen(N\_Q511\_1)  
encode Q91\_1, gen(N\_Q91\_1)  
encode Q92\_1, gen(N\_Q92\_1)  
encode Q93\_1, gen(N\_Q93\_1)  
encode Q94\_1, gen(N\_Q94\_1)  
encode Q110\_1, gen(N\_Q110\_1)  
encode Q112\_1, gen(N\_Q112\_1)

```
encode DS, gen (N_DS)
encode Q113_1, gen (N_Q113_1)
encode Q131_1, gen (N_Q131_1)
encode Q132_1, gen (N_Q132_1)
encode Q133_1, gen (N_Q133_1)
encode Q134_1, gen (N_Q134_1)
encode Q146_1, gen (N_Q146_1)
encode Q147_1, gen (N_Q147_1)
encode Q148_1, gen (N_Q148_1)
encode Q149_1, gen (N_Q149_1)
```

```
drop Q28_1
drop Q29_1
drop Q210_1
drop Q211_1
drop Q38_1
drop Q39_1
drop Q310_1
drop Q311_1
drop Q48_1
drop Q49_1
drop Q410_1
drop Q411_1
drop Q58_1
drop Q59_1
drop Q510_1
drop Q511_1
drop Q91_1
drop Q92_1
drop Q93_1
drop Q94_1
drop Q110_1
drop DS
drop Q112_1
drop Q113_1
drop Q131_1
drop Q132_1
drop Q133_1
drop Q134_1
drop Q146_1
drop Q147_1
drop Q148_1
drop Q149_1
```

```
*Gen Familiarity Q1
gen Familiarity_Q1=0
```

label list N\_Q28\_1  
replace Familiarity\_Q1=7 if N\_Q28\_1==1  
replace Familiarity\_Q1=5 if N\_Q28\_1==2  
replace Familiarity\_Q1=4 if N\_Q28\_1==3  
replace Familiarity\_Q1=1 if N\_Q28\_1==4  
replace Familiarity\_Q1=3 if N\_Q28\_1==5  
replace Familiarity\_Q1=2 if N\_Q28\_1==6

label list N\_Q38\_1  
replace Familiarity\_Q1=5 if N\_Q38\_1==1  
replace Familiarity\_Q1=1 if N\_Q38\_1==2  
replace Familiarity\_Q1=3 if N\_Q38\_1==3  
replace Familiarity\_Q1=2 if N\_Q38\_1==4  
replace Familiarity\_Q1=6 if N\_Q38\_1==5

label list N\_Q48\_1  
replace Familiarity\_Q1=5 if N\_Q48\_1==1  
replace Familiarity\_Q1=4 if N\_Q48\_1==2  
replace Familiarity\_Q1=1 if N\_Q48\_1==3  
replace Familiarity\_Q1=3 if N\_Q48\_1==4  
replace Familiarity\_Q1=2 if N\_Q48\_1==5  
replace Familiarity\_Q1=6 if N\_Q48\_1==6

label list N\_Q58\_1  
replace Familiarity\_Q1=5 if N\_Q58\_1==1  
replace Familiarity\_Q1=4 if N\_Q58\_1==2  
replace Familiarity\_Q1=1 if N\_Q58\_1==3  
replace Familiarity\_Q1=3 if N\_Q58\_1==4  
replace Familiarity\_Q1=2 if N\_Q58\_1==5

label list N\_Q91\_1  
replace Familiarity\_Q1=5 if N\_Q91\_1==1  
replace Familiarity\_Q1=4 if N\_Q91\_1==2  
replace Familiarity\_Q1=1 if N\_Q91\_1==3  
replace Familiarity\_Q1=3 if N\_Q91\_1==4  
replace Familiarity\_Q1=2 if N\_Q91\_1==5  
replace Familiarity\_Q1=6 if N\_Q91\_1==6

label list N\_Q110\_1  
replace Familiarity\_Q1=5 if N\_Q110\_1==1  
replace Familiarity\_Q1=1 if N\_Q110\_1==2  
replace Familiarity\_Q1=3 if N\_Q110\_1==3  
replace Familiarity\_Q1=2 if N\_Q110\_1==4  
replace Familiarity\_Q1=6 if N\_Q110\_1==5

label list N\_Q131\_1  
replace Familiarity\_Q1=5 if N\_Q131\_1==1  
replace Familiarity\_Q1=1 if N\_Q131\_1==2  
replace Familiarity\_Q1=3 if N\_Q131\_1==3  
replace Familiarity\_Q1=2 if N\_Q131\_1==4  
replace Familiarity\_Q1=6 if N\_Q131\_1==5

label list N\_Q146\_1  
replace Familiarity\_Q1=1 if N\_Q146\_1==1  
replace Familiarity\_Q1=2 if N\_Q146\_1==2

\*Gen Familiarity Q2  
gen Familiarity\_Q2=0

label list N\_Q29\_1  
replace Familiarity\_Q2=5 if N\_Q29\_1==1  
replace Familiarity\_Q2=4 if N\_Q29\_1==2  
replace Familiarity\_Q2=3 if N\_Q29\_1==3  
replace Familiarity\_Q2=2 if N\_Q29\_1==4  
replace Familiarity\_Q2=6 if N\_Q29\_1==5

label list N\_Q39\_1  
replace Familiarity\_Q2=5 if N\_Q39\_1==1  
replace Familiarity\_Q2=7 if N\_Q39\_1==2  
replace Familiarity\_Q2=4 if N\_Q39\_1==3  
replace Familiarity\_Q2=1 if N\_Q39\_1==4  
replace Familiarity\_Q2=3 if N\_Q39\_1==5  
replace Familiarity\_Q2=2 if N\_Q39\_1==6  
replace Familiarity\_Q2=6 if N\_Q39\_1==7

label list N\_Q49\_1  
replace Familiarity\_Q2=5 if N\_Q49\_1==1  
replace Familiarity\_Q2=7 if N\_Q49\_1==2  
replace Familiarity\_Q2=4 if N\_Q49\_1==3  
replace Familiarity\_Q2=1 if N\_Q49\_1==4  
replace Familiarity\_Q2=3 if N\_Q49\_1==5  
replace Familiarity\_Q2=2 if N\_Q49\_1==6

label list N\_Q59\_1  
replace Familiarity\_Q2=5 if N\_Q59\_1==1  
replace Familiarity\_Q2=4 if N\_Q59\_1==2  
replace Familiarity\_Q2=1 if N\_Q59\_1==3  
replace Familiarity\_Q2=3 if N\_Q59\_1==4  
replace Familiarity\_Q2=2 if N\_Q59\_1==5

label list N\_Q92\_1

replace Familiarity\_Q2=5 if N\_Q92\_1==1  
replace Familiarity\_Q2=4 if N\_Q92\_1==2  
replace Familiarity\_Q2=1 if N\_Q92\_1==3  
replace Familiarity\_Q2=3 if N\_Q92\_1==4  
replace Familiarity\_Q2=2 if N\_Q92\_1==5  
replace Familiarity\_Q2=6 if N\_Q92\_1==6

label list N\_DS

replace Familiarity\_Q2=5 if N\_DS==1  
replace Familiarity\_Q2=4 if N\_DS==2  
replace Familiarity\_Q2=1 if N\_DS==3  
replace Familiarity\_Q2=3 if N\_DS==4  
replace Familiarity\_Q2=2 if N\_DS==5  
replace Familiarity\_Q2=6 if N\_DS==6

label list N\_Q132\_1

replace Familiarity\_Q2=5 if N\_Q132\_1==1  
replace Familiarity\_Q2=7 if N\_Q132\_1==2  
replace Familiarity\_Q2=4 if N\_Q132\_1==3  
replace Familiarity\_Q2=1 if N\_Q132\_1==4  
replace Familiarity\_Q2=3 if N\_Q132\_1==5  
replace Familiarity\_Q2=2 if N\_Q132\_1==6

label list N\_Q147\_1

replace Familiarity\_Q2=4 if N\_Q147\_1==1  
replace Familiarity\_Q2=1 if N\_Q147\_1==2  
replace Familiarity\_Q2=3 if N\_Q147\_1==3  
replace Familiarity\_Q2=2 if N\_Q147\_1==4

\*Gen Familiarity Q3

gen Familiarity\_Q3=0

label list N\_Q210\_1

replace Familiarity\_Q3=1 if N\_Q210\_1==1  
replace Familiarity\_Q3=3 if N\_Q210\_1==2  
replace Familiarity\_Q3=5 if N\_Q210\_1==3  
replace Familiarity\_Q3=4 if N\_Q210\_1==4  
replace Familiarity\_Q3=2 if N\_Q210\_1==5  
replace Familiarity\_Q3=6 if N\_Q210\_1==6

label list N\_Q310\_1

replace Familiarity\_Q3=7 if N\_Q310\_1==1  
replace Familiarity\_Q3=3 if N\_Q310\_1==2  
replace Familiarity\_Q3=5 if N\_Q310\_1==3  
replace Familiarity\_Q3=4 if N\_Q310\_1==4

replace Familiarity\_Q3=2 if N\_Q310\_1==5  
replace Familiarity\_Q3=6 if N\_Q310\_1==6

label list N\_Q410\_1

replace Familiarity\_Q3=1 if N\_Q410\_1==1  
replace Familiarity\_Q3=3 if N\_Q410\_1==2  
replace Familiarity\_Q3=5 if N\_Q410\_1==3  
replace Familiarity\_Q3=4 if N\_Q410\_1==4  
replace Familiarity\_Q3=2 if N\_Q410\_1==5

label list N\_Q510\_1

replace Familiarity\_Q3=1 if N\_Q510\_1==1  
replace Familiarity\_Q3=3 if N\_Q510\_1==2  
replace Familiarity\_Q3=5 if N\_Q510\_1==3  
replace Familiarity\_Q3=4 if N\_Q510\_1==4  
replace Familiarity\_Q3=2 if N\_Q510\_1==5  
replace Familiarity\_Q3=6 if N\_Q510\_1==6

label list N\_Q93\_1

replace Familiarity\_Q3=7 if N\_Q93\_1==1  
replace Familiarity\_Q3=1 if N\_Q93\_1==2  
replace Familiarity\_Q3=3 if N\_Q93\_1==3  
replace Familiarity\_Q3=5 if N\_Q93\_1==4  
replace Familiarity\_Q3=4 if N\_Q93\_1==5  
replace Familiarity\_Q3=2 if N\_Q93\_1==6  
replace Familiarity\_Q3=6 if N\_Q93\_1==7

label list N\_Q112\_1

replace Familiarity\_Q3=1 if N\_Q112\_1==1  
replace Familiarity\_Q3=3 if N\_Q112\_1==2  
replace Familiarity\_Q3=5 if N\_Q112\_1==3  
replace Familiarity\_Q3=4 if N\_Q112\_1==4  
replace Familiarity\_Q3=2 if N\_Q112\_1==5  
replace Familiarity\_Q3=6 if N\_Q112\_1==6

label list N\_Q133\_1

replace Familiarity\_Q3=1 if N\_Q133\_1==1  
replace Familiarity\_Q3=3 if N\_Q133\_1==2  
replace Familiarity\_Q3=5 if N\_Q133\_1==3  
replace Familiarity\_Q3=4 if N\_Q133\_1==4  
replace Familiarity\_Q3=2 if N\_Q133\_1==5  
replace Familiarity\_Q3=6 if N\_Q133\_1==6

label list N\_Q148\_1

replace Familiarity\_Q3=1 if N\_Q148\_1==1  
replace Familiarity\_Q3=3 if N\_Q148\_1==2

replace Familiarity\_Q3=4 if N\_Q148\_1==3  
replace Familiarity\_Q3=2 if N\_Q148\_1==4

#### \*Gen Familiarity Q4

gen Familiarity\_Q4=0

label list N\_Q211\_1

replace Familiarity\_Q4=2 if N\_Q211\_1==1  
replace Familiarity\_Q4=3 if N\_Q211\_1==2  
replace Familiarity\_Q4=5 if N\_Q211\_1==3  
replace Familiarity\_Q4=6 if N\_Q211\_1==4  
replace Familiarity\_Q4=4 if N\_Q211\_1==5  
replace Familiarity\_Q4=1 if N\_Q211\_1==6

label list N\_Q311\_1

replace Familiarity\_Q4=2 if N\_Q311\_1==1  
replace Familiarity\_Q4=3 if N\_Q311\_1==2  
replace Familiarity\_Q4=5 if N\_Q311\_1==3  
replace Familiarity\_Q4=6 if N\_Q311\_1==4  
replace Familiarity\_Q4=4 if N\_Q311\_1==5  
replace Familiarity\_Q4=1 if N\_Q311\_1==6

label list N\_Q411\_1

replace Familiarity\_Q4=2 if N\_Q411\_1==1  
replace Familiarity\_Q4=3 if N\_Q411\_1==2  
replace Familiarity\_Q4=5 if N\_Q411\_1==3  
replace Familiarity\_Q4=6 if N\_Q411\_1==4  
replace Familiarity\_Q4=4 if N\_Q411\_1==5  
replace Familiarity\_Q4=1 if N\_Q411\_1==6

label list N\_Q511\_1

replace Familiarity\_Q4=2 if N\_Q511\_1==1  
replace Familiarity\_Q4=3 if N\_Q511\_1==2  
replace Familiarity\_Q4=5 if N\_Q511\_1==3  
replace Familiarity\_Q4=4 if N\_Q511\_1==4  
replace Familiarity\_Q4=1 if N\_Q511\_1==5

label list N\_Q94\_1

replace Familiarity\_Q4=2 if N\_Q94\_1==1  
replace Familiarity\_Q4=3 if N\_Q94\_1==2  
replace Familiarity\_Q4=5 if N\_Q94\_1==3  
replace Familiarity\_Q4=6 if N\_Q94\_1==4  
replace Familiarity\_Q4=4 if N\_Q94\_1==5  
replace Familiarity\_Q4=1 if N\_Q94\_1==6

label list N\_Q113\_1

```
replace Familiarity_Q4=2 if N_Q113_1==1
replace Familiarity_Q4=3 if N_Q113_1==2
replace Familiarity_Q4=5 if N_Q113_1==3
replace Familiarity_Q4=6 if N_Q113_1==4
replace Familiarity_Q4=4 if N_Q113_1==5
replace Familiarity_Q4=1 if N_Q113_1==6
```

```
label list N_Q134_1
replace Familiarity_Q4=2 if N_Q134_1==1
replace Familiarity_Q4=3 if N_Q134_1==2
replace Familiarity_Q4=5 if N_Q134_1==3
replace Familiarity_Q4=4 if N_Q134_1==4
replace Familiarity_Q4=1 if N_Q134_1==5
```

```
label list N_Q149_1
replace Familiarity_Q4=2 if N_Q149_1==1
replace Familiarity_Q4=3 if N_Q149_1==2
replace Familiarity_Q4=1 if N_Q149_1==3
```

#### \*Gen average familiarity

```
gen Average_Familiarity=(Familiarity_Q1+ Familiarity_Q2+ Familiarity_Q3+
Familiarity_Q4)/4
```

#### \*drop familiarity Q1...Q4 strings

```
drop N_Q28_1 N_Q29_1 N_Q210_1 N_Q211_1 N_Q38_1 N_Q39_1 N_Q310_1 N_Q311_1
N_Q48_1 N_Q49_1 N_Q410_1 N_Q411_1 N_Q58_1 N_Q59_1 N_Q510_1 N_Q511_1
N_Q91_1 N_Q92_1 N_Q93_1 N_Q94_1 N_DS N_Q110_1 N_Q112_1 N_Q113_1 N_Q131_1
N_Q132_1 N_Q133_1 N_Q134_1 N_Q146_1 N_Q147_1 N_Q148_1 N_Q149_1
```

#### \*Encode trust Q1

```
encode Q212_1, gen(N_Q212_1)
encode Q312_1, gen(N_Q312_1)
encode Q412_1, gen(N_Q412_1)
encode Q512_1, gen(N_Q512_1)
encode Q95_1, gen(N_Q95_1)
encode Q114_1, gen(N_Q114_1)
encode Q135_1, gen(N_Q135_1)
encode Q150_1, gen(N_Q150_1)
```

```
drop Q212_1
drop Q312_1
drop Q412_1
drop Q512_1
drop Q95_1
drop Q114_1
drop Q135_1
```



drop Q150\_1

\*Gen Trust\_Q1  
gen Trust\_Q1=0

label list N\_Q212\_1  
replace Trust\_Q1=2 if N\_Q212\_1==1  
replace Trust\_Q1=4 if N\_Q212\_1==2  
replace Trust\_Q1=5 if N\_Q212\_1==3  
replace Trust\_Q1=3 if N\_Q212\_1==4  
replace Trust\_Q1=1 if N\_Q212\_1==5

label list N\_Q312\_1  
replace Trust\_Q1=6 if N\_Q312\_1==1  
replace Trust\_Q1=2 if N\_Q312\_1==2  
replace Trust\_Q1=4 if N\_Q312\_1==3  
replace Trust\_Q1=5 if N\_Q312\_1==4  
replace Trust\_Q1=3 if N\_Q312\_1==5  
replace Trust\_Q1=1 if N\_Q312\_1==6

label list N\_Q412\_1  
replace Trust\_Q1=6 if N\_Q412\_1==1  
replace Trust\_Q1=2 if N\_Q412\_1==2  
replace Trust\_Q1=4 if N\_Q412\_1==3  
replace Trust\_Q1=5 if N\_Q412\_1==4  
replace Trust\_Q1=3 if N\_Q412\_1==5

label list N\_Q512\_1  
replace Trust\_Q1=6 if N\_Q512\_1==1  
replace Trust\_Q1=2 if N\_Q512\_1==2  
replace Trust\_Q1=4 if N\_Q512\_1==3  
replace Trust\_Q1=5 if N\_Q512\_1==4  
replace Trust\_Q1=3 if N\_Q512\_1==5  
replace Trust\_Q1=1 if N\_Q512\_1==6

label list N\_Q95\_1  
replace Trust\_Q1=6 if N\_Q95\_1==1  
replace Trust\_Q1=2 if N\_Q95\_1==2  
replace Trust\_Q1=4 if N\_Q95\_1==3  
replace Trust\_Q1=5 if N\_Q95\_1==4  
replace Trust\_Q1=3 if N\_Q95\_1==5

label list N\_Q114\_1  
replace Trust\_Q1=6 if N\_Q114\_1==1  
replace Trust\_Q1=4 if N\_Q114\_1==2  
replace Trust\_Q1=5 if N\_Q114\_1==3

```
label list N_Q135_1
replace Trust_Q1=6 if N_Q135_1==1
replace Trust_Q1=4 if N_Q135_1==2
replace Trust_Q1=5 if N_Q135_1==3
```

```
label list N_Q150_1
replace Trust_Q1=6 if N_Q150_1==1
replace Trust_Q1=4 if N_Q150_1==2
replace Trust_Q1=5 if N_Q150_1==3
```

### \*Encode trust Q2

```
encode Q212_2, gen(N_Q212_2)
encode Q312_2, gen(N_Q312_2)
encode Q412_2, gen(N_Q412_2)
encode Q512_2, gen(N_Q512_2)
encode Q95_2, gen(N_Q95_2)
encode Q114_2, gen(N_Q114_2)
encode Q135_2, gen(N_Q135_2)
encode Q150_2, gen(N_Q150_2)
```

```
drop Q212_2
drop Q312_2
drop Q412_2
drop Q512_2
drop Q95_2
drop Q114_2
drop Q135_2
drop Q150_2
```

### \*Gen Trust\_Q2

```
gen Trust_Q2=0
```

```
label list N_Q212_2
replace Trust_Q2=6 if N_Q212_2==1
replace Trust_Q2=2 if N_Q212_2==2
replace Trust_Q2=4 if N_Q212_2==3
replace Trust_Q2=5 if N_Q212_2==4
replace Trust_Q2=3 if N_Q212_2==5
replace Trust_Q2=1 if N_Q212_2==6
```

```
label list N_Q312_2
replace Trust_Q2=6 if N_Q312_2==1
replace Trust_Q2=2 if N_Q312_2==2
replace Trust_Q2=4 if N_Q312_2==3
replace Trust_Q2=5 if N_Q312_2==4
```

```
replace Trust_Q2=3 if N_Q312_2==5
replace Trust_Q2=1 if N_Q312_2==6
```

```
label list N_Q412_2
replace Trust_Q2=6 if N_Q412_2==1
replace Trust_Q2=2 if N_Q412_2==2
replace Trust_Q2=4 if N_Q412_2==3
replace Trust_Q2=5 if N_Q412_2==4
replace Trust_Q2=3 if N_Q412_2==5
```

```
label list N_Q512_2
replace Trust_Q2=6 if N_Q512_2==1
replace Trust_Q2=2 if N_Q512_2==2
replace Trust_Q2=4 if N_Q512_2==3
replace Trust_Q2=5 if N_Q512_2==4
replace Trust_Q2=3 if N_Q512_2==5
replace Trust_Q2=1 if N_Q512_2==6
```

```
label list N_Q95_2
replace Trust_Q2=6 if N_Q95_2==1
replace Trust_Q2=2 if N_Q95_2==2
replace Trust_Q2=4 if N_Q95_2==3
replace Trust_Q2=5 if N_Q95_2==4
replace Trust_Q2=3 if N_Q95_2==5
```

```
label list N_Q114_2
replace Trust_Q2=6 if N_Q114_2==1
replace Trust_Q2=4 if N_Q114_2==2
replace Trust_Q2=5 if N_Q114_2==3
```

```
label list N_Q135_2
replace Trust_Q2=6 if N_Q135_2==1
replace Trust_Q2=4 if N_Q135_2==2
replace Trust_Q2=5 if N_Q135_2==3
```

```
label list N_Q150_2
replace Trust_Q2=6 if N_Q150_2==1
replace Trust_Q2=4 if N_Q150_2==2
replace Trust_Q2=5 if N_Q150_2==3
```

### \*Encode trust Q3

```
encode Q212_3, gen(N_Q212_3)
encode Q312_3, gen(N_Q312_3)
encode Q412_3, gen(N_Q412_3)
encode Q512_3, gen(N_Q512_3)
encode Q95_3, gen(N_Q95_3)
```

```
encode Q114_3, gen (N_Q114_3)
encode Q135_3, gen (N_Q135_3)
encode Q150_3, gen (N_Q150_3)
```

```
drop Q212_3
drop Q312_3
drop Q412_3
drop Q512_3
drop Q95_3
drop Q114_3
drop Q135_3
drop Q150_3
```

```
*Gen Trust_Q3
gen Trust_Q3=0
```

```
label list N_Q212_3
replace Trust_Q3=2 if N_Q212_3==1
replace Trust_Q3=4 if N_Q212_3==2
replace Trust_Q3=5 if N_Q212_3==3
replace Trust_Q3=3 if N_Q212_3==4
replace Trust_Q3=1 if N_Q212_3==5
```

```
label list N_Q312_3
replace Trust_Q3=6 if N_Q312_3==1
replace Trust_Q3=2 if N_Q312_3==2
replace Trust_Q3=4 if N_Q312_3==3
replace Trust_Q3=5 if N_Q312_3==4
replace Trust_Q3=3 if N_Q312_3==5
replace Trust_Q3=1 if N_Q312_3==6
```

```
label list N_Q412_3
replace Trust_Q3=6 if N_Q412_3==1
replace Trust_Q3=2 if N_Q412_3==2
replace Trust_Q3=4 if N_Q412_3==3
replace Trust_Q3=5 if N_Q412_3==4
replace Trust_Q3=3 if N_Q412_3==5
```

```
label list N_Q512_3
replace Trust_Q3=6 if N_Q512_3==1
replace Trust_Q3=2 if N_Q512_3==2
replace Trust_Q3=4 if N_Q512_3==3
replace Trust_Q3=5 if N_Q512_3==4
replace Trust_Q3=3 if N_Q512_3==5
replace Trust_Q3=1 if N_Q512_3==6
```

```
label list N_Q95_3
replace Trust_Q3=6 if N_Q95_3==1
replace Trust_Q3=2 if N_Q95_3==2
replace Trust_Q3=4 if N_Q95_3==3
replace Trust_Q3=5 if N_Q95_3==4
```

```
label list N_Q114_3
replace Trust_Q3=6 if N_Q114_3==1
replace Trust_Q3=4 if N_Q114_3==2
replace Trust_Q3=5 if N_Q114_3==3
replace Trust_Q3=3 if N_Q114_3==4
```

```
label list N_Q135_3
replace Trust_Q3=6 if N_Q135_3==1
replace Trust_Q3=4 if N_Q135_3==2
replace Trust_Q3=5 if N_Q135_3==3
```

```
label list N_Q150_3
replace Trust_Q3=6 if N_Q150_3==1
replace Trust_Q3=4 if N_Q150_3==2
replace Trust_Q3=5 if N_Q150_3==3
```

#### \*Encode trust Q4

```
encode Q212_4, gen(N_Q212_4)
encode Q312_4, gen(N_Q312_4)
encode Q412_4, gen(N_Q412_4)
encode Q512_4, gen(N_Q512_4)
encode Q95_4, gen(N_Q95_4)
encode Q114_4, gen(N_Q114_4)
encode Q135_4, gen(N_Q135_4)
encode Q150_4, gen(N_Q150_4)
```

```
drop Q212_4
drop Q312_4
drop Q412_4
drop Q512_4
drop Q95_4
drop Q114_4
drop Q135_4
drop Q150_4
```

#### \*Gen Trust\_Q4

```
gen Trust_Q4=0
```

```
label list N_Q212_4
replace Trust_Q4=6 if N_Q212_4==1
```

replace Trust\_Q4=2 if N\_Q212\_4==2  
replace Trust\_Q4=4 if N\_Q212\_4==3  
replace Trust\_Q4=5 if N\_Q212\_4==4  
replace Trust\_Q4=3 if N\_Q212\_4==5  
replace Trust\_Q4=1 if N\_Q212\_4==5

label list N\_Q312\_4  
replace Trust\_Q4=6 if N\_Q312\_4==1  
replace Trust\_Q4=2 if N\_Q312\_4==2  
replace Trust\_Q4=4 if N\_Q312\_4==3  
replace Trust\_Q4=5 if N\_Q312\_4==4  
replace Trust\_Q4=3 if N\_Q312\_4==5  
replace Trust\_Q4=1 if N\_Q312\_4==6

label list N\_Q412\_4  
replace Trust\_Q4=6 if N\_Q412\_4==1  
replace Trust\_Q4=2 if N\_Q412\_4==2  
replace Trust\_Q4=4 if N\_Q412\_4==3  
replace Trust\_Q4=5 if N\_Q412\_4==4  
replace Trust\_Q4=3 if N\_Q412\_4==5

label list N\_Q512\_4  
replace Trust\_Q4=6 if N\_Q512\_4==1  
replace Trust\_Q4=2 if N\_Q512\_4==2  
replace Trust\_Q4=4 if N\_Q512\_4==3  
replace Trust\_Q4=5 if N\_Q512\_4==4  
replace Trust\_Q4=3 if N\_Q512\_4==5  
replace Trust\_Q4=7 if N\_Q512\_4==6  
replace Trust\_Q4=1 if N\_Q512\_4==7

label list N\_Q95\_4  
replace Trust\_Q4=6 if N\_Q95\_4==1  
replace Trust\_Q4=2 if N\_Q95\_4==2  
replace Trust\_Q4=4 if N\_Q95\_4==3  
replace Trust\_Q4=5 if N\_Q95\_4==4  
replace Trust\_Q4=7 if N\_Q95\_4==5

label list N\_Q114\_4  
replace Trust\_Q4=6 if N\_Q114\_4==1  
replace Trust\_Q4=4 if N\_Q114\_4==2  
replace Trust\_Q4=5 if N\_Q114\_4==3  
replace Trust\_Q4=7 if N\_Q114\_4==4

label list N\_Q135\_4  
replace Trust\_Q4=6 if N\_Q135\_4==1  
replace Trust\_Q4=4 if N\_Q135\_4==2

```
replace Trust_Q4=5 if N_Q135_4==3
replace Trust_Q4=7 if N_Q135_4==4
```

```
label list N_Q150_4
replace Trust_Q4=6 if N_Q150_4==1
replace Trust_Q4=4 if N_Q150_4==2
replace Trust_Q4=5 if N_Q150_4==3
replace Trust_Q4=3 if N_Q150_4==4
```

#### \*Average Trust

```
gen Average_Trust = (Trust_Q1+ Trust_Q2+ Trust_Q3+ Trust_Q4)/4
```

```
drop N_Q312_1 N_Q212_1 N_Q412_1 N_Q512_1 N_Q95_1 N_Q212_2 N_Q312_2 N_Q412_2
N_Q512_2 N_Q95_2 N_Q212_3 N_Q312_3 N_Q412_3 N_Q512_3 N_Q95_3 N_Q95_4
N_Q212_4 N_Q312_4 N_Q412_4 N_Q512_4 N_Q114_1 N_Q114_2 N_Q114_3 N_Q114_4
N_Q135_1 N_Q135_2 N_Q135_3 N_Q135_4 N_Q150_1 N_Q150_2 N_Q150_3 N_Q150_4
```

#### \*Encode Purchase Intention

```
encode Q213, gen(N_Q213)
encode Q313, gen(N_Q313)
encode Q413, gen(N_Q413)
encode Q513, gen(N_Q513)
encode Q96, gen(N_Q96)
encode Q115, gen(N_Q115)
encode Q136, gen(N_Q136)
encode Q151, gen(N_Q151)
```

```
drop Q213
drop Q313
drop Q413
drop Q513
drop Q96
drop Q115
drop Q136
drop Q151
```

#### \*Gen purchase intention

```
gen Purchase_Intention=0
```

```
label list N_Q213
replace Purchase_Intention=7 if N_Q213==1
replace Purchase_Intention=1 if N_Q213==2
replace Purchase_Intention=2 if N_Q213==3
replace Purchase_Intention=4 if N_Q213==4
replace Purchase_Intention=5 if N_Q213==5
replace Purchase_Intention=3 if N_Q213==6
```

label list N\_Q313  
replace Purchase\_Intention=1 if N\_Q313==1  
replace Purchase\_Intention=2 if N\_Q313==2  
replace Purchase\_Intention=4 if N\_Q313==3  
replace Purchase\_Intention=5 if N\_Q313==4  
replace Purchase\_Intention=3 if N\_Q313==5

label list N\_Q413  
replace Purchase\_Intention=1 if N\_Q413==1  
replace Purchase\_Intention=2 if N\_Q413==2  
replace Purchase\_Intention=4 if N\_Q413==3  
replace Purchase\_Intention=5 if N\_Q413==4  
replace Purchase\_Intention=3 if N\_Q413==5

label list N\_Q513  
replace Purchase\_Intention=1 if N\_Q513==1  
replace Purchase\_Intention=2 if N\_Q513==2  
replace Purchase\_Intention=4 if N\_Q513==3  
replace Purchase\_Intention=3 if N\_Q513==4

label list N\_Q96  
replace Purchase\_Intention=1 if N\_Q96==1  
replace Purchase\_Intention=2 if N\_Q96==2  
replace Purchase\_Intention=4 if N\_Q96==3  
replace Purchase\_Intention=5 if N\_Q96==4  
replace Purchase\_Intention=3 if N\_Q96==5

label list N\_Q115  
replace Purchase\_Intention=1 if N\_Q115==1  
replace Purchase\_Intention=4 if N\_Q115==2  
replace Purchase\_Intention=5 if N\_Q115==3  
replace Purchase\_Intention=3 if N\_Q115==4

label list N\_Q136  
replace Purchase\_Intention=4 if N\_Q136==1  
replace Purchase\_Intention=5 if N\_Q136==2  
replace Purchase\_Intention=3 if N\_Q136==3

label list N\_Q151  
replace Purchase\_Intention=2 if N\_Q151==1  
replace Purchase\_Intention=4 if N\_Q151==2  
replace Purchase\_Intention=5 if N\_Q151==3  
replace Purchase\_Intention=3 if N\_Q151==4

drop N\_Q213 N\_Q313 N\_Q413 N\_Q513 N\_Q96 N\_Q115 N\_Q136 N\_Q151



### \*Rename Age

```
rename Q64 Age  
replace Age = "70" in 76  
destring Age, replace
```

### \*Gen Gender

```
encode Q61, gen(N_Q61)  
drop Q61
```

```
gen Male=0  
replace Male=1 if N_Q61==2
```

### \*Gen Residence country

```
encode Q62, gen(N_Q62)  
drop Q62  
gen The_Netherlands=0  
replace The_Netherlands=1 if N_Q62==3
```

### \*Gen bachelor or higher

```
encode Q65, gen(N_Q65)  
drop Q65  
gen bachelor_or_higher=0  
label list N_Q65  
replace bachelor_or_higher=1 if N_Q65==1  
replace bachelor_or_higher=1 if N_Q65==6  
replace bachelor_or_higher=1 if N_Q65==7
```

### \*Gen married

```
encode Q66, gen(N_Q66)  
drop Q66  
gen married=0  
label list N_Q66  
replace married=1 if N_Q66==3
```

### \*\*sum involvement

```
tab involvement  
sum Average_Involvement if involvement==1  
sum Average_Involvement if involvement==0
```

### \*sum perceived length

```
tab Extensive  
sum perceived_length if Extensive==1  
sum perceived_length if Extensive==0
```

### \*sum negativity

tab negativity

sum negativity\_Q1 if negativity==1

sum negativity\_Q1 if negativity==0

### \*T-test

ttest Average\_Involvement, by (involvement) unequal

ttest perceived\_length, by (Extensive) unequal

ttest negativity\_Q1, by (negativity) unequal

### \*Cronbach's alpha

alpha Involvement\_Q1 Involvement\_Q2 Involvement\_Q3 Involvement\_Q4, std item detail

alpha Familiarity\_Q1 Familiarity\_Q2 Familiarity\_Q3 Familiarity\_Q4, std item detail

alpha Trust\_Q2 Trust\_Q1 Trust\_Q3 Trust\_Q4, std item detail

### \*\*\*Sample characteristics

#### \*HE

sum Age if involvement==1 & Extensive==1 & negativity==1

sum Male if involvement==1 & Extensive==1 & negativity==1

sum married if involvement==1 & Extensive==1 & negativity==1

sum bachelor\_or\_higher if involvement==1 & Extensive==1 & negativity==1

sum The\_Netherlands if involvement==1 & Extensive==1 & negativity==1

#### \*NLS

sum Age if involvement==0 & Extensive==0 & negativity==1

sum Male if involvement==0 & Extensive==0 & negativity==1

sum married if involvement==0 & Extensive==0 & negativity==1

sum bachelor\_or\_higher if involvement==0 & Extensive==0 & negativity==1

sum The\_Netherlands if involvement==0 & Extensive==0 & negativity==1

#### \*NHS

sum Age if involvement==1 & Extensive==0 & negativity==1

sum Male if involvement==1 & Extensive==0 & negativity==1

sum married if involvement==1 & Extensive==0 & negativity==1

sum bachelor\_or\_higher if involvement==1 & Extensive==0 & negativity==1

sum The\_Netherlands if involvement==1 & Extensive==0 & negativity==1

#### \*NLS

sum Age if involvement==0 & Extensive==1 & negativity==1

sum Male if involvement==0 & Extensive==1 & negativity==1

sum married if involvement==0 & Extensive==1 & negativity==1

sum bachelor\_or\_higher if involvement==0 & Extensive==1 & negativity==1

sum The\_Netherlands if involvement==0 & Extensive==1 & negativity==1

#### \*CHE

```
sum Age if involvement==1 & Extensive==1 &negativity==0
sum Male if involvement==1 & Extensive==1 &negativity==0
sum married if involvement==1 & Extensive==1 &negativity==0
sum bachelor_or_higher if involvement==1 & Extensive==1 &negativity==0
sum The_Netherlands if involvement==1 & Extensive==1 &negativity==0
```

#### \*CLE

```
sum Age if involvement==0 & Extensive==1 &negativity==0
sum Male if involvement==0 & Extensive==1 &negativity==0
sum married if involvement==0 & Extensive==1 &negativity==0
sum bachelor_or_higher if involvement==0 & Extensive==1 &negativity==0
sum The_Netherlands if involvement==0 & Extensive==1 &negativity==0
```

#### \*CLS

```
sum Age if involvement==0 & Extensive==0 &negativity==0
sum Male if involvement==0 & Extensive==0 &negativity==0
sum married if involvement==0 & Extensive==0 &negativity==0
sum bachelor_or_higher if involvement==0 & Extensive==0 &negativity==0
sum The_Netherlands if involvement==0 & Extensive==0 &negativity==0
```

#### \*CHS

```
sum Age if involvement==1 & Extensive==0 &negativity==0
sum Male if involvement==1 & Extensive==0 &negativity==0
sum married if involvement==1 & Extensive==0 &negativity==0
sum bachelor_or_higher if involvement==1 & Extensive==0 &negativity==0
sum The_Netherlands if involvement==1 & Extensive==0 &negativity==0
```

#### \*Total

```
sum Age
sum Male
sum married
sum bachelor_or_higher
sum The_Netherlands
```

#### \*Gen

```
gen w2=1 if Average_Familiarity>4
replace w2=0 if Average_Familiarity<=4
```

#### \*Rename

```
rename negativity x
rename involvement w1
rename Extensive w3
rename Purchase_Intention y
rename Average_Trust m
```

```
*gen  
gen w1x=x*w1  
gen w2x=x*w2  
gen w3x=x*w3
```