

Consumer-Brand Relationship Mapping

Testing the validity of a new consumer-brand relationship measurement in a low-involvement product category



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Preface

Dear reader,

Presented before you is my Master thesis that I have written with a lot of dedication over the last seven months. The present thesis is the final work of my Master Marketing at Radboud University.

I would like to express my thanks to my supervisor Dr. Horváth. The motivation and knowledge she has given to me have made it possible for me to establish a solid thesis.

In addition, I would like to thank all the respondents who participated in this study. Without these participants, it would not have been possible for me to conduct this study.

I hope you will enjoy reading this thesis. Besides, please do not feel constrained to get in touch in case you have any additional questions.

Kind regards,

Ilse Boers

Nijmegen, June 14, 2021

Abstract

In recent decades, research has been done on making consumer-brand relationships measurable, but it has been proven difficult to develop a measurement that measures both the relationship between the consumer, and the brand and between different brands in the same product category. To fill in this gap in the literature, a new technique was developed to measure consumer-brand relationships, named Consumer Brand Relationship Mapping (CBRM). This measure can be used to measure the relationship that consumers have with a specific brand in a specific product category. In order, to test whether this measurement method remains valid when it is digitalized and used in a low-involvement category, 2 independent studies were conducted for this research. By means of these studies, the validity of the method was examined and the evaluation in comparison with a Likert-scale, when using the construct brand attachment. The results of this study indicate that the digitalized CBRM achieves higher results in terms of enjoyment and reflectiveness. In addition, the results show that there is a small positive correlation between the brand attachment levels of the CBRM and the loyalty indicators. Based on this research, it can be assumed that the e-CBRM method remains valid when applied in a low-involvement product category.

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1. Introduction

Today's consumer market has numerous different products available. These different products are usually offered in a variety of brands (Babutsidze, 2011), ensuring that the choice of brands available to the customer is extensive (Keller, 2001). As a result of many competitors in the market, a brand needs to become the preferred brand. In order to become the preferred brand for the consumer, it is important to create customer-brand relationships. Through such a relationship a bond can be created that will bring the consumer and the brand closer together (Veloutsou & Moutinho, 2009).

Academic research shows that consumers can build (emotional) relationships with brands (Veloutsou, 2010; Swaminathan, Page & Gürhan-Canli, 2007; Thomson, MacInnis & Park 2005). A customer-brand relationship not only ensures that the brand is positioned in the mind of the consumer, but it is also essential for the long-term success of an organization. For example, it can contribute to organizational outcomes such as greater sales, better loyalty, higher margins, and gaining competitive advantage (Chang et al., 2006; Hess, Story & Danes, 2011; Kim, Lee & Lee, 2005). Furthermore, it is more profitable to maintain and build a relationship with existing customers than seeking new customers (Kim et al., 2005). In addition, brand relationships can help to understand how the brand is involved in the life of consumers (Breivik & Thorbjørnsen, 2008). Therefore, maintaining consumer-brand relationships has become an important element of today's marketing. To maintain these relationships, relationship marketing strategies are crucial. In order to formulate and pursue these strategies, insights and measurements of the consumer-brand relationship are of great importance (Papista & Dimitriadis, 2012).

1.1 Problem statement

In recent decades, research has been done on making consumer-brand relationships measurable (Fournier, 1998; Veloutsou, 2007), but it has been proven difficult to develop a measurement that measures both the relationship between the consumer and the brand, and between different brands in the same product category. These difficulties arise because every consumer-brand relationship is unique. They are incomparable because each relationship is formed by particular characteristics. (Hess and Story, 2005). Currently, techniques as face-to-face in-depth interviews (Kim et al, 2005), focus groups (Papista & Dimitriadis, 2012) and Likert scaling (Hess & Story 2005; Breivik et al, 2008) are being used to measure the consumer-brand relationships. The developed techniques measure the brand as if it was the only brand the consumer knows about and is attached to within the product category in question (Albert &

Merunka, 2013). However, it has been shown that customers can feel connected to multiple brands of the same product category (Fournier & Yao, 1997). Thus, to measure the attachment of multiple products in the same category, researchers will need to administer multiple questionnaires to the respondents. This can be very time-consuming and the respondent may get bored or lose focus. In addition, current measurement techniques measure brand relationships without taking into account the competitive environment. Which makes it difficult to understand the overall consumer-brand relationship. The literature lacks a reliable, valid and generalizable measurement instrument that measures the customer-brand relationship on all aspects in a given product category, in a less time-consuming way and taking the competitive environment into account.

To fill in this gap in the literature, a new technique was developed to measure consumer-brand relationships. This technique, named Consumer Brand Relationship Mapping (CBRM), can be used to measure the relationship that consumers have with a specific brand in a specific product category. In addition, it also shows the relationship of the customers with the brands that the customer has in his/her consideration set of a particular product category (Buunk, 2020; Fandridou, 2020; van der Ven, 2020). This can provide insight into how attached a consumer is towards a brand and how the brand relates to other brands. Previous research on the CBRM method has been done in two different high-involvement product categories: beer and cars. Further research and research in different product categories is needed to test the validity of the method. Since the CBRM method has only been tested with high-involvement products, it is unknown whether the technique remains valid when applied in a low-involvement product category. There is a need to test the CBRM method in a low-involvement product category because research indicates that consumer brand behavior differs with different levels of involvement (Villar, Di Ai & Segev, 2012). High-involvement products require more search activity, price comparison, and evaluating the quality of the product compared to low-involvement products. In addition, the consumer's perception of the brand has a greater influence with low-involvement products than with high-involvement products (Kim & Chao, 2019). Even though the consumer buys a low-involvement product with minimal effort and the purchase of the products are carrying low risks or low value for the consumers, branding is still important (Kim & Chao, 2019; Ndubisi & Moi, 2006). Since, it is proven that brand awareness can ensure that the consumer typically selects the product based on the familiarity of the brand (Radder & Huang, 2008).

It has been shown that brand attachment plays a critical role in the brand-building process and positively influences the purchase intention of low-involvement products (Kim & Chao, 2019). Brand attachment can be related to several aspects, for example, satisfaction, trust, commitment, and loyalty (Belaid & Behi, 2011). In addition, brand attachment can predict successful relationships, and it influences multiple performance outcomes (Park et al., 2010; Park et al., 2006). Therefore, brand attachment is considered to be a suitable construct to test the validity of the CBRM method once applied in a low-involvement product category. In addition, repeated purchase intention (RPI) and positive word-of-mouth (PWOM) will be included in this study to test the construct validity of the measure. These will be included since the literature confirms that brand attachment can affect these factors (Kim & Chao, 2019; Park et al., 2010; Park et al., 2006).

Since consumers are generally less interested in low-involvement products, there is a chance that consumers do not know any brands at all about this product category. In order to conduct research on the CBRM method, the respondents must be able to name some brands from a product category. Furthermore, there are contradictions in the literature regarding products that are considered low-involvement (Kuenzel & Musters, 2007; Mittal & Lee, 1989). In order to gain more insight into this issue, a preliminary study was conducted. Based on the preliminary study, it was chosen to use the product category "*pasta*" in this research. The details of this preliminary study can be found in the chapter methodology.

Concluding the aim of this research will be to test the validity of the CBRM method once applied in a low-involvement product category when focusing on the construct brand attachment. It will be interesting to test the CBRM method in a low-involvement product category because, as mentioned above, there are many differences between high and low-involvement products. In addition, it is interesting to discover whether the CBRM method can be applied in a low-involvement product category.

Therefore, the following research question is formulated:

Does the Consumer-brand relationship mapping method remains valid once it is applied in the low-involvement product category pasta?

1.2 Theoretical relevance

The present study contributes to the literature in 3 ways. First, the validity of the CBRM method is empirically tested for the first time with a low-involvement product in another product category. It was investigated whether this model is also applicable in low-involvement product

categories. Second, the model has proved to provide a better understanding of the complex relationships of consumers and brands in a low-involvement product category. Finally, the tested model enhances the understanding of brand relationships in a competitive environment. The method provides researchers to measure and investigate these relationships in an easier and validated way.

1.3 Practical relevance

The findings of this research are expected to help researchers and marketing managers to better understand the interaction that consumers have with brands in the same category, in the context of low-involvement products. By mapping this out, marketing managers will be able to improve their current brand, manage the positioning of the brand or reconstruct their brand strategies. Therefore, through this measurement method, new opportunities may be seen for low-involvement products. By doing so, these parties enhance their ability to respond to these opportunities, something which may lead to competitive advantages and growth of their sales.

1.4 Outline

The structure of the thesis consists of the following chapters. After the introduction, the literature review will follow, where all the major concepts of the thesis will be explained. Next will be the third chapter where the method and the 2 different studies that will be conducted will be explained. Here a description of the data analysis, sample selection, and research ethics will also be found. The fourth chapter will contain the results of this study. Finally, the conclusion, discussion, managerial implications, and suggestions for further research follow in the fifth chapter.

2. Literature review

In this chapter, the main concepts will be discussed in more detail. First, customer-brand relationships and brand attachment will be discussed in more depth. Next, a theoretical background of low-involvement products is given since this study focuses on these types of products. Finally, a detailed description will be provided about different consumer-brand relationship measurements.

2.1 Consumer-brand relationships

Consumer-brand relationships have become a competitive need and the dominant factor of marketing (Hess & Story, 2005). The consumer-brand relationship can be described as a bond between a person and a brand that is voluntary or enforced by the person and the brand itself (Blackston, 2000; Frontier, 1994). A brand relationship can be created, among other things, by the experience the consumer has with the brand's product. If this experience is positive, a relationship can be established. (Chang et al., 2006).

2.2 Brand attachment

Research in marketing has shown that consumers develop attachments to brands (Fournier 1998). In the literature, a distinction is made between different brand attachment measures. Thomson, MacInnis, and Park (2005) develop a measure of emotional attachment. They defined emotional attachment as *'having positive feelings of affection, passion, and connection for a brand'* (Thomson et al., 2005, p). Emotional brand attachment is thus about the bond that consumers have with a particular brand. In addition, it also encompasses the feelings that a customer has toward a brand (Malär et al., 2011). Additionally, on the emotional brand attachment scale, there is also a brand attachment scale. While the emotional brand attachment scale measures the feelings that are associated with attachment, the scale from Park et al. (2010) is more focused on cognitive dimensions of a brand's accessibility, and how the brand is associated with the consumers' identity (Dunn & Hoegg, 2014). Park et al. (2010) state that brand attachment is a marketing construct that can be defined as *'the strength of the bond connecting the brand with the self'* (Park et al., 2010, p2). The aforementioned brand attachment can be divided into two factors: brand prominence and brand-self connection (Park et al., 2010). Brand prominence reflects the thoughts and feelings that a consumer has with a brand. These thoughts and feelings can subsequently create cognitive links that will connect the brand with the self (Park et al., 2010). Brand-self connection describes the idea that attachment is about the bond between the brand and the self that involves cognitive and emotional connections (Chaplin and John, 2005; Escalas, 2004). These brand-self connections can occur because the

consumer can identify the brand with the self; the brand is similar to how the consumer sees themselves or the brand can help the consumer with personal goals in life (Park et al., 2010). Brand attachment can thus be seen as a match between the consumer's identity and the brand's identity.

Brand attachment can lead to different outcomes, such as commitment, trust, loyalty, and brand love (Park, MacInnis, & Priester, 2006; Thomson et al., 2005; Loureiro, Ruediger, & Demetris, 2012; Belaid et al., 2011). Even though brand love is also a brand relationship construct, the literature indicates that brand attachment is an essential element to create brand love. Therefore, to create brand love, brand attachment is needed (Batra, Ahuvia & Bagozzi, 2012; Japutra, Ekinici & Simkin, 2014). Furthermore, it has been proven that when consumers have a strong attachment towards a brand this can be favorable for companies, because this can lead to repeated purchases, increased usage of the brand, positive WOM and can serve as a buffer when a company commits a misstep (Rajaobelina et al., 2021; Rossiter & Bellman, 2012; Smalz & Orth, 2012).

2.3 Positive Word of mouth and repeated purchase intention

Positive word of mouth can be seen as informal communication about products and services between different consumers (Rajaobelina et al., 2021). It can be defined as: ‘*informal, person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product an organization or service*’ (Harrison-Walker, 2001, p70). Word of mouth communication can be negative or positive in nature. However, marketers are of course usually only interested in creating positive word of mouth, such as recommending the brand to other consumers. Therefore, this study will also focus only on word of mouth that is positive in nature (Brown et al., 2005).

Repeated purchase intentions are the likelihood that a consumer will continue to purchase a product from the same brand (Chiu et al., 2014). This also means that the consumer chooses the relevant brand over another brand in the same product category (Castro et al, 2018).

Repeated purchase intentions have been used as indicator/measurement in previous research since they have proven to have quite some influence on the business performance and profitability of a company (Kuo, Hu & Yang, 2013).

2.4 Low-involvement products

Low-involvement products can be defined as ‘*products which consumer purchase on a regular basis, with a minimum of thought and effort, because they are not of vital concern nor have*

they any great impact on the consumer's lifestyle' (Ndubisi & Moi, 2006, p29). Unlike high-involvement products, customers do not spend a long time thinking when purchasing low-involvement products. In addition, these products are often purchased by consumers and carrying low risk or low value (Kim & Chao, 2019). Furthermore, in contrast to high-involvement products, consumers rarely compare or evaluate the alternatives when buying a low-involvement product (Gu et al., 2012). Therefore, the level of product involvement is about the consumer's perceived importance of, and interest, in a specific product. In general, the level of product involvement varies among consumers. This is because of the different desires and needs of a consumer, which results in various purchasing processes. The characteristics of a product plays hereby a significant role (Gu et al., 2012).

Previous research has shown that high and low-involvement products can be classified based on the expected risk the consumer has when he or she purchases the product (Hoyer & MacInnis, 2008). As mentioned before for low-involvement products are the risks low and are the consequences for making a wrong decision small. However, because this can vary from consumer to consumer, it is difficult to determine what exactly is a high or a low-involvement product.

2.5 Consumer-brand relationship measurements

Besides the recently developed CBRM method, other measurement tools in the literature can be used to measure the consumer-brand relationship. In this research, the 3 most common ones are discussed. The advantages and disadvantages of these measuring methods will be highlighted.

2.5.1 In-depth interviews

An in-depth interview is a qualitative research method. This measurement method is one of the most widely used. Qualitative research can ensure that the brand becomes more human through the personal interaction of this technique (Papista & Dimitriasdis, 2012) With this method, (open-ended) interviews are conducted with consumers to gain more insights into the brand relationship in an explorative way (Fournier, 1998). The advantages of this technique are that the interviewer can synthesize a lot of rich data from the interviewee with useful insights. This is mainly because the interviewee can provide more clarifications of the answers than in a quantitatively focused method (Boeije, 2005; Brown, 2010). Furthermore, these explanations also allow the researcher to address and understand more complex problems (Papista & Dimitriasdis, 2012). The disadvantages are that this technique is very time and money-consuming, making it difficult to collect enough data to generalize the results. In addition, due

to the large amount of information obtained with this technique, it is difficult to process the data (Brown, 2010).

2.5.2 Focus groups

The focus group technique is also a qualitative research method and can be defined as *‘a type of group interview where a small group of individuals are gathered together for the purpose of discussing one (or sometimes more) topic of interest’* (Barrows, 2000, p. 193). This technique has become increasingly popular and is widely used for market research in various sectors (Masadeh, 2012). The focus group discussion will be led by a moderator who will ask prearranged open-ended questions. Whereupon the group will then engage in a discussion with each other about the specific topic (Prince & Davies, 2001). Compared to in-depth interviews, focus groups can elicit more honest and spontaneous responses. This is because the group dynamic can cause participants to be more motivated to clarify their answers and ideas about the specific topic more (Papista & Dimitriadis, 2012). In addition, another advantage of this measurement method is, as with in-depth interviews, that the measurement makes it possible to investigate the complex behavior, and motivations of this behavior in order to understand the consumer-brand relationship (Papista & Dimitriadis, 2012). Disadvantages of a focus group are that analyzing the output of the focus group takes a lot of time, is relatively complicated, and is therefore quite expensive (Schmidt, 2001). Besides, focus groups usually use small samples so the data may not be representative of the rest of the population (Masadeh, 2012).

2.5.3 Likert Scales

The Likert scale technique is a quantitative method that partially avoids the disadvantages of qualitative methods. It is the most widely used technique for confirmatory research on consumer-brand relationships (Belaid & Behi, 2011). The Likert scale is usually used with a 5-point or a 7-point scale. The rating scales are ordered from ‘totally agree’ to ‘totally disagree’ (Chimi & Russel, 2009; Veloutsou, 2007). An advantage of this measurement is that it is more likely that the respondent will give a more honest answer to sensitive questions than with a qualitative method. So socially desirable answers will occur less frequently (Chimi & Russel, 2009). Furthermore, a lot of data can be collected in a relatively quick way, which ensures that a large sample can be collected. This large sample enables the results to be more generalizable (Blackston, 1993; Nemoto & Beglar, 2014). Even though this method makes it less possible to give socially desirable answers, a downside of this method is that there is less opportunity for the respondent to clarify answers. Likert scales will therefore be less suitable for answering complex questions, as they offer less in-depth insights (Nemoto & Beglar, 2014).

2.6 Consumer-brand relationship mapping

To overcome the main disadvantages of the aforementioned measurement scales; such as the time-consuming aspect and the difficulty to gather enough data of qualitative measurement techniques and the fact that none of the measurement techniques takes the competitive environment into account when measuring the consumer-brand relationship, a new measurement method has been developed, namely the Consumer-Brand Relationship Mapping method (CBRM). The CBRM exists of 2 different stages; the preparation stage and the mapping stage. These different stages will be explained in more detail in the methodology chapter.

The purpose of this study is to test the validation of the previously developed method once it is applied in a low-involvement product category. To test the validity of the new measurement technique, this study will also use an already existing measurement technique; Likert scaling. This technique was chosen because Likert scaling and the CBRM method both use a quantitative approach. The results of both methods will be compared and analyzed to see if there are any significant differences. In this way, the research question will be able to be answered.

2.7 E-Consumer-brand relationship mapping

In the previous studies of the CBRM method, data collection was done physically. Therefore, the researchers had direct contact with the respondents and also asked the respondents questions during the process. This made for in-depth answers, but there is also a chance that socially desirable answers were be given (Chimi & Russel, 2009). In addition, this process was very time-consuming, so fewer respondents could be collected in a given period. To avoid these drawbacks in this study and to make the process more quantitative, the CBRM was digitized (e-CBRM). A website has been developed where the 'mapping' part of the method can be performed. In this way, more respondents could be reached and there was no interaction between the researcher and the respondent.

3. Methodology

This section will first explain the preliminary study conducted in order to determine the category of the low-involvement product. Next, the two studies conducted for this research will be discussed. Afterward, the pre-test, data analysis, sample, and research ethics will be outlined.

3.1 Preliminary study

Prior to the two studies of this study, a small preliminary research was performed to determine which low-involvement product will be used. However, important for this study was that respondents also needed to know at least two brands in this product category. The survey included 3 product categories. The first two product categories come from a study by Kuenzel & Musters (2007). This research has attempted to investigate the involvement level of products of grocery products, by using the questionnaire of Mittal and Lee (1989). The results of the study showed that the grocery products pasta and bouillon cubes have a low level of involvement (Kuenzel et al., 2007). These product categories were therefore included in the survey. In addition, the product category toilet paper was also included in the survey, because it was assumed to have a relatively low level of involvement.

The survey was conducted online and the introduction to the survey explained the purpose of the questionnaire. In addition, it was emphasized that the respondents' given information would be treated confidentially. Next, the respondents were shown in turn a product category (toilet paper, pasta, bouillon cubes) and they had to indicate which brands of the corresponding product category they knew, how many brands they knew in total and they had to indicate how involved they were with the product category. Finally, some demographic data were asked, such as age and gender.

In order to measure the product category involvement, the previously developed scale of Schneider & Rodgers (1996) was used. This measurement scale is designed to measure the personal relevance and importance of a product to the consumer. The 7 questions were asked on a 7-point Likert scale ranging from 1 'strongly disagree' to 7 'strongly agree'. The survey can be seen in Appendix 1.

The survey had a sample of $N = 35$, 11 men and 24 women. Before analyzing the results, it was first examined whether there was enough internal consistency between the survey questions. This was done by calculating Cronbach's alpha. Table 1 shows these Cronbach's alphas and it can be concluded that there is enough internal consistency between the survey questions, because all of them scored above the given standard of $\alpha = > .06$.

Table 1: Results of preliminary study

	Pasta	Toilet paper	Bouillon cubes
Cronbach's Alpha Levels	,865	,735	,755
The average number of brands mentioned brands	2,8	2,4	1,9
Level of product category involvement	3,3	2,9	2,3

The average involvement level for each product category was calculated from the product category involvement dimensions. Afterward, the average number of brands that respondents had listed for each category was also calculated. From these results, provided in Table 1, it can be concluded that on average, respondents could name most brands of the product category pasta. In addition, the results showed that on average bouillon had the lowest product category involvement. Pasta and toilet paper had a slightly higher involvement level, but the average difference was not very large. Because it was considered important for this study that the respondents could name at least two brands within the product category, it was decided to value the average of the number of brands mentioned more than the level of product category involvement. Therefore, the product category pasta was chosen because respondents could name an average of 2,8 brands, and in addition, pasta had also a relatively low level of product category involvement.

3.2 Study 1: Consumer-Brand Relationship Mapping

In the first study, the Consumer-Brand Relationship Mapping method was applied. As previously mentioned, this method was digitized for this study, so this method will be referenced from now on as e-Consumer Brand Relationship Mapping (e-CBRM). With the e-CBRM method, an online map was created that shows all the relationships between the consumer and the different brands in a specific product category. In this study, the e-CBRM was tested with a low-involvement product. The product category '*pasta*' was used for this purpose. Study 1 consisted of 4 stages. The first two stages are the preparation stage and the mapping stage, this involved the e-CBRM method. Then for the validation of the e-CBRM method, there was an insight creation stage and an analysis stage. These four stages will now be explained first.

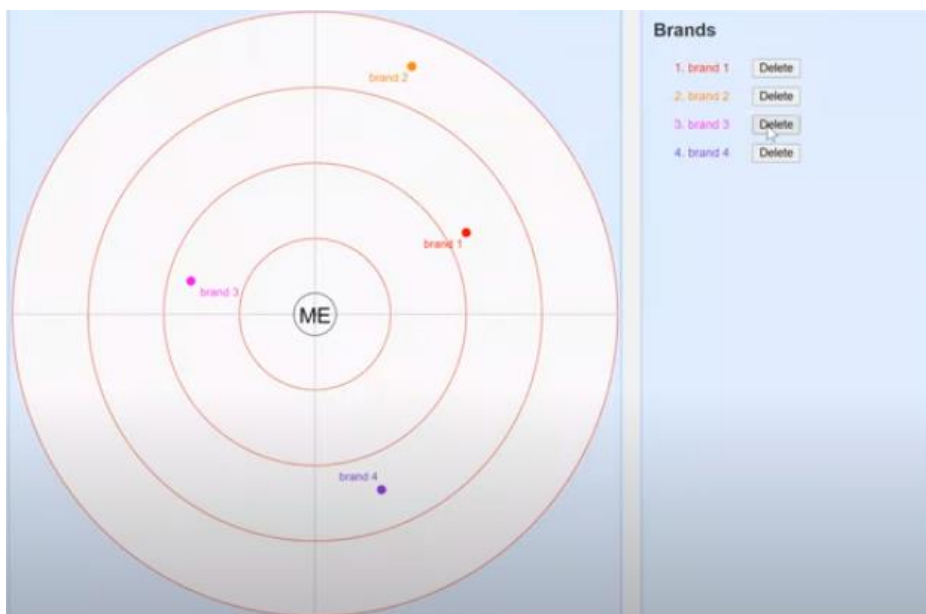
3.2.1 Preparation stage

This first phase was designed to explain and clarify the method to the respondents. The entire method was conducted online, in this way the researcher did not influence answers given by the respondent. Since the survey was conducted online, the explanation of the method was in the form of an introduction at the start of the survey. In the introduction, it was pointed that the research was about the attachment that respondents have about brands in the pasta category. Furthermore, it was explained that on the next page the respondents had to place brands of the pasta category in a target. The placement of the brand was done through the use of a circular map with the word 'me' written in the middle (see Figure 1). The respondents could place a brand by clicking on a spot in the target where the respondent wanted to place the brand. The closer the respondents placed the brand to the center of the target ('me') the more attached the respondent was to the brand. So the closer the respondent placed a brand to the 'me' the higher the level of attachment. Furthermore, brands that are placed close to each other are seen as having a similarity in attachment. Brands that were placed far from the 'me' were seen as brands that respondents were not very attached to. An overview of the introduction can be seen in Appendix 2.

If a respondent wanted to change a brand, they could remove the brand and place it again in the target. The introduction also included a video where the respondent could watch the procedure of the placement.

All respondents were given the same information in the introduction before starting the mapping stage. This was done to ensure standardization.

Figure 1: e-Consumer-Brand Relationship Map



3.2.2 Mapping stage

When the respondent had read the introduction and explanation completely, the respondent could click on a button (start). The respondent was then taken to the page where the mapping took place. First, a pop-up message appeared. The message explained that the respondent had to place every pasta brand they could think of in the circle. In addition, it was pointed that it could be any pasta brand; large, small, national, international, popular, or not popular. The respondent was asked to name at least 2 brands and it was indicated that a maximum of 7 brands could be filled in. In addition, the respondent was asked to remember the brand they placed closest to the 'me' and a randomly placed brand, as they would need them later in the survey, see Appendix 2 for an overview of the method. The respondent could start the mapping stage by clicking 'start'. The text of the pop-up was also shown above the mapping circle, so the respondent could read it back when they were in the process of mapping. There was no time limit during the mapping stage. So the respondent had all the time to complete the circle and therefore had no time constraint. However, the time about how long the respondent was working on the circle was measured, this was not visible to the respondents. When the respondent reached the maximum or did not know any more brands the respondent had to click 'Submit' and the respondent was taken to the next page. Here the respondent was explained that the first part of the survey was finished and that when the respondent was ready they could go to the second part of the survey. By clicking 'continue', the respondent was directed to the second part of the survey that took place in Qualtrics.

3.3 Study 1: Validation e-Consumer-Brand Relationship Mapping

After the phases of the e-CBRM method were completed, these results had to be validated.

This is carried out through the following 2 stages; the Insight creation stage and the Analysis stage.

3.3.1 Insight creation stage

The data for the insight creation stage was conducted in Qualtrics, covering the following topics; evaluation of the method, questions about the measuring of brand attachment from the brand the respondent placed closed to 'me' and a randomly picked brand, questions about related constructs (positive word of mouth and repurchase intention) also about the favorite and a randomly picked brand, involvement of the product category and some demographic questions.

For the evaluation of the method the focus was on 5 dimensions; ease of use, perception of effort, enjoyment, perception of time, and reflectiveness. For the dimensions perception of

effort and time, the previously created, valid, and reliable scale of Leroi-Werelds et al. (2014) was used. For the other dimensions, self-created questions and questions already used in a previous study related to the CBRM method were used (Ven, 2020).

In order to, measure brand attachment, the scale of Park et al. (2010) was adopted. Park et al. (2010), developed a reliable and valid scale that measures the emotional attachment a consumer has with a brand. The scale developed consists of 10 indicators. Park et al (2010) describe in their article that emotional brand attachment consists of two different constructs, brand-self connection, and brand prominence. Since it was important in this study to measure the connection a respondent has with a brand, it was decided to only include the five indicators on brand-self connection in this study. In addition to measure product category involvement, the same scale of Schneider & Rodgers (1996) of the preliminary research was used.

For the related constructs, a previously developed and tested scale was also adopted. For the items of PWOM and RPI, the scale of Zeithaml, Berry & Parasuraman (1996) was used. An overview of the survey can be found in Appendix 3.

For all questions in each subject, except for the demographics, respondents were asked to give a score on a 7-point Likert scale. After the respondent completed the entire questionnaire, the respondent was thanked and there was given an e-mail address where the respondent could send an e-mail if there were any questions or doubts about the questionnaire.

3.3.2 Analysis stage

The data collection was done on the website of the e-CBRM and in Qualtrics and was therefore in two different places. So it had to be combined first. In the e-CBRM method, the attachment scores of the placed brands were calculated from the coordinates given to the place where the brand was placed in the circle. Since the e-CBRM method gave two coordinates based on the placement of the mark, it was necessary to convert these coordinates into one attachment score. For this the Pythagoras' equation ($c^2 = a^2 + b^2$) * 7/100) was used. This was necessary so analyses could be made with the attachment score. The circle gave a score between 0 and 7, whereby a lower score indicated a higher attachment level and thus a higher score indicated a lower attachment level. The data was then analyzed in IBM SPSS.

3.4 Study 2: Traditional measure

For the second study of this research, only the Likert scale technique was used. In which this study refers to 'the traditional measure' when it concerns the Likert scale technique of study 2. Study 2 was designed to also measure respondents' brand attachment, but this time with only

the use of a Likert scale. The questions given to the respondents were the same questions as those of the e-CBRM Likert scale questionnaire. Therefore, the same items were used in this study. Study 2 consisted of two stages; the data collection stage and the analysis stage. In order to compare the results with those of study 1, study 2 also examined the relationship with the product category *pasta*.

3.4.1 Data collection stage

An online questionnaire through Qualtrics was created for the data collection. At the beginning of the questionnaire, a small introduction was given to introduce the topic and the purpose of the study. A brief explanation was provided, mentioning that the respondent should think of brands in the pasta category and that this could be any brand they could think of. Afterward, it was indicated that after each brand they listed, the respondent was shown 5 statements that they had to fill in based on the brand they had just mentioned. The survey in Qualtrics was made in such a way that the brand the respondent had mentioned was also visible in these statements. The respondents could fill in a maximum of 12 brands. When they did not know any more brands they could indicate this in the survey and be directed to the next part of the survey. The respondent was asked to name at least 2 brands. Once the respondents completed this part of the survey, they were directed to the next part of the survey where they were also asked the questions on the following topics; evaluation of the method, questions about the measuring of brand attachment of the brand the respondent is most attached to and a randomly selected brand, questions about the related construct (PWOM and RPI), product involvement and some demographic questions. In this study, the same scales as in study 1 were used. See Appendix 4 for the survey.

3.4.2 Analysis stage

After enough respondents were collected, the data was analyzed in IBM SPSS. Due to the fact that the attachment scores of this study were different from study 1, they first had to be reversed before analyses could be done. In this study, a high score also meant a high attachment level and in study 1 it was exactly the other way around. Therefore, the attachment scores of study 2 were reversed. The analysis of the results will be discussed later on.

3.5 Pre-test

A pre-test was conducted for both studies. This pre-test was done to ensure that there were no ambiguities in the survey and that there was no confusion or difficulty within the questions. On April 15, study 1 was pre-tested with a fellow student from the Radboud University and with another acquaintance of the researcher. One tested the e-CBRM method and the

accompanying survey on his phone and the other on her laptop. Both took the time to read the introduction carefully and watch the accompanying video. Based on this pre-test, several adjustments were made to the introduction test and the pop-up text of the e-CBRM. For example, one of the respondents did not quite understand what 'ME' meant, because it was written in capital letters, she thought it was an abbreviation. This was adjusted in the introduction text. In addition, one of the pre-testers did not remember which brand he had placed closest to the 'me' in the circle when he had to fill this in for the question in the Qualtrics section of the study. As a result, it was added to the pop-up text of the e-CBRM that respondents had to remember this brand and another randomly chosen brand. Furthermore, it could be assumed that the respondents had a good understanding of what they needed to do while completing the e-CBRM. In addition, it was also clear to the respondents that after the e-CBRM part, they had to click through for the second part of the study in Qualtrics. On the same day, the questionnaire of study 2 was also tested. This was done with two fellow students also from the Radboud University. In this case, 1 pre-tester also made the survey on her laptop and the other on his phone. The respondents understood what the purpose of the survey was after reading the introductory text and understood that they had to mentioned brands. One respondent indicated that they did not fully understand the location of the method evaluation questions, as there were more questions about the brands afterward. Therefore, the text was slightly modified to make it a little clearer that first the method is evaluated and afterward there will be other questions that are not related to the measurement method.

3.6 Data analysis studies 1 & 2

After both studies were completed and all data had been collected, the data had to be cleaned and structured in a way that it could be analyzed in SPSS. First of all, it was analyzed if there were any respondents who had not completely filled out the survey. In study 1 ($N = 103$) 12 respondents and study 2 ($N = 180$) 79 respondents had to be removed because they had not completed the survey completely. In addition, 2 respondents in study 2 had not filled in any brands but only put an X, therefore it was decided to remove these respondents as well because these given results of these respondents were not reliable information. This leaves study 1 with an $N = 91$ and study 2 with an $N = 99$. Despite the fact that a different N was conceived in advance (at least $N = 100$ for both studies), it was decided to continue with this sample due to time limits. Nevertheless, enough data was collected to do analyses with the data. The results of the analysis will be discussed in the results section, but here it will be briefly explained which analyses were done. First, a Cronbach's alpha analysis was performed for all scales to measure

the internal consistencies between the different items. Afterward, comparisons between the means of the two different studies were made. This involved looking at the difference between the average number of brands mentioned by the respondents. Afterward, how long it took for the respondents to finish the method. It should be mentioned here that study 1 did measure separately how long the respondent spent with the e-CBRM method and then with the Qualtrics survey. However, this was not done in study 2, where only the time of the entire survey was measured, which is why only the average of the entire time spent by the respondents in study 1 was compared to study 2. In addition, the 5 dimensions that had measured the evaluation of the method were compared. This comparison had been done with an independent t-test. Afterward, it was examined whether the comparison remains significant when controlled by control variable by means of an ANCOVA. The control variables that were used were age, gender, level of education, and product category involvement. It should be noted here that the sample of this study is very one-sided, which should be taken into account when interpreting and generalizing the results of the ANCOVA.

For the validation of the method, several independent, paired-sample t-tests and Pearson's correlation tests were conducted to compare whether there was a difference in the attachment level of the participant's favorite brand (most attached) and the randomly selected brand and if there was a correlation between the levels of attachment and the PWOM and RPI levels. Comparisons were made within study 1 because two different measurement techniques had been used there, and between study 1 and study 2.

3.7 Sample study 1 and 2

For this study, the snowball technique was used to collect respondents. This means that friends, family, and acquaintances were asked to fill in the survey. Respondents were then asked if they could forward the survey to their contacts. The questionnaires of both surveys were spread via Facebook, WhatsApp, LinkedIn, and through a flyer with a QR code that leads to the website of one of the surveys. These flyers were distributed in the neighborhood of the researcher in Nijmegen. This technique was chosen because during the data collection period there was a lockdown in the Netherlands due to the COVID-19 pandemic. As a result, it was very difficult to get in touch with other respondents. During data collection, there were no further distinctions made in age, gender, and other demographic characteristics. Table 2 shows the demographics of both studies. In both studies, it can be seen that there is a difference between the number of men and women who completed the survey. In study 2 this difference is the largest. In addition, both studies show that the age groups 'Under 25' and '25 - 35' are well represented. Few

respondents were collected from the other age groups. Furthermore, level of education is also examined. Here it can be noticed that most of the respondents are highly educated. In both study 1 and 2, none of the respondents indicated intermediate or lower education as the highest level of education. Therefore, it can be concluded that for both studies, most respondents are women, young adults, and highly educated. The one-sidedness of the sample distribution can be linked to the use of the snowball technique because all the respondents can now mainly linked back to the researcher.

Additionally, the average product category involvement per study was also examined. This shows that for study 1 ($M = 2,59$; $SD = 1,15$) and for study 2 ($M = 2,79$; $SD = 1,16$) the average involvement is around 2,6. The highest score that respondents could fill in for this scale was 7. Therefore, it can be assumed that respondents were not highly involved with the product category pasta.

Table 2: Demographics of the sample

Gender	N	Percentage	N	Percentage
Men	37	41,1	26	26,3
Women	53	58,9	73	73,3
<i>Total</i>	90	100,0	99	100,0
Age				
Under 25	36	40,0	62	62,6
25 - 35	49	54,4	31	31,3
36 -45	1	1,1	1	1,0
46 - 55	1	1,1	3	3,0
56 - 65	2	2,2	1	1,0
Older then 65	1	1,1	1	1,0
<i>Total</i>	90	100,0	99	100,0
Level of education				
MBO	3	3,3	3	3,0
Bachelor (HBO / WO)	36	40,0	52	52,5
Master (HBO / WO)	51	56,7	42	42,4
PhD	x	x	1	1,0
Other	x	x	1	1,0
<i>Total</i>	90	100,0	99	100,0

3.8 Research ethics

First, the respondents were not influenced or disturbed by the researcher while making the survey. The survey was conducted online, so the respondents did not need help from the researcher either. Second, in the introduction to the surveys of both studies, it is stated that the information given by the respondents will be treated confidentially. Therefore, it can be

assumed that the respondents gave honest answers. In addition, it was also indicated that the respondent could quit the survey at any time and the respondents were assured that participation in the study was completely voluntary. Finally, the information obtained will only be used for this study and the anonymity of the respondents is guaranteed.

4. Results

This chapter will discuss the results of study 1 and 2. First, the results of the evaluation of the method will be described. Then the results of the validation of the method will be examined, in which the brand attachment results will be discussed.

4.1 Evaluation of the methods

Prior to the analysis, the data of several questions had to be reversed, because these questions were asked in reverse order. For the questions of the evaluation of the method a 7-point Likert scale was used, running from 1 'strongly disagree' to 7 'strongly agree'.

Firstly, the time it took the respondents to complete the study was examined. Here it should be mentioned that in study 2, only the time it took the respondent to complete the entire survey was measured. Therefore, there was no separate measurement of how long the respondent spent with the method itself. This time was only measured in study 1. In order to be able to compare the results, the choice was made to also use the time the respondent needed to complete the entire survey for study 1. On average, it took respondents 7.25 minutes ($M = 7,25$; $SD = 2,86$) to complete the e-CBRM and the survey. This average arrived after the outliers were removed. One participant took 76.62 minutes to complete the survey and another took 25.18 minutes. These times are so far from the mean that these times were not considered reliable, therefore these were excluded from the analysis. In comparison, in study 2 the respondents spent on average 5.71 minutes ($M = 5,71$; $SD = 2,51$) on the survey. With this study, the outliers also examine first. In doing so, 5 outliers were indicated which were too far from the mean. The largest outlier had a time of 20212.48 minutes and the smallest outlier had a time of 16.57 minutes. These times were not included in the analysis for the same reason as for study 1.

In order to determine if there was a significant difference between the duration of the two studies, an independent t-test was conducted. Before this t-test could be conducted, the Q-Q plot and boxplot were examined. Here it could be examined that the durations scores were normally distributed and there were no more outliers. In addition, the independence of observations was checked and this was in order. Since Levene's test was not significant ($p = ,313$) it may be assumed that the variances are equal in both groups. Therefore the assumption of homogeneity of variances is met. The t-test indicates that there is a significant difference ($t(180) = 3,880$; $p < .000$) between the duration of the various measurement methods in study 1 ($M = 7,25$; $SD = 2.86$) and 2 ($M = 5,71$; $SD = 2,51$). Therefore, it can be assumed that the e-CBRM method on averages takes significantly more time than the traditional measurement.

Following, the average number of brands mentioned was studied. For both studies, the number of brands mentioned had been measured. The maximum number of brands to be mentioned had been set at seven for study 1 and 12 for study 2. The minimum number of brands to be mentioned was set to one, but in the survey explanation, respondents were encouraged to mention at least two brands. On average, respondents mentioned 3,04 brands in study 1. Contrasting, in study 2 respondents mentioned on average 1,81 brands. Remarkable here is that in study 1, one respondent only mentioned one brand where in study 2 this were 39 respondents. After looking at the Q-Q plots, it can be concluded that this variable is normally distributed in both studies. In addition, no outliers were found in the boxplot. Besides, Levene's test was not significant ($p = .383$), so it can be assumed that the variances are equal in both groups. The independent t-test shows that the difference between study 1 ($M = 3,04$; $SD = ,970$) and study 2 ($M = 1,81$; $SD = ,778$) is significant ($t(187) = 9,702$; $p < ,000$), therefore it can be assumed that respondents on average mention more brands with the e-CBRM measurement method compared to the traditional measurement method. The overall results of the independent t-tests can be seen in Table 4.

To check the reliability of the dimensions of the evaluation (ease of use, perception of effort, enjoyment, perception of time, and reflectivity) and of product category involvement, which were partly based on previous literature, the scales used in study 1 and 2 were checked through the calculation of Cronbach's alpha. Table 3 shows the calculated Cronbach's alphas of the dimensions. In this table can be seen that it can be concluded that all the calculated Cronbach's alphas can be accepted because they meet the set standard of $\alpha = > .06$. Therefore, it can be concluded that there is enough internal consistency between the survey questions of the different dimensions.

Table 3: Cronbach's Alpha evaluation and product category involvement items

	Cronbach's Alpha Study 1	Cronbach's Alpha Study 2
Ease of use	.687	.640
Perception of effort	.712	.850
Enjoyment	.789	.638
Perception of time	.682	.666
Reflectiveness	.830	.821
Product involvement	.846	.872

In order to see if there is a significant difference between the dimensions of the two different studies, several independent t-tests were conducted. The assumptions for the independence of the measures were met. The results of the t-tests can be seen in table 4. From this test, it can be assumed that a significant difference can be seen in the dimensions enjoyment and reflectiveness. Between the other four dimensions, no significant differences were found. Before the t-test was conducted, a Levene's test was also performed to examine the homogeneity of the variance. For the dimension reflectiveness was the Levene's test not violated ($p = ,466$). However, for the dimension enjoyment was the Levene's test not accepted ($p < ,000$), which means that the data used do not have equal variances. The results of the t-tests indicates a significant difference ($t(187) = 2,12; p < ,033$) between the enjoyment of the measurement in study 1 ($M = 4,51; SD = 1,28$) and 2 ($M = 4,16; SD = ,966$). Furthermore, there is also a significant difference ($t(187) = 2,33; p ,021$) indicated between the reflectiveness of the measurement in study 1 ($M = 3,98; SD = 1,35$) and 2 ($M = 3,55; SD = 1,18$). When looking at the mean of the significant dimensions, it can be assumed that the e-CBRM measurement method on average scores higher on enjoyment and reflectiveness in comparison with the traditional measurement.

In addition, to analyze whether these differences between the two methods will hold after being controlled by different control variables, several one-way ANCOVA analyses were conducted. A one-way ANCOVA analysis was performed for duration, number of brands, and all the evaluation dimensions. The control variables used were gender, education level, product category involvement, and age.

Before performing the one-way ANCOVA analysis for the duration, all assumptions were first checked. First, the standardized residual plots against the predicted values were examined. This plot showed homoscedasticity. Afterward, the homogeneity of the regression slopes was checked. All interaction term should be non-significant ($p = > ,005$). All were non-significant except for the level of education ($p = ,006$). Even though the interaction effect of this control variable is significant, it will still be included in the analysis. The reason for this decision is that it will eventually provide a more accurate estimation of the relationship between the independent variable and the outcome. Levene's test is not significant ($p = ,468$) so variances are homogeneous. Even though not all assumptions are met, the results of the ANCOVA will still be interpreted. Table 4 shows the results of the ANCOVA analysis, it can be assumed that after all control variables are added there is still a significant ($p = < ,005$) of the duration of

time between the measurements. Where, on average, respondents spent longer with the e-CBRM method than with the Likert scale method.

Afterward, the difference in the number of brands mentioned was compared when controlled by the control variables. The assumption checks were carried out and this showed homoscedasticity and homogeneity. In addition, Levene's test was not significant ($p = ,234$), so there was homogeneity of variances. The one-way ANCOVA analysis could thus be carried out and from the results that can be seen in Table 4, it can be concluded that, even when controlled by the control variables, respondents in the e-CBRM method mentioned significantly more brands than in the traditional method.

Finally, a one-way ANCOVA analysis was also conducted for each evaluation dimension. Six ANCOVA's were performed for this purpose. The results of these ANCOVA's are similar to those of the result of the t-test (see Table 4). As with the t-test, only the differences between the methods of the enjoyment and reflectiveness dimensions were significant ($p = < ,005$). For the reflectiveness dimension, all assumptions were met, and thus from this analysis, it can be assumed that the reflectiveness of the e-CBRM is rated more positively on average than the traditional measurement. This difference remains significant even when controlled for by control variables age, gender, level of education, and product involvement. For the enjoyment dimension, all assumptions were also met except for Levene's test. This test was violated ($p = < ,001$). The results of this ANCOVA analysis can still be interpreted, but it is important to keep in mind that this test is violated. The results indicate that the enjoyment dimension scores significantly higher on average on the e-CBRM method than on the traditional method, after controlling for the control variable.

Table 4: Results of the independent t-tests and ANCOVA analyses

	Study 1		Study 2		Independent t-test	ANCOVA
	Mean	Std dev.	Mean	Std dev.	T-value	F-value
Duration	7,25	2,86	5,71	2,51	3,88*	12,54*
Number of brands mentioned	3,04	,970	1,81	,77	9,70*	89,62*
Enjoyment Overall	4,61	,89	4,48	,71	1,08	,82
Ease of use	4,88	1,20	4,93	,99	,33	,27
Perception of effort	4,80	1,18	4,88	1,32	,44	,72
Enjoyment	4,51	1,28	4,15	,966	2,12*	6,84*
Perception of time	4,95	1,26	4,92	1,10	,149	,003
Reflectiveness	3,98	1,34	3,55	1,18	2,33*	4,99*

* = Sign. ($p = < .05$)

4.3 Validation of the method

First, the brand attachment results are examined within the different methods. In addition, the differences in the attachment levels between the brands the respondent is most attached to (or favorite brand) and a randomly selected brand will be investigated. This will also be done for the brand loyalty scores. Furthermore, it will be examined whether there are significant differences between the attachment level of the first, second and third mentioned brand and between the brands that are mentioned the most. Finally, the difference in the attachment levels between the different methods will be investigated.

Before starting this analysis, it was first checked whether any participants had filled out less than two brands in both methods. In order to perform this analysis correctly, respondents must have filled out at least two brands, because a comparison must be made between the most attached brand and a randomly selected brand. In study 1, two participants filled out one brand, so 89 respondents had filled in at least two brands. In study 2 unfortunately, 39 respondents only filled in one brand. Therefore these participants could not be included in this analysis. So in study 2, only 60 respondents had mentioned at least a second brand.

4.3.1 Results of the brand attachment levels

For both studies, the attachment levels of the brands that the participants named were measured. For study 1, this was measured through the e-CBRM model itself. This was calculated by means of two coordinates given based on the placement of the brands in the circle. As mentioned before, these coordinates were calculated through Pythagoras' equation ($c^2 = a^2 + b^2$)*7/100 into one attachment score. The closer the respondent placed the brand to the 'me' in the circle the lower the score that was given. So a low score meant a higher attachment level. In addition, participants were asked to rate, using a survey, the brand they had entered as most attached in the e-CBRM (closest to the 'me') and a random brand they had entered. This rating was calculated by means of a Likert scale. Where the attachment scale of Park et al. (2010) was used. Five questions were asked using a 7-point Likert scale ranging from 1 'strongly disagree' to 7 'strongly agree'. Since in study 1 the attachment levels of the Likert scale were calculated differently the scores of the e-CBRM had to be reversed. A low score with the e-CBRM meant that the participant had a high attachment level to this brand, while with the Likert scale it was the other way around. Therefore, the Likert scale scores are reversed (1 = 7, 2 = 6, 3 = 5 etc.). As a result, a low score on the Likert scale also means and high level of attachment. In addition, the range of results of the Likert scale was from 1 to 7 and of the e-CBRM from 0 to 7, so it was necessary to modify this data as well. Through a calculation ($x*6/7+1$), it was ensured that

the attachment scores of the e-CBRM also ranged between 1 and 7. These adjustments to the data made it possible to perform analyses with the data.

In addition, for the construct validity, scales were also used to measure PWOM and RPI. These 6 questions were also stated through a 7-point Likert ranging from 1 'Extremely unlikely' to 7 'Extremely likely'.

To calculate the internal consistency of the questions of the different scales, a Cronbach's alpha was calculated for each scale of each study. Table 5 displays the calculated Cronbach's alphas of the different dimensions that were measured. From the table, it can be concluded that all Cronbach's alpha were above the minimum standard of $\alpha = > ,06$. Therefore, it can be assumed that there is enough internal consistency among the different survey questions of the different scales.

Table 5: Cronbach's Alpha of the attachment, PWOM, and RPI scales

	Cronbach's Alpha Study 1	Cronbach's Alpha Study 2
Attachment scale (overall)	x	.919
<i>Most attached brand</i>	.900	x
<i>Random brand</i>	.942	x
PWOM scale		
<i>Most attached brand</i>	.852	.878
<i>Random brand</i>	.877	.856
RPI scale		
<i>Most attached brand</i>	.742	.708
<i>Random brand</i>	.779	.699

4.3.2 Comparison of most attached brand and random brand

First of all, for each participant separately, it was examined in both measurement methods whether the brand they indicated they were most attached to had also received the highest attachment score. In study 1 (N=89), this was the case for 80 respondents, and for 9 respondents, the brand they indicated as most attached did not have the highest score. In study 2 (N=60) this was the case for 30 respondents, 17 respondents had an equal attachment score to the most attached brand and randomly selected brand and in 14 cases the most attached brand did not have the highest attachment score. This difference can be explained by the fact that in Study 2 many respondents had an equal attachment score. In study 2, this could occur relatively easier because the attachment level was measured with a Likert scale. With study 1, this could occur

less easily, because here the attachment level was measured by means of the coordinates of the circle.

To analyze whether there is a significant difference between the attachment level of the scores between the favorite brand and the randomly chosen brand of the respondent is in study 1 the e-CBRM method and the Likert scale method used. In this way, it has been possible to compare the differences in the same group. First, an independent t-test was conducted to see if there was a difference between these two chosen brands through the score they gave with the e-CBRM method. Before performing the independent t-test, the boxplot was checked to identify outliers. There were no outliers found. Next, the Q-Q Plot was reviewed and it showed that the attachment scores were normally distributed. Levene's test was violated ($p = .049$), so there was no homogeneity of the variance. The results of the t-test show that there is a significant difference between the mean of the favorite brand and the randomly named brand of the e-CBRM method (see table 6). It can be seen that the mean of the favorite brand is lower, and therefore had a higher average attachment level. Therefore, it can be assumed that within the e-CBRM method a significant difference can be found between the attachment level of the favorite brand and the randomly selected brand. The same test was performed for the Likert scale method, also used in Study 1. Before this analysis could be performed, the attachment scores of the Likert scale method had to be reversed first. Levene's test was not violated ($p = 0.72$), so there was homogeneity of the variance. The assumptions were met and a t-test could be performed. Table 6 shows that the Likert method indicates a significant difference between the attachment score of the favorite brand and the randomly selected brand. In this analysis, the mean of the favorite brand is lower in comparison to the randomly chosen brand. This means that the favorite brand has a higher attachment level than the randomly selected brand.

Table 6: Comparison of most attached and random brand

	e-CBRM method			Likert Method		
	Mean	Std dev.	T-value	Mean	Std dev.	T-value
Most attached brand (N = 89)	2,55	1,07	-9,44*	5,46	1,30	3,72*
Randomly chosen brand (N=89)	4,03	1,38		6,15	1,12	

* = *Sign.* ($p < .05$)

As study 1 used two measurement methods, a comparison could also be made between the differences in the two methods for the same group. This test is done to see if the Likert

attachments scores and the e-CBRM attachments scores differ from the favorite brand, the randomly named brand, and the favorite brand and randomly selected brand merged. A paired-samples t-test was used for this purpose. Before performing the paired-samples t-tests, the Q-Q plots were looked at again, they showed that the groups are normally distributed. In addition, there were no outliers to be seen in the boxplot. The paired samples t-tests of the favorite brand ($p = ,000$, $t = -17,097$), the randomly chosen brand ($p = ,000$, $t = -10,051$) and the merged brands ($p = ,000$, $t = -18,131$) showed a significant difference. For the favorite brand in comparison, the e-CBRM method ($M = 2,55$; $SD = 1,07$) had a statistically significantly lower mean than the Likert method ($M = 5,46$; $SD = 1,30$) and therefore a higher attachment level. The same is the case for the randomly selected brands; e-CBRM method ($M = 4,30$; $SD = 1,38$) and the Likert method ($M = 6,15$; $SD = 1,12$) and the merged brands; e-CBRM method ($M = 3,43$; $SD = 1,51$) and the Likert method ($M = 5,81$; $SD = 1,26$). Therefore, it can be concluded that there is a significant difference between these two methods when completed by the same participant. Whereby within the e-CBRM method a higher level of attachment is given for the favorite brand and the randomly chosen brand.

Following the t-test analyses, a Pearson's Correlation test was also performed to determine the degree of correlation of the attachment levels of the different methods. First, the variables were checked for outliers, which were not found in the boxplot. The results of the Pearson's correlation in Table 7 indicates that for the most attached brand ($r = ,099$; $p = ,358$) and the randomly selected brand ($r = ,062$; $p = ,566$) there is a non-significant weak positive relationship between the measurement methods. Therefore, this means that a high attachment level of the most attached brand in one measurement method does not necessarily correlate with a high attachment score of the most attached brand in the other measurement. The same holds for the randomly selected brand. Interestingly, when the most attached and the randomly chosen brand are merged there is a significant positive weak relationship ($r = ,218$; $p < ,005$). So when the two brands are tested separately there is no significant correlation, but when they are merged there is a small correlation.

Table 7: Correlation of the e-CBRM and Likert scale method

	e-CBRM attachment levels		Likert scale attachment levels		T-test	Correlation of attachment levels of the e-CBRM and Likert scale	
	Mean	Std dev.	Mean	Std dev.	Significance level	Correlation	Significance level
Most attached brand (N=89)	2,55	1,07	5,46	1,30	,000*	,099	,358
Random brand (N=89)	4,30	1,38	6,15	1,12	,000*	,062	,566
Merged data (N=178)	3,43	1,51	5,81	1,26	,000*	,218	,004*

* = Sign. ($p < .05$)

Pearson's Correlation tests were also performed to determine the degree of correlation of the attachment levels of the e-CBRM measure and the Likert scale measure with the loyalty levels. Since there is evidence from the literature that brand attachment can have an effect on PWOM and RPI (Kim & Chao, 2019; Park et al., 2010; Park et al., 2006) a correlation is expected between brand levels and the loyalty levels in both measurement methods. For this purpose, the following hypotheses have been established for both measurement methods:

H0: $\rho = 0$ (the population correlation coefficient is 0)

H1: $\rho \neq 0$ (the population correlation coefficient is different from 0)

Before this analysis could be performed, first the variable of the loyalty levels PWOM and RPI were reversed from study 1. In order to make this variable equal to that of the e-CBRM and the Likert scale attachment levels. Next, each variable was checked for outliers. The boxplot showed that the PWOM variable of the e-CBRM method contained two outliers. Therefore, it was decided not to include these two outliers in the analysis since Pearson's Correlation is very sensitive to outliers.

The results of the Pearson's Correlation test indicates in Table 8 that attachment levels of the most attached, random, and merged brands of the e-CBRM method have a small positive significant correlation with PWOM. H0 can therefore be rejected and H1 can be accepted. In addition, it can be assumed from the results that the most attached brand had a higher positive significant (small) correlation with PWOM compared to the positive significant correlation of

the randomly chosen brand. When the brands are merged it shows a small increase in the correlation. The results of the Pearson's Correlation of the Likert scale indicates a similar result. In these analyses, H0 can also be rejected and H1 can be accepted. However, the significant positive correlation of the Likert scale can be seen as moderately strong correlations. Therefore, the Likert scale method displays a stronger correlation with PWOM than the e-CBRM method.

Table 8: Pearson's Correlation PWOM

	Positive word of mouth e-CBRM		Positive word of mouth Likert scale	
	Correlation	Significance	Correlation	Significance
Most attached brand (N= 89)	,297	,005*	,544	,000*
Randomly chosen brand (N= 89)	,220	,039*	,470	,000*
Merged (N= 178)	,298	,005*	,557	,000*

* = Sign. ($p < .05$)

The same Pearson's Correlation analysis with the e-CBRM and the Likert scale attachment levels was conducted with the RPI loyalty levels. With the Pearson's Correlation analysis of the e-CBRM method, H0 can also be rejected and H1 can be accepted. RPI and the most attached brand, randomly chosen brand and the merged brands have also a positive significant correlation. In this case, the positive significant (small) correlation of the most attached brand is also higher compared to the positive significant correlation of the randomly chosen brand. Table 9 also indicates that the RPI levels correlate with the attachment levels of the Likert scale measure. Therefore, H0 can also be rejected in favor of H1 for the analyses of the most attached brand, random brand, and the merged brands. Furthermore, it can also be assumed from Table 9 that for RPI also the Likert scale method has a higher correlation with the loyalty level than the e-CBRM method.

Table 9: Pearson's Correlation RPI

	Repurchase intention e-CBRM		Repurchase intention Likert scale	
	Correlation	Significance	Correlation	Significance
Most attached brand (N= 89)	,308	,003*	,369	,000*
Randomly chosen brand (N= 89)	,262	,013*	,290	,006*
Merged (N= 178)	,309	,003*	,413	,000*

* = Sign. ($p < .05$)

Finally, Pearson's correlations were performed in which the scores of the PWOM and RPI levels were combined. In order to investigate the correlations with the most attached brand, randomly chosen brand and merged brands from the e-CBRM and Likert scale method. In both the e-CBRM and Likert scale analyses, H0 can be rejected in favor of H1. In all analyses, a positive significant correlation was found with the PWOM & RPI levels (see Table 10). In which the Likert scale method displays stronger correlations than the e-CBRM method. In addition, from this analysis, it can be assumed that when the loyalty levels PWOM & RPI are combined there is a stronger correlation found between the loyalty levels and the merged brands of the e-CBRM method than when the levels are measured separately.

From the results, it can be assumed that, when using the e-CBRM method in a low-involvement product category, a small correlation with the loyalty levels can also be found. In addition, the results also indicate that there is a difference in correlation between the most attached and the randomly chosen brand. In all cases, the most attached brand has a relatively stronger correlation with the loyalty levels than the random brand. The results demonstrated a positive significant correlation in the area that was expected. Together, the present findings confirm the findings of earlier research that brand attachment can correlate with PWOM and RPI (Kim & Chao, 2019; Park et al., 2010; Park et al., 2006). Although it should be taken into account that the correlations that were found are small correlations with the attachment levels of the e-CBRM. However, this could be explained by the fact that it is a relatively large step from brand attachment to PWOM or RPI. A lot happens in between which can influence the correlation (Bond, He & Wen, 2019; Lin & Lekhawipat, 2014). In addition, the higher correlations of the Likert scale of study 1 can be explained by common method bias (Jakobsen & Rasmus Jensen, 2015) since with the Likert scale, the same scales were used.

Table 10: Pearson's Correlation PWOM and RPI

	PWOM & RPI e-CBRM		PWOM & RPI Likert scale	
	Correlation	Significance	Correlation	Significance
Most attached brand (N= 89)	,306	,004*	,555	,000*
Randomly chosen brand (N= 89)	,273	,010*	,430	,000*
Merged (N= 178)	,510	,000*	,543	,000*

* = Sign. ($p < .05$)

4.3.3 Order of brands mentioned

In the e-CBRM method, 89 respondents mentioned at least two brands. 62 respondents mentioned three brands, 26 respondents four brands, 5 respondents five brands, and 1 respondent one brand. The fact that only 62 respondents mentioned more than two brands may be due to the fact that they were asked about a low involvement product and consumers on average know fewer brands about these products than they do about a high involvement product (Kuenzel & Musters, 2007). Since the theory suggests that the brand that respondents recall first is related to brand loyalty (Buil, de Chernatony & Martinez, 2008), a check is made whether this is also the case with the e-CBRM method. To see if there is a difference between the attachment level of the first, second, and third mentioned brand, an independent t-test was conducted. First between the attachment scores of the first and second named brand. Levene's test in this independent t-test is not violated ($p = ,366$), so it can be assumed that there is a homogeneity of the variance. The t-test indicates that there is a significant difference in the attachment level between the first ($M = 2,95$; $SD = 1,34$) and second-mentioned brand ($M = 4,05$; $SD = 1,49$). The first brand shows a lower mean than the second brand. Therefore, it can be concluded that the first-mentioned brand of the participants has on average a higher attachment level than the second-mentioned brand. So, it can be concluded that, on average, the participants feel significantly more attached to the first brand that they mentioned than to the second brand. For Study 2, this analysis was also performed. Only no significant difference was found in this analysis ($p = > ,005$). Therefore, it cannot be concluded for study 2 that participants are more attached to the first brand they mention than to the second brand. However, it should be noted that the N of study 2 is not very high and therefore these results may not be properly generalizable.

In addition, it was examined whether there was a significant difference between the second and third named brand. Here, no significant difference was found ($p = > ,005$). This indicates that on average, the respondents did not feel significantly more attached to the second named brand compared to the third named brand. Study 2 also found no significant results ($p = > ,005$) on this comparison.

4.3.4 Mean comparison between study 1 & 2

In order to examine whether there are differences in the attachment scores of study 1 and study 2, the mean attachment scores of the two studies were compared. To compare these scores, the scores of study 2 had to be reversed. In study 2, a high score meant a high attachment level and in study 1 it was the other way around. Afterward, an independent t-test was performed. The

assumptions had been checked and these had been met. Levene's test was significant ($p = >.000$), so violated. This means that homogeneity of the variance may not be assumed. The t-test results in Table 11 show that there is a statistically significant difference between the e-CBRM method (study 1) and the traditional method (study 2). Therefore, it can be assumed that the participants significantly give a higher attachment score to a brand when it is rated using the e-CBRM method compared to the traditional measurement method.

Table 11: Comparison of attachment levels between the studies

Comparison attachment levels study 1 & 2			
	Mean	Std dev.	T value
e-CBRM method (study 1)	3,75	1,54	-11,91*
Traditional method (study 2)	5,55	1,22	

* = *Sign.* ($p = < .05$)

5. Conclusion and discussion

The purpose of this study was to find out whether the Consumer-brand relationship mapping method remains valid once it was applied in a low-involvement product category. During this research, the choice was also made to digitize the CBRM method in order to make the process of the method more quantitative. In addition, there was no interaction with the respondents was necessary. This could ensure that socially desirable responses were avoided (Chimi & Russel, 2009). During this research, two different studies were conducted to determine brand attachment measures. In study 1 this was measured using the e-CBRM method and in study 2 using the traditional Likert scale method. In addition, in study 1 the Likert method was also used, in order to compare the results within one sample and between two different samples. Based on the empirical findings of this study, it can be concluded that the e-CBRM method remains valid even when it is used in a low-involvement product category. The following conclusion and discussion is written based on the empirical findings of this research and previously written literature.

5.1 Evaluation of the method

First, it was examined whether significant differences could be found about how the participants evaluated the different methods of study 1 (e-CBRM, $N = 91$) and study 2 (Traditional measure, $N = 99$). For this purpose, the average of six different dimensions (Overall enjoyment, Ease of use, Perception of effort, Enjoyment, Perception of time, and Reflectiveness) had been compared. The analyses of these dimensions showed that the e-CBRM method and the traditional method only had a significant difference in the dimensions of enjoyment and reflectiveness. On both dimensions, the e-CBRM method had a significantly higher mean than the traditional method. These significant differences remained after controlling for the control variables age, gender, level of education, and product category involvement. Therefore, it can be assumed that, on average, respondents found the e-CBRM method more enjoyable to complete than the traditional measurement. In addition, on average, respondents indicate that the e-CBRM gives a better reflection of their brand attachment than the traditional measurement. There appeared to be no significant differences between the other four dimensions. These results were found to be non-significant against the expectations. These results were not expected, because earlier studies on the CBRM method had found positive significant differences (Buunk, 2020; Fandridou, 2020; van der Ven, 2020). Because in these earlier studies the data collection of the CBRM method was administered physically, there is a possibility that there are no significant differences because the CBRM method was now digitized. The question then arises whether this was due to the CBRM method itself or to the

process of the e-CBRM. Therefore, the process of the e-CBRM was looked at again critically and from my own findings and from respondents' reactions to the method, several issues were remarkable; (1) respondents sometimes had difficulty removing the brands at the moment they had placed a brand in the circle. For the respondents, it was sometimes not clear enough how this worked. (2) In addition, some respondents found it 'irritating' that when a brand was placed incorrectly it had to be removed first and could not be moved. (3) Furthermore, the e-CBRM method did not work completely well on a phone. The website did not work on an iPhone 5 or lower and the drop-down menu where the respondent had to fill in the brand did not always work well. (4) Lastly, some respondents doubted whether there was a difference between the upper bound and the lower bound of the circle. For example, the top was meant for brands where the respondent was positive about, and the bottom was seen as negative. Unfortunately, these shortcomings did not emerge in the pre-test held before the data collection. One reason for this could be that the pre-testers both watched the entire video and therefore had a good understanding of how everything worked. There is a chance that not all respondents watched this video. Reflecting on this, perhaps the video could have been made more concise. The clip lasted 2:21 and this might have put respondents off or they did not have the time to watch it.

To avoid this shortcoming in a subsequent study on the e-CBRM, a few solutions will be proposed. It is recommended that an improved version of the e-CBRM website will be developed, where the drop-down menu and moving the brands around instead of deleting them do work properly. In doing so, it is advisable to create a desktop website and a properly working mobile website, so that the e-CBRM website also works well on a mobile phone. Furthermore, the updated version of the e-CBRM will need to have an option where the respondent could go back to the explanation or video that was committed. In the current version, there was no option for this either and the participant had to restart the method if he/she wanted to read the explanation again. It should be made easy for the respondents to read the explanation again when there are uncertainties. Lastly, it is recommended that for a subsequent study using the e-CBRM that it be indicated that there is no difference in attachment between the upper and lower bound of the circle. These adjustments could increase the enjoyment of using the method in a subsequent study

In addition to these shortcomings of the method, some good things have come out of the e-CBRM method as well. (1) The enjoyment and reflectiveness levels of the e-CBRM were on average significantly higher than the traditional measurement method. This means, that respondents, on average, enjoy completing the e-CBRM more than the traditional measurement.

In addition, the e-CBRM on average gives a better reflection on the attachment a consumer has to a brand. (2) The e-CBRM allows more data to be collected in a shorter period of time. (3) The placement of the brands by the participants can be measured more easily and accurately because it is automated. (4) Lastly, because no contact with the respondents is necessary while completing the measurement method, the chance that socially desirable answers are given is smaller (Chimi & Russel, 2009).

5.1.2. Number of brands mentioned and duration

A significant difference was found between the number of brands mentioned between the e-CBRM method and the traditional method. The results showed that, on average, participants mentioned more brands in the e-CBRM method compared to the traditional measurement method. This difference is statistically significant and this difference holds even when controlled by control variables age, gender, level of education, and product category involvement. This difference might be explained by a significant difference found between the enjoyment of the measurement methods, as explained above. The enjoyment of the e-CBRM method is significantly higher in comparison to the traditional measurement and therefore the participants might have been stimulated to list more brands because they enjoyed doing it.

In addition, a significant difference was also found between the different methods in the time it took to complete the method. Table 4 shows that on average it took longer to complete the e-CBRM method in comparison to the traditional method. This difference remained even after it was controlled by the control variables. However, it should be mentioned that this difference is a comparison of the average time it took the participant to complete the survey of study 1 and 2. As mentioned earlier, for study 1, the time the respondent needed to complete the e-CBRM part of the survey was measured, but this was not the case for study 2. Therefore, it was decided to compare the total time of the survey for both studies. So, the difference in time could be explained by the fact that the e-CBRM study also included some questions from the traditional measurement method and therefore took a bit longer overall. However, the difference in time could also be explained because the e-CBRM method scored significantly higher on the enjoyment dimension. A higher score of enjoyment with the method could be a reason that the participant took longer to fill out the survey because the participant enjoyed filling it out.

Furthermore, participants of the e-CBRM method mentioned significantly more brands in comparison to the traditional method. So it might be that respondents of the e-CBRM took longer to think about whether they could recall another brand. In addition, it is also worth mentioning that the respondents on average did not have the feeling the e-CBRM method took

too long. The average score of the dimension 'Perception of time' for the e-CBRM is 4,95. Therefore, it can be assumed that the participants did not have the feeling that the e-CBRM method took too long. The dimension can only not be compared with the traditional measurement, because these means were not found to differ significantly.

5.2 Brand attachment levels

Furthermore, it was also investigated whether there were differences between attachment levels within study 1 (between the e-CBRM and the Likert scale method) and between study 1 and 2 (e-CBRM and the traditional measure). There appeared to be a significant difference in the mean attachment level between the e-CBRM and the Likert scale of study 1 and between the e-CBRM and the traditional measure of study 2. This difference was therefore confirmed between a comparison of two independent groups and between a comparison of the same group. The comparison shows that in both cases, participants gave higher attachment levels on average when they used the e-CBRM method. In study 1, this was both for the brand that the respondent was most attached to and with the randomly selected brand. Therefore, it can be assumed that a respondent will give higher attachment scores to brands of a particular low-involvement product category when they rate them using the e-CBRM method compared to the Likert scale method. In addition, the analyses show that within Study 1 there is a significant difference between the brand that the participants were most attached to and a randomly selected brand. This holds within study 1 for the e-CBRM method and the Likert scale method. For both methods, the favorite brand had on average a significantly higher attachment level than the randomly selected brand. The assumption can therefore be made that when a respondent uses the e-CBRM method, on average, the brand to which he/she is most attached will be placed closest to the center point of the circle.

For the construct validity of the e-CBRM, brand loyalty levels were also examined using the positive word of mouth and repurchase intention scores. This involved examining the favorite brand and the randomly selected brand of the participants. The scores of the e-CBRM method indicates that the respondent's favorite brand had a statistically significant higher level of PWOM and RPI than the randomly selected brand. These results align logically with previous studies showing that when a consumer has a strong attachment to a brand this can also lead to a high repurchase intention and positive word of mouth level (Rajaobeline et al., 2021; Rossiter & Bellman, 2012; Smalz & Orth, 2012). In order to further confirm these findings in the literature for the e-CBRM method, Pearson's correlation analyses were conducted to examine how strongly the loyalty levels correlated with the attachment levels of the e-CBRM and the

Likert scale of study 1. From the results of this analysis, it can be assumed that the attachment levels of the Likert scale method have a higher correlation with the loyalty levels than the attachment levels of the e-CBRM method. As mentioned earlier, this could allegedly due to common method bias (Jakobsen & Rasmus Jensen, 2015). The findings of the Pearson's correlation of the e-CBRM method displays that there is a significant positive small correlation between the attachment levels and the loyalty levels separately and that there is a significant positive moderate correlation between the attachment levels and the loyalty levels combined. From these results, it can therefore be assumed that when a high level of attachment is given in the e-CBRM it can be associated with a high level of PWOM or RPI. In addition, the most attached brands displayed a higher correlation with the loyalty levels than the randomly selected brands. Even though this is only a small positive significant correlation, it can be assumed that when high attachment levels are measured at the e-CBRM there is a correlation with high PWOM and RPI levels. This finding is in line with the literature, where it is stated that brand attachment affects these loyalty levels (Kim & Chao, 2019; Park et al., 2010; Park et al., 2006). The small correlation can be explained by the fact that between the moment of brand attachment and PWOM or RPI, there might be other causes that can explain these loyalty levels (Bond, He & Wen, 2019; Lin & Lekhawipat, 2014).

In addition, it was also analyzed whether there was a significant correlation between the attachment levels of the e-CBRM method and the Likert scale method. There was a significant positive correlation found when the most attached brand and the random brand were merged. When analyzing the most attached brand and random brand separately, no significant correlation was found between the measurement methods. Therefore, it can be assumed that a high level of attachment in one measurement method does not necessarily correlate with a high attachment score in the other measurement method. However, a merged attachment score in one measurement method correlates positively significantly with a merged attachment score in the other measurement method.

Finally, it was examined whether there was a significant difference in the attachment level between the first, second, and third named brands. The results show that this was the case with the e-CBRM method. Between the first and the second named brand, there was a significant difference in the mean attachment score. The first brand mentioned had a significantly higher attachment level. These results are consistent with a previous study which proved that brand loyalty is related to a strong recall of the brand (Buil, de Chernatony & Martinez, 2008). There was no significant difference found between the second and third named brand. In study 1 only

62 respondents had filled in a third brand, therefore this result is not very generalizable. In study 2, there was no significant effect between the first and second named brand nor between the second and third named brand. Since in study 2 only 60 people filled in a second brand it should be taken into account that these results are not very generalizable either.

5.3 Implications

The present study contributes to the literature by enhancing to the knowledge in the field of consumer-brand relationship measurement. In this research, the recently developed Consumer-Brand Relationship Mapping method was empirically tested. In which in this study has been focused on the method testing with a product in a low-involvement product category. Besides implicating that this method can be applied in a low-involvement product category, the CBRM can also contribute to a better understanding of the relationship that consumers have with low-involvement products. Furthermore, it has been indicated that when this method is digitized e-CBRM is considered more enjoyable and reflective than the Likert scale (traditional) measurement by consumers.

In addition to the theoretical implications, this study has some managerial implications. First, this study, with the e-CBRM as an outcome can contribute to improving the knowledge that marketing managers have about their brand in a low-involvement product category. The e-CBRM can improve marketing managers' understanding of the brand relationships that consumers have with their brand. This knowledge can provide valuable insights for marketing managers and help improve brand positioning or create brand strategies. Resulting in better competitive advertising and growth in sales. Furthermore, this method will certainly be useful for organizations where the low-involvement product operates in a highly competitive environment. Since the e-CBRM method makes it possible to measure the brand relationships within a given product category, this method can provide the marketing practitioners with information about the places the brand has in the market compared to competitors. Through this information, the organization can improve its position in the market and obtain better competitive advantages.

Secondly, this study demonstrated that the CBRM method can also be performed digitally. By digitizing the method the data collection is much easier, takes less time, and costs less money. In addition, the coordinates of the brands placed can be measured more accurately than when the CBRM method is performed offline because this process is now automatic. The data is also easier to process because it is already digitized. In this way, the CBRM has been made more accessible and easier to implement for organizations.

Third, the results showed that in the e-CBRM method, the participants scored higher attachment levels, named more brands, and spent more time working with the method, compared to the traditional Likert scale method. This may ensure that more reliable and useful information can be obtained when using the e-CBRM method instead of the Likert scale method. For example, because on average more brands are mentioned when using the e-CBRM method, a better comparison with other brands can be made and this can provide a better representation of reality.

Finally, the results also show that the e-CBRM method scores higher on the evaluation dimension enjoyment and reflectiveness compared to the traditional Likert scale method. Because of higher scores on the enjoyment scale, it may be possible that it is easier to collect respondents when using the e-CBRM method. Furthermore, it might ensure that respondents do not quit halfway through filling out the survey because they enjoyed filling it out. In addition, more valid results can be collected with the e-CBRM because on average the e-CBRM scores were higher on reflectiveness than the Likert method. Because of this higher score, respondents might be able to expose their attachment to a brand more through the e-CBRM method.

5.4 Limitations and further research

This study has some limitations which will now be discussed here, and additionally, suggestions for further research will also be provided. First of all, due to the COVID-19 rules, it was almost impossible to recruit respondents who were not related to the researcher. Additionally, also due to COVID-19 rules, it was chosen to use a snowball technique to collect respondents. Due to this, there was not a truly diverse sample collected for the data study. The sample consisted mainly of highly educated women in the age group under 25 - 35. As a result, the study is not entirely generalizable. It is therefore recommended that further research is needed in which a sample is collected that is more representable for the population. In this way, more generalizable and reliable results can be obtained. Furthermore, due to the short time frame, a website was built for the CBRM method in a relatively short period of time. Although it seemed that the website worked properly and it was very nice that it was developed so quickly, some key issues were overlooked. The assumption is made that because of these key issues (discussed above) the respondents did not experience the e-CBRM method as positively as expected. The results of the data analysis were therefore also less positive than previously predicted. Therefore, for further research with the e-CBRM method, improvements to the website should be made first (see, 5.1 evaluation of the method), in order to fix these key issues and increase the overall evaluation of the e-CBRM method. In addition, there appeared to be a lack of clarity among a

number of respondents as to whether the top and bottom of the e-CBRM circle had different meanings. For further research, it might be interesting to give a different meaning to the top and bottom of the circle, for example in the sense of positively / negatively attached to the brand. Another suggestion would be to give the map another shape (square) to test if the method is still valid or if this provides different results. Further, this study has focused only on the construct of brand attachment. To test whether the model is also valid in a low-involvement product category with another construct, such as brand love or trust further research will be required. Lastly, another limitation of this research is that only one low-involvement product category was tested. Also due to the limit of time, another low-involvement product category could not be included in this study. Further research with another low-involvement product will therefore be necessary to increase the generalizability of this method. A different product category might provide different results.

Reference list

- Albert, N., and Merunka, D. (2013). The role of brand love in consumer-brand relationships. *Journal of Consumer Marketing*
- Barrows, C. W. (2000). An exploratory study of food and beverage training in private clubs. *International Journal of Contemporary Hospitality Management*.
- Batra, R., Ahuvia, A., & Bagozzi, R. P. (2012). Brand love. *Journal of marketing*, 76(2), 1-16.
- Blackston, M. (1993). Beyond brand personality: building brand relationships. *Brand equity and advertising: Advertising's role in building strong brands*, 113-124.
- Blackston, M. (2000). Observations: Building brand equity by managing the brand's relationships. *Journal of Advertising Research*, 40(6), 101-105.
- Babutsidze, Z. (2012). How do consumers make choices? A survey of evidence. *Journal of Economic Surveys*, 26(4), 752-762.
- Belaid, S., & Behi, A. T. (2011). The role of attachment in building consumer-brand relationships: an empirical investigation in the utilitarian consumption context. *Journal of Product & Brand Management*.
- Breivik, E., & Thorbjørnsen, H. (2008). Consumer brand relationships: an investigation of two alternative models. *Journal of the Academy of Marketing Science*, 36(4), 443-472.
- Bond, S. D., He, S. X., & Wen, W. (2019). Speaking for “Free”: Word of mouth in free-and paid-product settings. *Journal of Marketing Research*, 56(2), 276-290.
- Brown, A. P. (2010). Qualitative method and compromise in applied social research. *Qualitative research*, 10(2), 229-248.
- Brown, T. J., Barry, T. E., Dacin, P. A., & Gunst, R. F. (2005). Spreading the word: Investigating antecedents of consumers' positive word-of-mouth intentions and behaviors in a retailing context. *Journal of the academy of marketing science*, 33(2), 123-138.
- Buil, I., De Chernatony, L., & Martinez, E. (2008). A cross-national validation of the consumer-based brand equity scale. *Journal of Product & Brand Management*.
- Buunk, C. (2020). The Consumer-Brand Relationship Map-A measurement technique that captures consumer-brand relationships in a consumer/user-friendly way.
- Carroll, B. A., & Ahuvia, A. C. (2006). Some antecedents and outcomes of brand love. *Marketing letters*, 17(2), 79-89.
- Castro, I. A., Majmundar, A., Williams, C. B., & Baquero, B. (2018). Customer purchase intentions and choice in food retail environments: A scoping review. *International journal of environmental research and public health*, 15(11), 2493.
- Chang, P. L., & Chieng, M. H. (2006). Building consumer-brand relationship: A cross-cultural experiential view. *Psychology & Marketing*, 23(11), 927-959.
- Chaplin, L. N., & Roedder John, D. (2005). The development of self-brand connections in children and adolescents. *Journal of consumer research*, 32(1), 119-129.

Chimi, C. J., & Russell, D. L. (2009, November). The Likert scale: A proposal for improvement using quasi-continuous variables. In *Information Systems Education Conference, Washington, DC* (pp. 1-10).

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.

Dens, N., & De Pelsmacker, P. (2010). Consumer response to different advertising appeals for new products: The moderating influence of branding strategy and product category involvement. *Journal of Brand Management*, 18(1), 50-65.

Dimitriadis, S., & Papista, E. (2011). Linking consumer-brand identification to relationship quality: An integrated framework. *Journal of Customer Behaviour*, 10(3), 271-289.

Dunn, L., & Hoegg, J. (2014). The impact of fear on emotional brand attachment. *Journal of Consumer Research*, 41(1), 152-168.

Escalas, J. E. (2004). Narrative processing: Building consumer connections to brands. *Journal of consumer psychology*, 14(1-2), 168-180.

Gu, B., Park, J., Konana, P., Gu, B., & Park, J. (2012). Sources on retailer sales of high-involvement products the impact of external word-of-mouth sources on retailer sales of high-involvement products. *Information Systems Research*, 23(1), 182-196.

Fandridou, D. (2020). Consumer Brand Relation Map-a New Brand Relationship Measurement Model.

Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of consumer research*, 24(4), 343-373.

Fournier, S., and Yao, J. L. (1997). Reviving brand loyalty: A reconceptualization within the framework of consumer-brand relationships. *International Journal of research in Marketing*, 14(5), 451-472.

Harrison-Walker, L. J. (2001). The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents. *Journal of service research*, 4(1), 60-75.

Hess, J., and Story, J. (2005). Trust-based commitment: multidimensional consumer-brand relationships. *Journal of Consumer Marketing*, 22(6), 313-322

Hess, J., Story, J., & Danes, J. (2011). A three-stage model of consumer relationship investment. *Journal of Product & Brand Management*.

Hoyer, W. D., D. H. MacInnis. 2008. *Consumer Behavior*, 5th ed. South-Western, Mason, OH.

Jakobsen, Morten, and Rasmus Jensen. "Common method bias in public management studies." *International Public Management Journal* 18.1 (2015): 3-30.

Japutra, A., Ekinici, Y., & Simkin, L. (2014). Exploring brand attachment, its determinants and outcomes. *Journal of strategic Marketing*, 22(7), 616-630.

- Keller, K. L. (2001). *Building customer-based brand equity: A blueprint for creating strong brands* (pp. 3-27). Cambridge, MA: Marketing Science Institute.
- Kim, H. K., Lee, M., & Lee, Y. W. (2005). Developing a scale for measuring brand relationship quality. *ACR Asia-Pacific Advances*.
- Kim, R. B., & Chao, Y. (2019). Effects of brand experience, brand image and brand trust on brand building process: The case of Chinese millennial generation consumers. *Journal of International Studies*, 12(3).
- Kuenzel, J., & Musters, P. (2007). Social interaction and low involvement products. *Journal of Business Research*, 60(8), 876-883.
- Kuo, Y. F., Hu, T. L., & Yang, S. C. (2013). Effects of inertia and satisfaction in female online shoppers on repeat-purchase intention: The moderating roles of word-of-mouth and alternative attraction. *Managing Service Quality: An International Journal*.
- Leroi-Werelds, S., Streukens, S., Brady, M. K., & Swinnen, G. (2014). Assessing the value of commonly used methods for measuring customer value: a multi-setting empirical study. *Journal of the academy of marketing science*, 42(4), 430-451.
- Lin, C., & Lekhawipat, W. (2014). Factors affecting online repurchase intention. *Industrial Management & Data Systems*.
- Loureiro, S. M. C., Ruediger, K. H., & Demetris, V. (2012). Brand emotional connection and loyalty. *Journal of Brand Management*, 20(1), 13-27.
- Malär, L., Krohmer, H., Hoyer, W. D., & Nyffenegger, B. (2011). Emotional brand attachment and brand personality: The relative importance of the actual and the ideal self. *Journal of marketing*, 75(4), 35-52.
- Masadeh, M. A. (2012). Focus group: Reviews and practices. *International Journal of Applied Science and Technology*, 2(10).
- Mittal, B., & Lee, M. S. (1989). A causal model of consumer involvement. *Journal of economic psychology*, 10(3), 363-389.
- Ndubisi, N. O., & Moi, C. T. (2006). Awareness and usage of promotional tools by Malaysian consumers: the case of low involvement products. *Management Research News*.
- Nemoto, T., & Beglar, D. (2014). Likert scale questionnaires. In *JALT 2013 conference proceedings* (pp. 1-8).
- Osuna Ramírez, S. A., Veloutsou, C., & Morgan-Thomas, A. (2017). A systematic literature review of brand commitment: Definitions, perspectives and dimensions. *Athens journal of business and economics*, 3(3), 305-332.
- Papista, E., & Dimitriadis, S. (2012). Exploring consumer-brand relationship quality and identification. *Qualitative Market Research: An International Journal*.
- Park, C.W., MacInnis, & D.J, Priester, J. (2006). Brand attachment: Constructs, consequences, and causes. *Foundations and trends in marketing*, 1, 191-230

- Park, C. W., MacInnis, D. J., Priester, J., Eisingerich, A. B., & Iacobucci, D. (2010). Brand attachment and brand attitude strength: Conceptual and empirical differentiation of two critical brand equity drivers. *Journal of marketing*, 74(6), 1-17.
- Piehler, R., King, C., Burmann, C., & Xiong, L. (2016). The importance of employee brand understanding, brand identification, and brand commitment in realizing brand citizenship behaviour. *European Journal of marketing*.
- Prince, M., & Davies, M. (2001). Moderator teams: an extension to focus group methodology. *Qualitative Market Research: An International Journal*.
- Radder, L., & Huang, W. (2008). High-involvement and low-involvement products: A comparison of brand awareness among students at a South African university. *Journal of Fashion Marketing and Management: An International Journal*.
- Rajaobelina, L., Prom Tep, S., Arcand, M., & Ricard, L. (2021). The relationship of brand attachment and mobile banking service quality with positive word-of-mouth. *Journal of Product & Brand Management*.
- Roozen, I. (2008). The relative effectiveness of celebrity endorsement for beauty, high-and low involvement product print advertisements. 7th International Congress" Marketing Trends".
- Rossiter, J., & Bellman, S. (2012). Emotional branding pays off: How brands meet share of requirements through bonding, companionship, and love. *Journal of Advertising Research*, 52(3), 291-296.
- Schneider, K. C., & Rodgers, W. C. (1996). An "Importance" Subscale for the Consumer Involvement Profile. *Advances in consumer research*, 23(1).
- Schmalz, S., & Orth, U. R. (2012). Brand attachment and consumer emotional response to unethical firm behavior. *Psychology & marketing*, 29(11), 869-884.
- Schmidt, M. (2001). Using an ANN-approach for analyzing focus groups. *Qualitative Market Research: An International Journal*.
- Swaminathan, V., Page, K. L., & Gürhan-Canli, Z. (2007). "My" brand or "our" brand: The effects of brand relationship dimensions and self-construal on brand evaluations. *Journal of consumer research*, 34(2), 248-259.
- Thomson, M., MacInnis, D. J., & Park, C. W. (2005). The ties that bind: Measuring the strength of consumers' emotional attachments to brands. *Journal of consumer psychology*, 15(1), 77-91.
- Veloutsou, C. (2007). Identifying the dimensions of the product-brand and consumer relationship. *Journal of Marketing Management*, 23(1-2), 7-26.
- Veloutsou, C., & Moutinho, L. (2009). Brand relationships through brand reputation and brand tribalism. *Journal of Business Research*, 62(3), 314-322.
- Ven, D. V. D. (2020). Consumer-Brand Relationship Mapping. A new methodology to measure consumer-brand relationships in their competitive context.
- Villar, M. E., Ai, D., & Segev, S. (2012). Chinese and American perceptions of foreign-name brands. *Journal of Product & Brand Management*.

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of marketing*, 60(2), 31-46.

Appendix 1: Survey preliminary study

Introduction:

Thank you for participating in this survey. This survey is part of my master thesis of the master Marketing at Radboud University Nijmegen. Through this research I want to learn more about the relationships customers can have with brands in the same product category. This survey is meant to be a small preliminary study for my final research.

The survey will take no longer than 5 minutes. Your information will be handled confidentially.

Thank you in advance for your participation!

Ilse

The following questions were asked for each product category (pasta, bouillon and toilet paper)

1. Name all the brands you can think of from the following product category (describe the brands as specifically as possible): X
2. How many brands did you list?

To what extent does the product category X play a role in your daily life? To what extent do you agree with the following statements on a scale of 1 to 7 (totally agree - totally disagree):

1. Choosing a X is a big decision in one's life.
2. I attach great importance to selecting a X
3. I don't usually get overly concerned about a X (Reverse)
4. Which X I choose doesn't really matter to me. (Reverse)
5. Choosing a X takes a lot of careful thought.
6. Decisions about selecting a X are serious, important decisions.
7. It means a lot to me to use a X

Demographics

1. How old are you?
2. Which gender do you feel belonging to?
 - male
 - female
 - other/decline to say

Appendix 2: Overview e-CBRM method; study 1

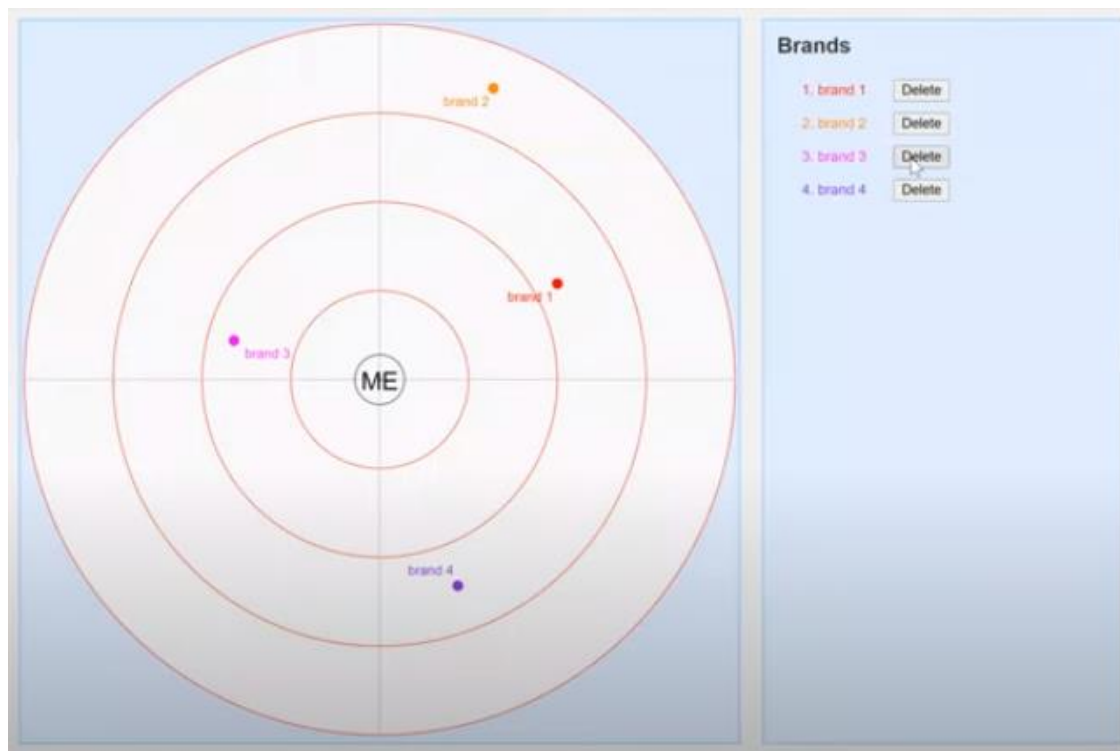
Introduction text:

Dear Participant, Thank you for taking the time to take part in this study! My name is Ilse Boers and this study is part of my Master's thesis in Marketing at Radboud University Nijmegen, under supervision of Dr. Csilla Horváth. In this study, I would like to learn about how you feel towards brands in the category of pasta. The study should take around 10 minutes. Your data will be treated anonymously, safely and with great care. It will only be used for scientific research. On the following page, you will be asked to place brands of the pasta category in a target - you can do so by clicking on the place in the target where you want the brand to be. The closer you place the brand to the center of the target ('me'), the more you are attached to the brand. If you want to change a brand's placement, you can do so by deleting the brand and creating it again. The video above (no sound) demonstrates the placement.

Mapping prompt:

Please think of brands you know in the category of pasta, and place them in the target. The brands can be popular or not, national or international, from small or big companies or it could be a house brand (please indicate which house brand it is about). I would like to ask you to place at least 2 brands in the target, the maximum amount of brands you can place is 7. The closer you put the brand to 'me', the more you are attached to the brand. Important: remember or write down the brand you place closest to the 'me' and remember or write down another randomly chosen brand you entered in the circle. You will need these two brands further on in the survey.

Overview of the map



Final Prompt:

You have finished the first part of the survey. When you are ready you can move on to the second part of the survey. This part of the survey will be take place in Qualtrics. By clicking “continue” you will be directed to Qualtrics.

Appendix 3: Survey study 1; Likert scale

e-CBRM BRAND ATTACHMENT

Q1 Dear Participant,

Thank you for your answers so far and welcome to the 2nd -important- part of the study. This will only take about 5 minutes.

Q2 We would like to ask a few questions about the method you just used to indicate your relationship with brands in the pasta category. Please, indicate how much you agree with the following statements on a scale of 1 (strongly disagree) to 7 (strongly agree).

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
This method is user-friendly . (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This method gives the possibility to recover from mistakes easily . (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could use this method successfully the next time. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was difficult for me to apply this method. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had to concentrate a lot while applying this method. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had to think very hard while applying this method. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The effort required to apply this method was very low . (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This method is fun to use. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I felt bored using this method. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I enjoyed participating in this method. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time went by quickly while filling out this method. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The time required to fill out this method was very low. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This method really displays the way I feel about the different brands. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This method enables me to uncover my attachment to the brands. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that by using this method I was able to communicate my true feelings towards the brands. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3 Please, indicate which of the pasta brands you are attached most to (the brand you placed closest to the 'me' in the circle)

Q6 How likely are you to do the following things for **#{Q3/ChoiceTextEntryValue}** (1: extremely unlikely, 7: extremely likely)?

	Extremely unlikely (1)	Moderately unlikely (2)	Slightly unlikely (3)	Neither likely nor unlikely (4)	Slightly likely (5)	Moderately likely (6)	Extremely likely (7)
Say positive things about this brand to other people. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recommend this brand to someone who seeks your advice. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourage friends and relatives to do business with this brand. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consider this brand your first choice to buy pasta. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do more business with this brand in the next few years . (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buy this brand the next time I need pasta. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 How likely are you to do the following things for $\{Q7/ChoiceTextEntryValue\}$ (1: extremely unlikely, 7: extremely likely)?

	Extremely unlikely (1)	Moderately unlikely (2)	Slightly unlikely (3)	Neither likely nor unlikely (4)	Slightly likely (5)	Moderately likely (6)	Extremely likely (7)
Say positive things about this brand to other people. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recommend this brand to someone who seeks your advice. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourage friends and relatives to do business with this brand. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consider this brand your first choice to buy pasta. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do more business with this brand in the next few years. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buy this brand the next time I need pasta (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Please consider the role pasta plays in your daily life and well-being. How much do you agree with the following statements (1: strongly disagree, 7: strongly agree)?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Choosing pasta is a big decision in one's life. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I attach great importance to selecting pasta. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't usually get overly concerned about pasta (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Which pasta I choose doesn't really matter to me. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choosing pasta takes a lot of careful thought . (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decisions about selecting pasta are serious, important decisions . (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

It means a
lot to me to
use pasta.
(7)

☐ ☐ ☐ ☐ ☐ ☐ ☐

Q12 Finally, some general questions.

Q11 How old are you?

Q13 Which gender do you feel belonging to?

- ☐ Male (1)
- ☐ Female (2)
- ☐ other / decline to say (3)

Q14 What's your highest level of education?

- ☐ lower education: basisonderwijs (1)
- ☐ intermediate education: Vmbo/Havo/Vwo (2)
- ☐ Mbo (7)
- ☐ Bachelor (Hbo / Wo) (3)
- ☐ Master (Hbo / Wo) (4)
- ☐ PhD (5)
- ☐ other (6) _____

Q15 Which country do you currently live in?

- ☐ The Netherlands (1)
- ☐ Germany (2)
- ☐ other (3) _____
-

Q16 What's your country of origin?

- ☐ The Netherlands (1)
- ☐ Germany (2)
- ☐ other (3) _____
-

Q17 What is your annual net income in your household (in €)?

- ☐ Under 7.499 (1)
- ☐ 7.500- 14.999 (2)
- ☐ 15.000-24.999 (3)
- ☐ 25.000-34.999 (4)
- ☐ 35.000-44.999 (5)
- ☐ 45.000 and above (6)

Q18 Thank you for your participation in my Master thesis study! I really appreciate your time and effort! If you have any remarks or questions, please feel free to contact me at ilse.boers@student.ru.nl.

Appendix 4: Survey study 2; Traditional measurement

Traditional measure BRAND ATTACHMENT

Start of Block: Welcome page

Q1 Dear Participant, Thank you for taking the time to take part in this study!
My name is Ilse Boers and this study is part of my Master's thesis in Marketing at Radboud University Nijmegen, under supervision of Dr. Csilla Horváth.
In this study, I would like to learn about how you feel towards brands in the category of pasta. The study should take around 5-8 minutes. Your data will be treated anonymously, safely and with great care. It will only be used for scientific research.
By starting the survey, you agree with the use of your (anonymous) data for this research project.

End of Block: Welcome page

Start of Block: Explanation of measurement

Q2 To start off, I would like to learn about which brands you attached to when it comes to pasta. **Please think of brands in the pasta category that you attached to. The brands can be popular or not, national or international, from small or big companies or it could be a house brand (please indicate which house brand it is about)** You can mention up to 12 pasta brands, entered one by one in the text box below. Once you enter a pasta brand, you will be given five statements about the brand in question. Please indicate how much you agree or disagree with the statements (1: strongly disagree, 7: strongly agree). After answering the statements, you can move on to naming another brand. When you can no longer think of another brand, or have reached the limit of 12 brands, you can continue to the next part of the questionnaire.
I would like to ask you to name at least 2 brands

End of Block: Explanation of measurement

Start of Block: Indication brand 1

Q3 Please, name a pasta brand that comes to your mind.

Q4 Indicate how much you agree with the following statements from 1(strongly disagree) to 7 (strongly agree).

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
#{Q3/ChoiceTextEntryValue} is part of who I am. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel personally connected to							
#{Q3/ChoiceTextEntryValue}. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel emotionally bonded to							
#{Q3/ChoiceTextEntryValue}. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
#{Q3/ChoiceTextEntryValue} is part of me. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
#{Q3/ChoiceTextEntryValue} says something to other people about who I am. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5 Do you want to add another brand? If so, please click "yes" and write down the brand in the text field. If you are done with naming brands, please click no - you will then go to the next part of the survey.

- ☐ Yes (1) _____
- ☐ No (2)

Skip To: End of Block If Do you want to add another brand? If so, please click "yes" and write down the brand in the text... = No

Q27 We would like to ask a few questions about the method you just used to indicate your relationship with brands in the pasta category. Please, indicate how much you agree with the following statements on a scale of 1 (strongly disagree) to 7 (strongly agree).

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
This method is user-friendly . (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This method gives the possibility to recover from mistakes easily . (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could use this method successfully the next time. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was difficult for me to apply this method. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had to concentrate a lot while applying this method. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had to think very hard while applying this method. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The effort required to apply this method was very low . (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This method is fun to use. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I felt bored using this method. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I enjoyed participating in this method. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time went by quickly while filling out this method. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The time required to fill out this method was very low . (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This method really displays the way I feel about the different brands. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This method enables me to uncover my attachment in the brands. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that by using this method I was able to communicate my true feelings towards the brands. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q28 Please, indicate the pasta brand from the first step that you feel most attached to.

Q29 How likely are you to do the following things for **#{Q28/ChoiceTextEntryValue}** (1: extremely unlikely, 7: extremely likely)?

	Extremely unlikely (1)	Moderately unlikely (2)	Slightly unlikely (3)	Neither likely nor unlikely (4)	Slightly likely (5)	Moderately likely (6)	Extremely likely (7)
Say positive things about this brand to other people. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recommend this brand to someone who seeks your advice. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourage friends and relatives to do business with this brand. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consider this brand your first choice to buy pasta (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do more business with this brand in the next few years. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buy this brand the next time I need pasta (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q30 Please, indicate any other pasta brand you filled in before.

Q31 How likely are you to do the following things for **#{Q30/ChoiceTextEntryValue}** (1: extremely unlikely, 7: extremely likely)?

	Extremely unlikely (1)	Moderately unlikely (2)	Slightly unlikely (3)	Neither likely nor unlikely (4)	Slightly likely (5)	Moderately likely (6)	Extremely likely (7)
Say positive things about this brand to other people. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recommend this brand to someone who seeks your advice. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourage friends and relatives to do business with this brand. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consider this brand your first choice to buy pasta. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do more business with this brand in the next few years. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buy this brand the next time I need pasta (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q32 Please consider the role pasta plays in your daily life and well-being. How much do you agree with the following statements (1: strongly disagree, 7: strongly agree)?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Choosing pasta is a big decision in one's life. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I attach great importance to selecting pasta. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't usually get overly concerned about pasta. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Which pasta I choose doesn't really matter to me. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choosing pasta takes a lot of careful thought . (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decisions about selecting pasta are serious, important decisions . (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

It means a
lot to me to
use pasta.
(7)

☐ ☐ ☐ ☐ ☐ ☐ ☐

End of Block: Category involvement

Start of Block: Demographic information

Q33 Finally, some general questions.

Q34 How old are you?

Q35 Which gender do you feel belonging to?

☐ Male (1)

☐ Female (2)

☐ other / decline to say (3)

Q36 What's your highest level of education?

- ☐ lower education: basisonderwijs (1)
 - ☐ intermediate education: Vmbo/Havo/Vwo (2)
 - ☐ Mbo (7)
 - ☐ Bachelor (Hbo / Wo) (3)
 - ☐ Master (Hbo / Wo) (4)
 - ☐ PhD (5)
 - ☐ other (6) _____
-

Q37 Which country do you currently live in?

- ☐ The Netherlands (1)
 - ☐ Germany (2)
 - ☐ other (3) _____
-

Q38 What's your country of origin?

- ☐ The Netherlands (1)
 - ☐ Germany (2)
 - ☐ other (3) _____
-

Q39 What is your annual net income in your household (in €)?

- ☐ Under 7.499 (1)
- ☐ 7.500- 14.999 (2)
- ☐ 15.000-24.999 (3)
- ☐ 25.000-34.999 (4)
- ☐ 35.000-44.999 (5)
- ☐ 45.000 and above (6)

End of Block: Demographic information

Start of Block: Thank you

Q40 Thank you for your participation in my Master thesis study! I really appreciate your time and effort! If you have any remarks or questions, please feel free to contact me at ilse.boers@student.ru.nl.

End of Block: Thank you

Start of Block: Indication most attached brand 1

Q28 Please, indicate the pasta brand from the first step that you feel most attached to.

End of Block: Indication most attached brand 1

Start of Block: Indication brand 2

Q30 Please, indicate any other pasta brand you filled in before.
