Can we “trust” (e)CBRM?

Validating (e)CBRM for the measure of brand trust in the *facial cream* product category

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Abstract

Understanding consumer-brand relationships involves identifying the way different brands in a product category are perceived and influence each other. Past marketing research has paid little attention to this influence when measuring consumer-brand relationships. This paper elucidates the effectiveness of the Consumer Brand Relationship Map (CBRM) technique for measuring brand trust in the facial creams product category. The purpose of this research is to validate the electronic version of the CBRM measurement technique as a tool able to effectively and efficiently capture the complexity of the consumer-brand relationship and particularly the trust generated between them. According to purpose, this manuscript empirically tests the eCBRM technique which was characterized by its precursors as consumer/user-friendly and potent. The research consists of both the eCBRM method as well as a traditional Likert-scale method for comparison. The two studies demonstrate the reliability and validity of the eCBRM method. Also, findings provide evidence that the eCBRM is a fun, fast and accurate method able to keep participants engaged and generate higher levels of trust. In addition, information regarding the drivers of trust in a consumer-brand relationship leads to interesting theoretical and managerial implications.

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1. Introduction

Marketing is about exchanging value with customers and other stakeholders (Vargo & Lusch, 2004). A central concept facilitating marketing exchanges are interactions between suppliers and customers (Grönroos, 2006). Undoubtedly, marketers have dedicated a lot of effort to constructing durable consumer-brand relationships over the past decades (Kumar & Kaushik, 2018). Marketing scholarship has moved from a transactional to a relationship-based approach (Vargo & Lusch, 2004). As a result, activities directed towards establishing, developing, and maintaining successful relationships between customers and brands have been given a lot of attention (Morgan & Hunt, 1994).

The abundance of product and services options in today's markets make brands difficult to stand out and reserve a valued place in customers' minds. Also, it has become more laborious for consumers to choose between the available options. In addition, today's globalized world has enhanced the competitiveness and stakeholder demand in the marketplace (Gabler et al., 2020). The consumer-brand relationship notion has been proven to be a powerful, supporting tool for industries and its advantages for both firms and consumers have been widely acknowledged by marketing practitioners (Fournier, 1998). Indeed, strong consumer-brand relationships are seen by firms as a way to develop flexibility to negative brand information, augment loyalty, leverage greater sales and also decrease price sensitivity (Franzen, 1999). What is more, it has been proven that consumers that acquire strong brand relationships provide more forgiving and benevolent brand evaluations even after a failure (Cheng et al., 2012). In general, the accepted denouement is that consumer relationships are vital for long-term business success. Committed consumers are connected with higher profitability, loyalty and even act as powerful ambassadors for the brand (Hess, Story, & Danes, 2011). Furthermore, prior literature suggests that establishing relationships with brands elicits positive outcomes for the consumers as well. In fact, favorable and potent consumer-brand relationships allow consumers to utilize brands as a means of creation, support and communication of their self-concepts (Sung & Kim, 2010), reduce switching costs (Yang & Peterson, 2004) but also simplify their decision-making process (Ahuvia, 2005). What is more, consumers cultivate intense relationships to a limited number of products and brands despite coming in contact with thousands during their lives (Schouten & McAlexander, 1995).

Consequently, companies as well as marketers have been noted to increasingly exercise consumer-brand relationship creation strategies. Furthermore, professionals and academics realized that describing and measuring the consumer-brand relationships efficiently and effectively is of critical importance in order to learn how to create and maintain long-term bonds (Batra et al., 2012; Fournier, 1994; Hess & Story, 2005; Aggarwal, 2014; Munuera-Aleman et al., 2003). Hence, an abundance of measurements and constructs that attempt to describe the diverse aspects of the consumer-brand relationship phenomenon are documented. For example, Fournier's conceptualization views the relationships consumers form with brands similar to interpersonal relationships (Fournier, 1994). This model has been widely accepted as a suitable measurement for the complex consumer-brand relationship phenomenon. In addition, academic researchers have revealed that consumer-brand relationships acquire norms resembling those found in interpersonal relationships (Blackston, 1993). Efforts have been made to measure and conceptualize all the different aspects and constructs of the consumer-brand relationship. Some of the most common components of these conceptualizations are: Love/passion, self-connection, commitment, interdependence, intimacy, involvement, satisfaction and trust. Brand trust in particular, is an eminent element for a brand or product to be placed in the consideration set of the consumer and will be the focus point of this manuscript.

Customers distinguish brands based on the relationships they form with them. This notion stresses the value of creating good customer relationships as a long-term marketing strategy (Veloutsou, 2015). What is more, brand trust acts as a vital vehicle in achieving long-term customer-relationships. In fact, the whole purpose of relationship building is to earn consumer preference by developing trust (Doyle & Roth, 1992, p. 59). Brand trust has been defined as the willingness of the average consumer to rely on the ability of the brand to perform its stated function (Morgan & Hunt, 1994, p.23). Also, through trust personal connections that develop deeper relationships able to surpass utility and reliability are established between customers and brands (Hess & Story, 2005). Additionally, in situations where consumers feel some type of uncertainty, trusting a brand acts as a way to reduce vulnerability (Chaudhuri & Holbrook, 2001). This actively demonstrates the importance of measuring the concept of trust between brands and their customers in order to establish successful, long-term consumer-brand relationships.

Ample attempts have been made to discover a reliable measure able to seize and portray the trust notion developing between a brand and its customers. For example, Morgan & Hunt

(1994) conducted a quantitative research following an empirical investigation. Interestingly, the questionnaire included a comparison between two different brand alternatives. The results suggested commitment and trust as key concepts for successful relationship marketing implementation. Their research, although intuitive, offered a fictitious alternative for the participants to compare. Answers could potentially have been imprecise given that relationship marketing and its components differ in theory and in practice (Fournier et al., 1998). On the other hand, Chaudhuri & Holbrook (2001) conducted a survey which included at least three brands simultaneously. They found that brand trust is both directly and indirectly linked to brand affect and brand loyalty. However, personal factors such as product involvement were neglected and, as the authors pointed out, their incorporation would be beneficial for the research. In addition, Hess & Story (2005) showcased the prominence of brand trust in building personal connections by basing their survey on the retail and fast food industries. Their trust-based commitment framework is a great influence for this report, but it could be argued that a more focused approach on the relationship component of brand trust would provide more fruitful managerial and theoretical implications. From this it can deducted that prior literature has made numerous promising attempts to measure the brand trust concept efficiently and generous knowledge has been offered. However, a concrete, validated tool focused on brand trust; able to measure more than one brand in a product category at the same time; that also takes into consideration personal factors such as category involvement, appears to be missing.

1.1 Problem statement

Despite the dedication of both marketing specialists and academics to the concept of the relationships existing between brands and their consumers, the progress in creating an empirically tested measure able to capture relationships regarding numerous brands within a product category simultaneously is still deficient (Hess & Story, 2005). Earlier marketing research has presented many different ways to measure the phenomenon. In particular, focus groups, personal interviews (Veloutsou et al., 2007; Papista & Dimitriadis, 2012) as well as Likert-scales (Thomson et al., 2005; Park et al., 2010) have been utilized to explain, capture and measure relationships between consumers and one (or two) brands. Focus groups and personal interviews provide depth and clarity as well as breadth and contextual information of the collected data (Stokes & Bergin, 2006). Likert scales administer larger numbers of respondents, individuality and honesty of feedbacks as well as time efficiency. Furthermore, Fournier's (1998)

phenomenological interviews utilize experiential marketing and give insight into every-day life experiences consumers have with brands.

Regardless of their positive aspects, these techniques share a common negative component, their inability to go beyond the dual relationship of one brand and one consumer. This is simply unrealistic since brands exist in an ecosystem. In fact, brands prevail in an environment consisting of other brands that are potential competitors and can interact or impact each other (Mackalski & Belisle, 2015). What is more, consumers might reveal different trust measures when multiple brands are considered. It has been proven that the perceived relative attractiveness between two options could depend on the presence or absence of an additional option (Tversky & Simonson, 1993). Also, extensive research regarding values and preferences has indicated that preferences are dependent on the context and the time of choice (Howes et al., 2016). Thus, consumers are expected to react differently to a brand when others are considered simultaneously as opposed to it being evaluated alone, as in a vacuum. As a result, the already existing measurements lack the ability to seize the complexity of the consumer relationship with different brands in a product category to its entirety.

These expectations for alternative consumer reactions to and evaluations of brands were actively supported by the precursors of this thesis (Buunk, 2020; Daan T. van der Ven, 2020; Fandridou, 2020). They utilized a new technique to empirically measure the consumer-brand relationship while taking into consideration multiple brands in a product category and placing them simultaneously on a map. The technique, the Consumer Brand Relationship Map, or CBRM, revealed that consumers being interviewed changed their positioning of previous brands as new ones entered the map. The present study aims to breach the gap and surpass the limitations of previous measurements by validating this technique. This new measurement provides apprehending of the unique relationship between one particular consumer and multiple brands in a product category. Brand trust will be utilized as the dependent variable and aid in uncovering an effective measurement of the consumer-brand relationship. The technique has been deemed as user-friendly resulting in engaged participants and ultimately extensive information on the research goal. Furthermore, it was uncovered that the ease of use and fun element of the technique nudged people into cooperating more.

During its implementation a lot of attention is given to recalled brands from the consumer's consideration set. Studies that present respondents with a fixed set of alternatives to

choose from mistakenly perceive the choice set as static and thus neglect the possibility of changes in it (Nedungadi, 1990). Furthermore, decision making can be influenced greatly when making memory based choices (Lynch & Srull, 1982). Thus, allowing participants to evoke trusted brands from their memory, offers the advantage of examining in depth the consumer-brand relationship and the brand trust notion. Lastly, the measurement transpires by using distance scores. The distance scores have been proven advantageous due to their simplicity, visibility and generalizability (Jacobs-Lawson & Hershey, 2002). Depending on the number of these scores the level of trust towards different brands is calculated. This method provides the opportunity for a visual representation and quantification of intimacy between the consumer and brands and ultimately the degree of trust can be determined.

To validate this new method construct validity will be examined to test the correspondence between brand trust measured through the eCBRM and through a Likert-scale (Peter, 1981). Specifically, an experimental demonstration will determine whether the test is measuring the construct it claims to be measuring (Brown, 2000, p.8). In other words, an attempt will be made to demonstrate that concepts theoretically related to trust are (are not) reproduced in the results as expected, in a particular population.

Therefore, the aim of this research will be to validate a new measurement method that is able to measure brand trust while capturing the full complexity of consumer-brand relationships within the product category of facial creams.

1.2 Theoretical relevance

Studies regarding the consumer-brand relationship have been somewhat restricted either in a conceptual character, a services-based approach or a limitation in studying multiple brands simultaneously (John et al., 2006; Blackston, 1993; Schnittka et al., 2012; Harrison-Walker, 2001). This study utilizes the eCBRM and aims to take a different approach that allows for the consumer to present their point of view and use brad recall to unravel the trusted brands in the consideration set. Furthermore, this manuscript aims to address some of the existing thesises' limitations and aspires to contribute to the findings. First, the digitalization of the CBRM process aids in simplifying data collection and analysis. Second, it contributes by using brand trust as the dependent variable and focusing on discovering how it influences choice and placement. Also, the choice of facial creams as the product category allows for the trust concept to be highlighted. Lau & Lee (1999) referred to brand trust as the "willingness to rely on the brand". Given that

"facial creams" is a high-involvement product category that requires the consumers' willingness to place confidence in the brand, it allows for an accurate and deep understanding of the brand trust concept. Lastly, the research aspires to elaborate on validity by measuring concepts that are theoretically related to trust in the same population. Thus, by validating that the expected relationship was indeed reproduced in the results, construct validity will be amplified.

1.3 Managerial relevance

Apart from additions to the academic world, this study aspires to result in practical relevance for marketing practitioners as well. As mentioned above, understanding the way consumers form relationships is of vital importance for the creation of long-term profitability for brands. Thus, this tool provides marketers the opportunity to get a deep insight into how consumers interact with, attach to and develop trustful relationships with different brands in the same product category. The route for a brand to get on top is to comprehend their competitor's relevance and surpass it (Aaker, 2011, p.9). By understanding the relationships consumers acquire not only with a brand but also with their competitors in a category, professionals can get a fuller spectrum of the connection and achieve dominance. Moreover, the visual representation of the tool makes it a very efficient communication device for interdepartmental exchange of information in firms regarding costumer approach, marketing decisions and competitive analysis. Success of company developments and structures is ensured when employees of different departments (e.g. design, building, delivering) communicate efficiently with each other (Hauser, 1993). The eCBRM could thus provide the opportunity for productive information transmission across sectors.

1.4 Outline

This report will be structured as follows. First, the theoretical background includes a literature review presenting an overview of the research most closely related to the consumer-brand relationship and its essential variables. Afterwards, the eCBRM mapping along with the additional research methods is explained. Furthermore, the outcomes of the empirical research as well as the interpretations derived are analyzed. As a result, a conclusion, managerial implications and contribution to already existing knowledge arise and are described on section five. Lastly, the limitations as well as directions for further research can be found on the last part of this manuscript.

2. Theoretical Background

According to Keller K.(1993,p2.) a brand is defined as "a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors". Furthermore, the term brand can be conceptualized as one of the most crucial and sustainable assets of organizations (Clifton, 2009, p.3). Evidently, research has found proof that strong brands acquire greater advertisement elasticities, are better shielded towards negative information and are more effective at marketing communications (e.g. Hoeffler & Keller, 2003). Due to the realization that consumers can become emotionally attached to brands (Schouten & McAlexander, 1995), research regarding the creation of consumer-brand relationships flourished. The consumer-brand relationship phenomenon is suggested to augment the understanding of brand loyalty (Correia Loureiro et al., 2012), stimulate brand evaluation bias (Park & Lessig, 1981), and enhance the comprehension of a brand's role in the life of the consumer, leading to marketing products and activities that fit them better (Breivik & Thorbjornsen, 2008). Thus, several researchers and practitioners have attempted to discover the mechanisms behind this phenomenon and how they are related (Thomson et al., 2005; Chang & Chieng, 2006; Papista & Dimitriadis, 2012). This part of the study is dedicated to unraveling some of these mechanisms and providing argumentation on the choice of *brand trust* as the focus point for this thesis.

2.1 Related Constructs

A starting point for the analysis of the consumer-brand relationship identified six components of the consumer-brand relationship quality, namely, love and passion, self-connection, interdependence, commitment, intimacy and brand partner quality (Fournier, 1998). The six component model illustrated the complexity of the relationship quality concept and emphasized the importance of multiple components to explain it. To this day, ample marketing academics (e.g. Sen & Bhattacharya 2001; Correia Loureiro, 2012; Ahuvia, 2005) implement Fournier's conceptualization to their approach because it views the brand as an active relationship partner with which consumers are able to form bonds that lead to profitability. In addition, the brand relationship quality model was capable of discovering not only deep knowledge of the consumer-brand relationship but also the wider context of consumer experiences which act as the basis for this relationship (Fournier, 1998). However, later research suggested that these components often

tend to correlate with each other in the minds of the consumers (Papista & Dimitriadis., 2012; Chang et al., 2006) and called for refinement. Moreover, Fournier's study proved limited due to its restricted sample size as well as its exploratory nature. Subsequently, in an attempt to bundle all the correlated components, researchers presented different distinct components for the consumer-brand relationship. A description of the most vastly mentioned is provided in this chapter and includes the concepts of: *commitment, love, attachment and trust.*

2.1.1 Brand Commitment

Commitment has been studied extensively and from many aspects in the marketing literature. It is viewed as "a force that binds an individual to a course of action of relevance to one or more targets" (Meyer & Herscovitch, 2001, p.301). A committed to a certain brand consumer perceives their relationship as enduring and portrays a stable behavior over time. This combination of personal and functional characteristics dictates the level and nature of commitment in a consumer-brand relationship (Hess & Story, 2005). Furthermore, commitment reflects a consumer's desire, need and/or obligation to sustain a relationship (Meyer & Allen, 1991). Academics and practitioners over the years have utilized the concept of *commitment* to build sustainable, long-lasting relationships with their customers. Moreover, it has been showcased that *trust* leads to commitment (Hess & Story., 2005; Morgan & Hunt, 1994). In addition, the level of commitment a consumer feels in a relationship with a brand can be predicted by *trust and satisfaction* (Sung & Campbell, 2009).

2.1.2 Brand Love

Brand Love was included in Fournier's (1998) conceptualization as a centre element of the consumer-brand relationship. Loved brands have been in the spotlight of academic research for many decades. It has been interpreted in both its interpersonal (Shimp & Madden, 1988) and object aspect (Sternberg, 1986). Brand love influences powerful and intense consumer interaction and involvement with the brand (Batra et al., 2012; Carroll & Ahuvia, 2006). Furthermore, it has been proven that *brand love* is not distinguishable from other consumer-brand relationship constructs. *Brand trust*, in particular can enhance *brand love* (Albert & Merunka, 2013).

2.1.3 Brand Attachment

Brand attachment reflects a consumer's connection to a brand. This connection demonstrates the perceived relevance between the brand and the consumers' 'self' (Fedorikhin et al., 2008).

Additionally, self-brand connections have been used to indicate the degree that a brand has been integrated into a consumers' self-concept (Escalas, 2004). The notion of brand attachment has been researched extensively and it has been realized that emotional *attachment* results in brand loyalty and positive word-of-mouth (Vlachos et al., 2010). What is more, it has been proven that *brand attachment* is one of the key factors for equity (Malar et al., 2011). Also, *attachment* has been viewed as an essential element able to depict the way by which consumers are related to brands (Schmitt, 2012). Researchers have studied the concept broadly and have presented both emotional and cognitive aspects (Park et al., 2006). Lastly, it has been found that a consumer's *brand attachment* may result from *brand trust* towards the firm (Vlachos et al., 2010) but also *brand trust* can affect brand loyalty indirectly through *brand attachment* (Tsiotsou, 2010).

It is quite clear that *Brand Trust* plays the role of the key component tying all the different constructs of the consumer-brand relationship together. It has been viewed as playing the role of an antecedent/predictor (e.g. Thorbjornsen & Supphellen, 2014), a moderator (e.g. Park et al., 2008) or a result (e.g. Loureiro, Ruediger & Demetris, 2012). Evidently, the concept of *trust* seems to unify every other concept. Thus, *brand trust* is perceived as the most influential variable and will be given more attention. Figure 1 presents the connection between *brand trust* and other related constructs as well as outcomes of *brand trust*.

2.1.4 Brand Trust

The concept of *trust* has been studied in length by a myriad of academics, specialists and philosophers over the years. As the Scottish author George MacDonald wrote in 1877 "To be trusted is a greater compliment than to be loved". In the relationship marketing subject, *brand trust* has been deemed as the "cornerstone" of long-term relationships (Spekman. 1988, p.79). Also, *trust* has been characterized a fundamental element for the prosperity of a relationship marketing attempt (Sung & Kim, 2010). *Trust* is a decisive factor that differentiates the transactional from the relational characters of marketing (Delgado-Ballester & Munuera-Aleman, 2001). In other words, without *trust* the consumer-brand relationships would be completely shallow and relying solely on utility and reliability, disregarding the deeper relational connections (Hess & Story, 2005). Hence, comprehension of the *trust* concept should be prioritized and utilized to aid the maintenance of long-term relationships regarding firms and their multiple partners (Morgan & Hunt, 1994).

Brand trust is perceived as a consumer's belief that the brand is willing and able to deliver on promises it has set (Chaudhuri & Holbrook 2001, p.82). *Trust* has been established as a dominant determinant of relationship commitment (Morgan & Hunt, 1994). Also, brands which acquire high levels of *trust* enjoy both attitudinal and behavioral brand loyalty from their consumers (Chaudhuri & Holbrook, 2001). This is important because brand loyalty, justifiably, leads to increased willingness to pay (Reichheld, 1996). Moreover, it has been proven that *brand trust* has an impact on repurchase intention particularly in the case of retailers (Zboja & Voorhees, 2006). This actively demonstrates that trusted brands acquire an enduring spot in consumers consideration set and are likely to be bought repeatedly in the future. Furthermore, high levels of *brand trust* contribute to positive consumer attitudes that develop towards the trusted brand (Chaudhuri & Holbrook 2001). Also, studies have shown that customer's trust has a significant effect on customer's word of mouth (WoM) (Sallam, 2016). Therefore, repeat purchase intention and (positive) WoM are, among others, perceived as important outcomes of *brand trust*.

The underlying premise of the trust literature is that people fundamentally need to reduce uncertainly in their relationships. In fact, consumers invest in a brand based on their level of *trust* in that particular brand (Kim et al., 2019). In the personal care product category, consumer's purchase intentions are influenced by their attitudes towards the brand (Kim & Chung, 2011). In the skincare industry especially, *brand trust* plays a fundamental role in the establishment of the consumer-brand relationship. Research has shown that when a skincare brand is perceived as trustworthy and reliable, consumers view it as more valuable and prefer it (Rani & Krishnan, 2018). Also, it has been reported that skincare products could potentially contain harmful to the inner and outer skin ingredients (Ayenimo et al., 2010). Thus, in order to avoid injurious incidents consumers might prefer purchasing brands that they *trust* greatly. Consequently, the facial creams product category provides a compelling field for the *brand trust* notion to be studied accurately.

It is important for the notions of *satisfaction* and its connection to *trust* to be clarified for the accurate advancement of present study. In particular, *trust and satisfaction* are oftentimes perceived uniformly in the literature (e.g. Crosby et al., 1990; Zboja & Voorhees, 2006). Moreover, it has been argued that satisfaction could be an antecedent to trust (Geyskens et al., 1999). However, *satisfaction* alone cannot contribute reliable information regarding consumer

behavior, price sensitivity or product failure (Hess & Story, 2005). Meanwhile, *brand trust* has been viewed, for quite some time, as a basic factor in clarifying brand loyalty, repeat purchase intention and word of mouth in traditional as well as online channels (Bart et al., 2005). Also, the notion that "not all satisfied customers trust the brand" is globally accepted (Hess & Story, 2005). Lastly, Hess & Story (2005) showcased that although initially *trust* is constructed from *satisfaction*, they exist separately.

Consequently, b*rand trust* can be characterized as an autonomous, holistic and reliable construct able to: (1) depict the emotional bond between the brand and the consumer (Delgado-Ballester & Munuera-Aleman, 2001) (2) display the connection between consumers confidence in brands and brand loyalty (Sirdeshmukh et al., 2002) and thus (3) impact an abundance of positive business performance outcomes such as repeat purchase intention (Zboja & Voorhees, 2006). As a result, in this study, the construct of *trust* is deemed able to capture the phenomenon of the consumer-brand relationship in the facial creams product category from all different aspects; hence it will be used as the sole dependent variable.

Construct	**Relationship**	**Source**
Commitment	Commitment as an outcome of Trust	Hess & Story, 2005 Morgan & Hunt, 1994
	Trust as a predictor of Commitment	Sung & Campbell, 2009
Love	Trust as enhancer of Love	Albert & Merunka, 2013
Attachment	Attachment as an outcome of Trust	Vlachos et al., 2010
	Trust affects Loyalty indirectly through Attachment	Tsiotsou, 2010
Loyalty	Trust as an antecedent of Loyalty	Chaudhuri & Holbrook, 2001 Bart et al., 2005
Outcomes	Repeat Purchase Intention as an outcome of Trust	Zboja & Voorhees, 2006 Bart et al., 2005
	Positive consumer attitude as an outcome of Trust	Chaudhuri & Holbrook, 2001
	Positive Word of Mouth as an outcome of Trust	Sallam, 2016 Bart et al., 2005

Figure 1: Connecting Brand Trust with other related constructs and outcomes

2.2 Measurement of the consumer-brand relationships

As mentioned above, previous literature tried to address the consumer-brand relationship in different ways. The three techniques most commonly used to measure the consumer-brand relationship are in-depth interviews, focus groups and Likert-scales in the form of Questionnaires. In this part of the article these three techniques as well as their advantageous and disadvantageous points are described. Also, the (e)CBRM technique along with the mapping concept are discussed.

2.2.1 In-depth Interviews

In-depth interviews are the prevailing and most broadly spread method for acquiring qualitative data. It has been described as one of the most powerful tools for obtaining an understanding of human beings through investigating topics in depth (Fontana & Frey, 2000). They can be structured or semi-structured interviews and they often include open-ended questions. These questions portray a free association qualitative research technique. They mainly aim to identify the assortment of possible brand associations in order to help marketers create a brand profile (Keller & Swaminathan, 2019, p. 334). All types of emotional, rational, cultural as well as social needs that shape brand profiles lye deep in the minds and hearts of consumers and are often connected. Thus, it is essential to obtain information about these associations and thoughts when researching consumer-brand relationships through in-depth interviews (Cooper 1999).

In-depth interviews are in the advantageous position to allow the researcher to uncover more detailed and thorough information on consumer perceptions (Papista & Dimitriadis, 2012). Moreover, in-depth interviews provide the respondent with the freedom to express thoughts and feelings more freely in comparison to other quantitative techniques (Boyce & Neale, 2006). However, this technique must be accompanied with thorough planning and preparation from the side of the researcher. Conducting the interviews; transcribing the dialogues; and interpreting the content, usually demands extensive time and exertion. In addition, there is a thin line between being flexible and allowing the respondent to express their deep thoughts and going-off track often resulting in a difficult to analyze interview (Adams & Cox, 2008). Also, it is a rather time-consuming technique which means that the participants need to be engaged and the researcher capable (Patton, 1980).

2.2.2 Focus groups

Focus groups resemble interviews greatly with the basic difference being that this method involves more than one participant at a time, usually up to six or seven (Adams & Cox, 2008). The participants are able to hear each other's responses and contribute with supplementary statements which they may not have come up with on their own. This structure of the focus group discussion tends to motivate participants to communicate their own experiences and feelings after listening to other participants encounters (Morgan, 1997). Papista & Dimitriadis (2012) implemented this method when conducting research on consumer-brand relationship and their usage behavior. Focus groups resulted in data higher in honesty in comparison to personal interviewing (Papista & Dimitriadis 2012). Therefore, one could argue that focus groups would be an effective tool to decrease the time-consuming effect of the interview technique. However, the time and effort needed to interpret the complex data derived from focus groups could outweigh any time-savings (Mansell et al., 2004). Also, participants who form the groups in this method have been noted to modify or exaggerate their replies according to the groups' socially desirable responses in an attempt to influence, impress or daunt each other (Stewart et al., 2007). What is more, this method comes with an intrinsic limit in the sense that the majority of information that come up during a focus group is most likely reflecting what the participants have in common and share, neglecting differentiated aspects of individuals (Acocella,2011). Thus, focus groups would not be a highly effective measure to capture the consumer-brand relationship in-depth for every consumer individually.

2.2.3 Likert-scales in the form of Questionnaires

Recent academic research illustrates that the most popular method to measure consumer-brand relationships from a quantitative approach is Likert scales. For example, Kimpakorn and Tocquer (2010) used a 5-point Likert scale whereas Veloutsou (2007) and Batra et al. (2012) preferred a 7-point Likert scale to measure the relationship between one brand and one consumer. Two important concepts when using the Likert scale as a tool in the form of Questionnaires are reliability and validity (Adams & Cox, 2008). Reliability represents the consistency of the measure whereas validity reflects its ability to measure what it is supposed to measure. Likert scales are perceived as simple to construct, easy to read and complete by participants. However, they are often associated with restricting problems. For example, participants tend to avoid the extremes (e.g. completely disagree/completely agree) or give dishonest answers in order to

achieve desirability. These issues are described as central tendency bias and acquiescence bias and could lead to lack of reproducibility (Bertram, 2007). These disadvantages as well as the one-dimensional nature of the method result in a weakness to measure multiple brands at a time in regards to their deep associated relationships with a consumer.

2.2.4 The mapping concept

According to Jacobs-Lawson & Hershey (2002, p.1), "a concept map is a graphic, hierarchically arranged knowledge representation that reflects the content of an individual's semantic long-term memory". Concept mapping as a tool assists the elicitation of the structure of knowledge and the process of knowledge production (Novak & Gowin, 1984, p.8). In the consumer-brand relationship context, the mapping technique offers the interviewer the opportunity to capture the complexity of the associations, thoughts and feelings that exist in the consumers mind regarding their relationship with multiple brands in a specific product category. When it comes to brand relationships the consumer is often viewed as tangled in a web of connections consisting of many sources of influence and their interconnections, which can be defined as a relational ecosystem (Henderson & Palmatier, 2010, p. 37). The techniques of in-depth interviews, Likert scales and focus groups do not take this ecosystem into consideration and neglect the competitive environment when measuring consumer-brand relationships. But, "consumer-brand relationship research is multi-disciplinary, multi-dimensional and multi-conceptual" (Fetscherin & Heinrich. 2014, p.1). Also, relationships depend on their social context (Hinde, 1995). In other words, they exist in a social and physical environment where they influence each other (Reis et al., 2000).

Researchers have used the "brand concept map" to measure and evaluate the relations between consumers and brands in a specific category. For example, John et al. (2006) implemented the method of brand concept maps (BCM) in capturing consumer brand association as well as their interconnections. Their research concluded with the realization that brand concept maps are a reliable method that can successfully identify core brand associations. Also, Schnittka et al. (2012) used the mapping procedure while taking into account consumers' evaluation judgments of each brand association and the importance of these associations for each consumer individually. They introduced the brand association network value (BANV) and highlighted the ability of the mapping technique to quantify consumer brand associations and their favorability in a satisfactory manner. However, in both conceptualizations the maps included and focused on only one brand at a time, neglecting the competitive environment in which brands primarily exist.

As mentioned above, the eCBRM fills this gap and places attention on the unique brand consideration set of each participant individually. Also, the tool is constructed in such a way that no specific training is required for its successful application. Lastly, the CBRM method is worth researching and validating since in its debut it was characterized as fun, user-friendly and successful. Thus, the present research will utilize and validate the eCBRM method in order to capture this complexity of the consumer-brand relationship context and measure *brand trust*.

3. Empirical investigation

Similarly to the precursors and developers of the CBRM, the consumer-brand relationship will be researched using both quantitative and qualitative techniques. The use of multiple methods of data collection regarding the same phenomenon is otherwise known as method triangulation (Thurmond, 2004). Triangulation allows for validity testing through the convergence of information from different sources (Lambert & Loiselle, 2008). In particular, in this study, in-depth interviews were conducted to get a deep understanding of how and why brand trust influences the placement of the different brands on the map. In addition, two questionnaires in the form of a 7-point Likert scale were handed out to two different samples in a population.

Qualitative research is capable of providing rich and thorough information on the perplexing emotional layers that stimulate human desires and behavior (Hooper, 2011). Individual in dept interviews, in particular, allow for more control and closer communication with the interviewee (Morgan, 1997). Given the focus of this research, in-depth interviews are a suitable and valid technique since they allow for the participants to express themselves clearly and broadly. Thus they provide the opportunity to get a better insight both in the relationships between the consumer and the brand but also in the different brand connections. In other words, by prompting the participants to express themselves out loud during the brand placement on the map, access is gained on secondary data. Secondary data depict the actual decisions that have been made or could potentially be made by real decision-makers in real environments (Winer, 1999). On the other hand, in order for the measurement to be validated correctly, an already existing method must also be conducted acting as a means of comparison supporting the triangulation method. “Questionnaires” is the traditional method that offers the opportunity to both validate and compare the results. Hence, present study is in the position to validate or reject the eCBRM as an efficient measurement technique in capturing the full complexity of the trust element in a consumer-brand relationship regarding the facial creams product category. Figure 2 provides a comparison between the conceptualizations of the eCBRM measure and the traditional, Likert-scale measure. The brand trust; enjoyment; positive wom and repeat purchase intention; category involvement; and demographic information scales can be found in the next segment of this chapter. Also, appendix D includes a visual representation of the eCBRM and Likert-scale surveys as seen realistically in Qualtrics.

Method	1. eCBRM	2. Traditional measure
Measurement	*In-person interview*	*7-point Likert scale*
Step 1	➢ Verbal introduction to the method ➢ Explanation and guidance ➢ Participants recall brands from their consideration set ➢ eCBRM target is filled in ➢ Up to 12 brands can be mentioned ➢ Time monitored for the map and survey completion separately	➢ Text introduction and explanation of the method ➢ Participants recall brands from their consideration set ➢ Brand trust scale is filled in for each brand mentioned individually ➢ Up to 12 brands can be mentioned ➢ Time monitored only for the survey completion
Step 2	Enjoyment scale	Enjoyment scale
Step 3	➢ Indication of the most trusted brand placed on the eCBRM ➢ Brand trust scale filled in ➢ Brand trust outcomes scale (positive WoM and repeat purchase intention) filled in	➢ Indication of the most trusted brand mentioned on step 1 ➢ Brand trust outcomes scale (positive WoM and repeat purchase intention) filled in
Step 4	➢ Indication of a second, random brand placed on the eCBRM ➢ Brand trust scale filled in ➢ Brand trust outcomes scale (positive WoM and repeat purchase intention) filled in	➢ Indication of a second, random brand mentioned on step 1 ➢ Brand trust outcomes scale (positive WoM and repeat purchase intention) filled in
Step 5	Category Involvement scale	Category Involvement scale
Step 6	Demographic information	Demographic information

Figure 2: Comparison between the CBRM and the Liker-scale measures

An important remark concerns the reason for not selecting solely the online survey option which includes the eCBRM and does not require the presence of an interviewer. The in-depth interviews method was expected to be more appropriate than solely the online survey because the population sample chosen for this study was predicted to be more comfortable and involved with the presence of an interviewer for initial guidance and support. Furthermore, the responses could have been deemed invalid given the low levels of familiarity of the population with digital methods in general and online surveys in particular. Also, the nature of the personalized interaction of qualitative research techniques has the power to present brands as more human (Hooper, 2011). Besides, a qualitative approach is more useful when dealing with brands since it is able to tackle the rational, emotional social and cultural interconnected needs that come up (Cooper, 1999).

The in-depth interviews took place during the same time period as information was being gathered via the questionnaires. The interviews included a Greek population thus the Greek

language was chosen as the target language. The questionnaires on the other hand were available in both Greek and English. The original text for the two techniques was written in English, making it the source language. In order to ensure the accuracy of the translated texts, the method of back-translation was used. Back-translation has been proven very advantageous since it allows for the "decentering" of the questionnaire away from the original language form and for the modification of items to a more understandable to the respondents manner (Brislin & Freimanis, 2001, p. 23). Thus, the original English texts were translated in Greek and a native Greek speaker with a proficient English knowledge took upon the task of translating the Greek text back into English. The final texts resulted in a very understandable and successful research.

Also, in order to relish the advantages of data triangulation diverse and multiple data were gathered. Some of these advantages include a clearer understanding of the problem, revealing unique findings and increasing confidence in research data (Thurmond, 2001). Therefore, participants were of different ages, gender, educational levels and category involvement. Triangulation was achieved through in-depth interviews with an adequate number of participants (N=50) as well as a survey filled in by a control group (N=150), used for comparison. Furthermore, the enjoyment scale served as a means to validate the results. A comparison of the results from both sources indicated the existence of significant differences between the eCBRM and the traditional Likert-scale method. Lastly, both questionnaires were created using the Qualtrics survey-building tool and the results were analyzed using SPSS. This analysis helped determine the superiority of the eCBRM method as a tool for measuring brand trust in comparison to the Likert-scale method, since it is able to take the brands' ecosystem into account.

3.1 eCBRM measure

The eCBRM measure is the option where in-depth interviews are held and the mapping process is followed. In-depth interviews have been researched extensively (e.g. Rubin & Rubin, 1995; Robson, 2002) and great attention has been given to the connection of the interview environment with everyday life. In order for this connection to be achieved the researcher needs to create a transmission for the interviewee from the everyday, social level to a deeper more focused level where the elaboration of the interview topic can take place (Ritchie & Lewis, 2003, p. 144). During the implementation of the eCBRM method the transmission was made clear so the participants could dive deep into their consideration sets and recall the trusted facial cream

brands. Once the information was gathered and the process approached the end it was again the interviewers' responsibility to initiate the return to the everyday level smoothly.

The eCBRM method included an introductory-welcoming text where the explanation of the mapping procedure as well as an example was provided followed by the actual mapping procedure. Next, the enjoyment scale, the brand trust scale as well as the outcomes of brand trust (repeat purchase intention and positive wom) scale were filled in for the most trusted brand. The same scales were filled in for a second, random brand. Lastly, the category involvement scale was part of the validation process for the eCBRM method. Also the demographic information segment of the survey provided some categorization and segmentation of the participants. The next section of the report is dedicated to explaining this layout.

3.1.1 Preparation and mapping stage

The first stage depicts the introduction to the study. In the beginning of the interview, it is important for the interviewer to provide an understandable repetition of the nature and purpose of the research as to ensure that there has been a clear comprehension from the side of the interviewee (Ritchie & Lewis, 2003, p. 145). First, information regarding the general objectives of the interview must be given to the participants. During this phase the participants' permission is also requested for the interview to be recorded. The interviews must be recorded to aid the analysis stage. Next, the map and the product category are presented along with instructions on how to portray their consumer-brand relationship and trust on it. The layout of the round surface with distance scores created and employed by Buunk, Daan Van der Ven and Fandridou was used. However, the on-paper approach was replaced by the electronic version of the method. More precisely, an online platform was developed, under the supervision of Dr. Csilla Horváth, where the CBRM map was visible and allowed for the placement of up to twelve brands in the targeted circle. The round surface represents the category environment and a small circle named "me" is placed in the middle. A copy of the mapping layout can be found in Figure 3. The participants are able to type in the name of a brand, place it as close to them as they like, according to their level of trust, and move on to the next one. It was advised to type in the number of the order by which the brand was mentioned. For example, if the participant mentioned "brand A" first, they would type in "A- brand 1". This was done as to ensure no confusion regarding the order of the brands mentioned during the subsequent analysis. Emphasis was given on the notion that brands placed closer to the "me" point are perceived by the

participants as more trustworthy. Also, the closer two brands are placed to each other the more similar they are perceived, by the participant, to be to one another. Lastly, a quick example using a different product category was presented to ensure the detailed comprehension of the method by the participant. The product category serving the explanatory purpose, for this research, was pasta. Once it is ensured that the participant has no further questions or confusion the next phase begins. Appendix A contains this layout and exact phrasing of the information in detail.

Following the preparation stage and after all the information has been given, the mapping can begin. Since this research was conducted during the Covid-19 pandemic crisis, a safe environment was ensured and the participant was advised to acquire and use their own devise. However, the choice existed for either the interviewers' or the participants' electronic devise to be used for the map completion. For the mapping stage, the participants are asked to recall brands in the facial cream category from their memory and not from a prepared list. This ensures that the consumers' awareness and consideration set will be highlighted. Associations are created and connected to a specific brand more easily and firmly maintained in memory when a brand is also well established in memory (Esch & Langer, 2006). Thus, it is important for brand recall and awareness to play a dominant role in the eCBRM method. In addition, emphasis was given on the trust element to ensure participants pick the most trusted brands from their consideration set and conduct the map placement with the correct goal in mind.

Concurrently with the map placement the participant is encouraged to think out loud and explain the reasoning behind the placement of the different brands. If deemed necessary, the interviewer is in a position to ask informants questions reflectively during the interview due to fluent knowledge of the topic (Klave, 1996). However, in the eCBRM methods' case the interviewers' participation during the mapping stage ought to be as constrained as possible to allow for the free elicitation and though flow of the participant. The procedure continues with the placement of another brand in the mapping circle until the participant has reached the maximum number of twelve brands or until they can't think of another brand. The limit of twelve brands has been set to avoid making the analysis too complex and to maintain ease of use for the participants. An example of an eCBRM containing 7 brands can be found in appendix B. Once the participant has concluded the placement they are asked to assess the end result and make any alterations if and where they see fit. If they are satisfied, the mapping process is concluded.

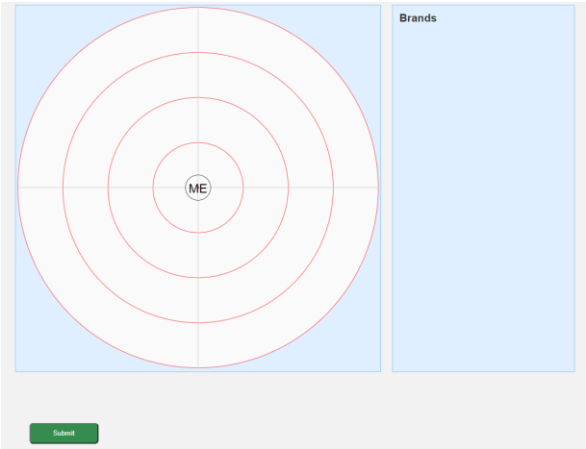

Figure 3: The eCBRM map layout

3.1.2 Validation of the eCBRM method

Once the eCBRM has been successfully completed the participant is automatically redirected to a Qualtrics survey. The survey makes up the second part of the eCBRM method and consists of four questionnaire segments. Once again, the participant could either fill in the survey using their own electronic device or choose to use the interviewers'. First and directly after the mapping has been conducted, the evaluation questionnaire is introduced. The evaluation or enjoyment scale questions are used to address and measure the subjective evaluation regarding: ease of use, perception of effort, enjoyability, perception of time, and Reflectiveness. This enjoyment scale is important for defining the validity of the method since a questionnaire's reliability is a quantitative estimation of its consistency (Lewis, 1993). It is also capable of providing a reflection of the overall participants' satisfaction with the eCBRM method. The questionnaire included three, four, three, two and three questions/items, respectfully, for each of the five categories mentioned above. The 15 items were based on Leroi & Werelds (2014) for the perception of effort and time categories as well as on Daan T. van der Ven, and Dr. Horváth for the remaining categories. Participants were requested to indicate the extent to which they agreed with each statement on a seven-point rating scale (1=strongly disagree, 7=strongly agree). An overview of the evaluation-enjoyment scale can be found in figure 4.

# of Item	Statements	Reversed	Categories
	Please indicate how much you agree with the following statements on a scale of 1 (strongly disagree) to 7 (strongly agree).	(Y/N)	1-5
Item 1	This method is user-friendly.	No	1. Ease of Use
Item 2	This method gives the possibility to recover from mistakes easily.	No	
Item 3	I could use this method successfully the next time.	No	
Item 4	It was difficult for me to apply this method.	Yes	2. Perception of Effort
Item 5	I had to concentrate a lot while applying this method.	Yes	
Item 6	I had to think very hard while applying this method.	Yes	
Item 7	The effort required to apply this method was low.	No	
Item 8	This method is fun to use.	No	3. Enjoyment
Item 9	I felt bored using this method.	Yes	
Item 10	Overall, I enjoyed participating in this method.	No	
Item 11	Time went by quickly while filling out this method.	No	4. Perception of Time
Item 12	The time required to fill this method was very low.	No	
Item 13	This method really displays the way I feel about the different brands.	No	5. Reflectiveness
Item 14	This method enables me to uncover my trust in the brands.	No	
Item 15	I feel that by using this method I was able to communicate my true feelings towards the brands.	No	

Figure 4: Evaluation-Enjoyment scale

Next, the participant is asked to indicate the most trusted brand mentioned in the previous mapping stage by typing-it-in in text form. Qualtrics was programmed to automatically present this value in the next question. Thus, the following brand trust scale is filled in regarding the most trusted brand. The trust scale includes four questions and was based on the brand trust scale of Chaudhuri & Holbrook (2001). An overview of the brand trust scale can be found in figure 5. It was again requested for the participants to indicate the extent to which they agreed with each statement on a seven-point rating scale (1=strongly disagree, 7=strongly agree). Also, the phrase, "this brand", represents the brand indicated and typed-in by the respondent. For example, if respondent 1 indicated "brand A" as their most trusted brand, the first item of the brand trust questionnaire would be presented as "I trust brand A".

# of Item	Statements	Reversed
	Please indicate how much you agree with the following statements on a scale of 1 (strongly disagree) to 7 (strongly agree).	(Y/N)
Item 1	I trust "this brand".	No
Item 2	I rely on "this brand".	No
Item 3	"This brand" is safe.	No
Item 4	"This brand" is an honest brand.	No

Figure 5: Brand Trust scale

Right after the completion of the brand trust scale, the brand trust outcomes scale follows. The outcomes of brand trust included in this questionnaire are the repeat purchase intention and the positive word of mount (wom). The two outcome categories contain three items each. This 7-item scale was based on Zeithaml et al. (1996). Here the participants are again presented with the most trusted brand name mentioned in the previous step. The brand trust outcomes scale is filled in regarding the most trusted brand and participants were asked to indicate the likelihood of each statement on a seven-point rating scale (1=strongly extremely unlikely, 7=extremely likely). An overview of the brand trust outcomes scale is presented in figure 6. Again, the double quote phrase, "this brand", represents the brand indicated and typed-in by the respondent as the name of the brand they trust the most.

# of item	**Statements**	**Reversed (Y/N)**	**Brand trust outcomes**
	How likely are you to do the following things for "this brand"? (1: extremely unlikely, 7: extremely likely).	**(Y/N)**	**Categories**
Item 1	Say positive things about this brand to other people.	No	1. Positive Word of Mouth
Item 2	Recommend this brand to someone who seeks your advice.	No	
Item 3	Encourage friends and relatives to prefer this brand.	No	
Item 4	Consider this brand your first choice to buy facial cream.	No	2. Repurchase Intention
Item 5	Prefer this brand in the next few years.	No	
Item 6	Buy this brand the next time I need facial cream.	No	

Figure 6: Brand Trust Outcomes scale

Thereafter, the procedure is repeated a second time and the brand trust as well as the brand trust outcomes scales are filled-in anew. This time, the participant is asked to indicate a second, random brand from those mentioned during the previous mapping stage. It is made clear that the selection for this brand name doesn't have to follow the order in which the brands were placed on the eCBRM. The brand can be randomly picked by the respondent. The repetition occurs so that the responses can be compared with the Likert-scale method responses and the effectiveness of the eCBRM method can be illuminated. The procedure is again aided by Qualtrics. More specifically, the participant types-in the name of a second, random brand that was placed on the eCBRM and Qualtrics presents it in the designated "brand name" place.

Lastly, the category involvement scales as well as the demographic information segment are presented as part of the sample description and the validation of the eCBRM method. For the category involvement scale, the scale of Schneider & Rodgers (1996) was employed. Participants

were requested to indicate the extent to which they agreed with each statement on a seven-point rating scale (1=strongly disagree, 7=strongly agree). Also, Zeithaml's (1985) research was utilized for the demographic information questionnaire. The age question was open-ended, the gender question included three categories (1=male, 2=female and 3=other); the level of education question included six categories (1=Lower education, 2=Intermediate education, 3=Bachelors Degree, 4=Master's Degree, 5= PhD and 6=other); the country of residence and country of origin questions contained three options each (1=Greece, 2=The Netherlands, 3=other). It should be noted that the open-ended "other" option was coded into further numeric categories depending on the frequency of the counties named. For example, apart from Greece and The Netherlands the third most mentioned country name was the UK and thus it was coded with the number 3. Furthermore the annual net income question was measured in euro and included six categories (1=Under 7.499, 2=7.500- 14.999, 3=15.000-24.999, 4=25.000-34.999, 5=35.000-44.999, 6=45.000 and above).

It was explained that participating in the demographic information questions was not obligatory. Participants had the freedom to not complete the last part of the survey to its entirety or skip selected items as they saw fit. This choice insured that respondents not wishing to disclose personal information had the freedom to abstain from it. An overview of each of these scales can be found in figures 7 and 8.

# of item	**Statements**	**Reversed (Y/N)**
	Please indicate how much you agree with the following statements on a scale of 1 (strongly disagree) to 7 (strongly agree).	**(Y/N)**
Item 1	Choosing a facial cream is a big decision in one's life.	No
Item 2	I attach great importance to selecting a facial cream.	No
Item 3	I don't usually get overly concerned about a facial cream.	Yes
Item 4	Which facial cream I choose doesn't really matter to me.	Yes
Item 5	Choosing a facial cream takes a lot of careful thought.	No
Item 6	Decisions about selecting a facial cream are serious, important decisions.	No
Item 7	It means a lot to me to use a facial cream.	No

Figure 7: Category Involvement scale

# of item	Questions	Type of Answer
Item 1	How old are you?	Open-ended
Item 2	Which gender do you feel belonging to?	○Male ○Female ○Other
Item 3	What is your highest level of education?	○Lower education: High school or lower ○Intermediate education: Institute of Vocational Training ○University, Bachelors Degree ○Master's Degree ○PhD ○Other
Item 4	Which country do you currently live in?	○Greece ○The Netherlands ○Other
Item 5	What is your country of origin?	○Greece ○The Netherlands ○Other
Item 6	What is your annual net income in your household (in €)?	○Under 7.499 ○7.500- 14.999 ○15.000-24.999 ○25.000-34.999 ○35.000-44.999 ○45.000 and above

Figure 8: Demographic Information Items

3.2 Likert scale method

The Likert-scale traditional method was conducted via an online questionnaire using Qualtrics. An explanation and instructions in the beginning of the survey, before the questions segment, was provided. Also, a disclaimer stating the anonymous use of the data gathered ensured the participants' personal information protection. After the introductory and welcoming text the participants is asked to fill in the brand trust scale for different brands in the product category of facial creams. The brand trust scale is the same as in the previous method and an overview can be found in figure 5. It is explained that the scale can be filled in for up to twelve different brands individually. The maximum number of brands that could be mentioned remained the same as in the eCBRM method to maintain accuracy in the comparison. Qualtrics was again programmed to present the brand name that the respondent had indicated in the brand trust scale under "this brand". After the participant has concluded naming trusted facial cream brands and answering the brand trust scale for each one, step two initiates. Step two consists of the previously mentioned enjoyment scale which is presented in figure 4. This evaluation questionnaire ensured the proper comparison with the eCBRM method. Next, the brand trust outcomes (repeat purchase intention and positive wom) scale is introduced. Figure 6 contains an overview of the brand trust outcomes scale. In addition, the category involvement scale allowed for the judgment of whether the

population was well chosen and had a sufficient level of involvement with the facial cream product category. Lastly, the demographic information questions are presented. The completion of the demographic information items was completely voluntary and not obligatory. This means that respondents had the choice to click the button and complete the survey without participating in some or all items of the last segment. This choice insured that respondents that didn't wish to disclose personal information had the freedom to abstain from it. The category involvement scale can be found in figure 7 whereas the demographic information items are displayed in figure 8.

3.3 Analysis stage

Once the information from both methods was gathered the analysis of the results initiated. Based on this analysis the interpretations arise and are explained further in this manuscript. For the eCBRM method, the map distance measurements were conducted using distances calculated in centimeters. The eCBRM online tool is able to capture the coordinates of the brand name in the circle. The Pythagorean Theorem was then utilized to measure the exact distance of each placed brand from the "me" point. This distance shows how much the consumers trust the brands they chose to mention and how close they feel to them. The closer to the "me" a brand name has been placed, the more trustworthy it is perceived to be by the respondent. The distance scores were measured using the excel program. The measurement was conducted for each completed eCBRM map and each brand mentioned individually.

Furthermore, from the recordings of the interviews, verbal transcripts were gathered. These verbal transcripts will be then turned into non-verbatim transcripts. The transcription of interview data is a common strategy for managing qualitative data and has been viewed as a way to improve the rigor of qualitative data (Loubere, 2017). Once the answers from the interviews have been typed into a transcript, the text must be encoded. The coding was conducted manually rather than with the aid of a digital mean to ensure that the complexity of the consumer-brand relationship is taken into account. However, the translation of the text from the Greek to the English language was aided by DeepL.com. The data analysis initializes with open coding where conceptualization and categorization of concepts occurs (Vollstedt & Rezat, 2019). The concepts created by the open coding step were then compared and the ones with many similarities were labeled with the same code (Strauss & Corbin, 1990). This allowed for correlated concepts mentioned during the interviews to be grouped together. More precisely, different words and phrases (e.g. "it feels nice") that were mentioned by many respondents were grouped together

with others referring to the same topic and form a code (e.g. texture). Through the grouping of similar concepts, the brand trust phenomenon and its dimensions could be studied and important conclusions derived from this interpretation.

The analysis of the survey results was conducted using SPSS. The comparison between the brand trust scales was done by using a t-test univariate analysis. Through this analysis it became possible to validate whether the eCBRM has efficiently measured the trust between a consumer and a brand. Also, the enjoyment scales captured how user-friendly and fun the eCBRM is perceived to be by the participants. Furthermore, the brand trust outcomes scale showed the validity and reliability of this innovative method. The category involvement as well as the demographic information scales served as an indicator of correct sample selection and significance as well as generalizability of results. The findings of this empirical study present fruitful implications to both practitioners and academics and can be found in the next segments of this manuscript.

3.4 Pre-testing

Pretesting is the stage in the development of a questionnaire created to ascertain the effectiveness of the questionnaire (Reynolds et al., 2017). This stage is very important since no amount of cognitive exercise can substitute for actually testing an instrument. For the eCBRM validation, pretesting acted as a very useful instrument. The main reason being, the educational limitations and lack of familiarity with academic studies that the majority of the population sample faces. This could potentially have led to difficulties and unclear points during the research which needed to be taken into account. Also, the translation from the English to the Greek language may have resulted in the distortion of some words and phrases. Thus, getting some feedback, from at least two participants, early on, appeared beneficial for the successful end-result. The pretest was carried out prior to the final delivery of the questionnaire to the intended population (Reynolds et al., 2017). The two pre-tests were conducted on April 5th and 6th respectively. The eCBRM was not yet in its definitive form; however both interviews were completed in a satisfactory manner. The participants were both of Greek nationality, in their 20s and had completed a master's program in a British university. Two points that were flawed came up. First, the male participant noticed that once he deleted a brand on the eCBRM to alter the positioning, this brand was moved on the last position of the brand list on the right. Thus, it was not visible which brand he typed first but rather only the final setup, after the alterations, was

detectable. As a result, a change was made in the instructions where it was explained that the brand names must be accompanied by their number. For example, if they think of brand A first and B second they must type in: brand1-A, brand2-B. Second, this participant also helped highlight the importance of the "trust element" clarification. In particular, after expressing his intention to buy a particular brand (brand B) the interviewer reminded the direction of the research towards trust. The interviewee stated "So we are not talking about which brands I buy the most or have bought the most over the years? You want to know only which brands I trust?". This conversational point highlighted the importance of emphasizing the brand trust element. Hence, a change in the explanatory introduction text was made. Principally, two sentences were added illuminating trust as the focal point of the research. Furthermore, the female participant stated "what do you mean by 'do business with the brand', you are asking if I would buy this brand again?'. These lead to a change in the brand-trust-outcomes questionnaire from "do business with this brand" to "prefer this brand". This participant also referred to the eCBRM as the "circle of trust", a label which was adopted and used as a description for the eCBRM model for the rest of the interviews. Finally, other minor spelling and grammatical mistakes as well as translation inaccuracies were corrected and overall the pre-testing allowed for the improvement of the final study.

3.5 Research ethics

This section will briefly discuss applied research ethics as to ensure that all of the participants in this study were respected and unharmed. Deceptive marketing research practices can be considered inappropriate by consumer respondents and thus damage the image of both the research taking place and the marketing field (Kimmel & Smith, 2001). The present research practice ensures that there was no physical harm done. The interviews for the eCBRM method were conducted in-person during the Covid19 pandemic crisis. Thus, all the measures and precautions were held. In particular, the one and a half meter distance was held and both interviewee and interviewer used a face mask. The participant was also advised to bring their own electronic devise as to avoid any physical contact. Also, no psychological damage was done either. The Ethics Code states that individuals participating in experimental research must be informed about the nature, risks and benefits of the research (APA, 2003). Hence, the participants for both methods were thoroughly informed either verbally or in text about the research topic and goal, the recording of the interviews, as well as the implications and interpretations of the

responses. Furthermore, it was explained clearly that they had the freedom to stop the interview at any given moment or even withdraw from the research if they found it necessary. Also, the participants were allowed and able to opt out of completing the demographic information segment of the survey if they wished thus ensuring personal data protection. In addition, anonymity was ensured and guaranteed along with the assurance that the recordings and data responses were used solely for the purposes of this thesis. The interview recordings in particular were never shared with or heard by anyone other than the interviewer. Lastly, this research complies with the four principles as set out in the Code of Human Research Ethics and thus ensures the respectful handling of resources as well as the compliance with ethics rules.

4. Results

The respondents participating in both methods came from a convenience sample from the researcher's circle of family, friends and acquaintances. Also the 'snowball' recruitment technique was employed. In other words, all 200 participants were selected from a group of people easy to contact and reach. The convenience sample tactic was mainly employed due to the limitations of the thesis time frame, the Covid19 pandemic restrictions and the narrow researcher's circle of associates. Convenience samples are based on voluntary participation which increases the probability of participants being strongly involved in the issue in question which may favor particular outcomes (Moore, 2001). However, past research on trust (e.g. Couch & Jones, 1997) has highlighted the importance of having involved participants when studying issues regarding the notion of trust. This manuscript prioritized including participants in both surveys that were highly involved in the product category of face creams and had a strongly positive attitude about participating in the studies.

All the data gathered for both the eCBRM and the traditional Likert-scale methods were analyzed via the Statistical software Package for Social Sciences (or SPSS). Both Qualtrics surveys were formulated in such a way that participants were obligated to finish each segment, except the demographics, before moving on to the next. This resulted in no missing data and the final data set of both methods consisted of all valid responses. This means that all of the responses used to conduct the analysis were 100% completed, within an adequate amount of time and integrated at least two brand names. For the Likert-scale method, 5 responses were deemed invalid and eliminated from the final data set since they only included one mentioned brand name. Also, about 30 responses were erased early on, due to a less than 100% completion rate. The procedure, the measures of the scales as well as the literature on which the scales were based on can be found in the empirical investigation segment of this manuscript.

4.1 Sample Description

The eCBRM method consisted of an interview and an online survey and included 50 participants whereas the Traditional Likert-scale method consisted of only an online survey and included 150 participants. This segment presents an overview of the mean values (and standard deviation) for every category of the demographic information segment as well as for the product category

involvement scale for both methods. Also, two independent samples t-tests were conducted to compare the means of the two samples.

Demographic Information For the eCBRM method, the sample (N=50) consisted of 86% female and 14% male participants. The ages of the participants ranged from 18 to 69 with a mean value of 35.2. Regarding the level of education, most participants had either completed intermediate education or acquired a bachelor's degree. Also, most participants resided and declared as country of origin the country of Greece. The language used by the majority of the participants was Greek. Lastly, most participants had an annual net income of either "Under 7.499€" or "7.500- 14.999€".

For the Traditional Likert-scale method, the sample (N=150) consisted of 90% female, 8.7% male participants and 1.3% did not indicate gender. The ages ranged from 18 to 61 with a mean value of 28 and most participants had acquired a bachelor's degree. Also, most participants declared Greece as their country of origin but not all resided in Greece. The countries indicated most often for the "other" category were The UK, Serbia, India, France, Germany, Italy and Romania. Many participants completed the survey in English. Lastly, the majority of the participants had an annual net income of 7.500- 14.999€. Table 1 presents the mean values described.

VARIABLES	**METHOD**	
	eCBRM	**Traditional**
	N=50	N=150
	Mean	
Gender	1.86 (.35)	1.93 (.30)
Age	35.1 (12.63)	28 (6.93)
Level of Education	2.88 (.77)	3.20 (.63)
Country of Residence	1 (.00)	1.69 (1.86)
Country of Origin	1.30 (1.98)	1.82 (2.38)
Language Used	1.86 (.35)	1.47 (.50)
Annual Net Income (€)	1.74 (.85)	2 (1.19)

Table 1: Demographic Information Mean Values

Product Category Involvement The product category involvement scale was formulated in a 7-point Likert-scale with a minimum value of 1 and a maximum value of 7. Also, items 3 and 4 were reversed. Table 2 includes the mean values of the product category scale individually for the eCBRM and the Traditional Likert-scale method.

Furthermore, in order to ensure that the 7 items of the scale all reliably measure product category involvement in both methods, their reliability needed to be assessed. Reliability is an

assessment of the degree of consistency between multiple measurements of a variable (Hair et al., 2019, p.161). For this purpose, Cronbach's alpha was employed seen as it assesses the consistency of the entire scale. The scale was deemed reliable since a reliability test indicated a Cronbach's alpha value of .877 for the eCBRM and .887 for the Traditional method. Cronbach's alpha reliability coefficient ranges between 0 and 1 and the closer the coefficient is to 1.0, the greater the internal consistency of the items in the scale (George & Mallery, 2003). Moreover, none of the "Cronbach's alpha if item deleted" values exceeded .87. Thus, the 7 items of this scale have internal consistency and the scale can be considered reliable for both methods.

For the eCBRM method, the mean for all 7 items of the product category involvement scale was 5.28. The value of 5 corresponds to the statement "somewhat agree" and the value of 7 to the statement "strongly agree". Thus, it can be concluded that all participants had a moderate involvement in the product category of facial creams. For the Traditional Likert-scale method, the mean for all 7 items of the product category involvement scale was 4.98. Again, the value of the mean is really close to the value of 5. Hence, participants of both methods had, on average, a moderate involvement in the product category of facial creams.

VARIABLES	**METHOD**	
	eCBRM	**Traditional**
	N=50	**N=150**
	Mean	
Product Category Involvement (7 items)	5.28 (1.11)	4.98 (1.13)

Table 2: Product Category Involvement Scale Mean Values, α=0.87(eCBRM) and α=0.88(Traditional)

4.1.1 Comparing the two samples

Methodology An independent samples t-test was conducted to test the statistical differences between the means of the two methods. The t-test univariate analysis was chosen since it allows for the assessing of group differences through examining the differences in the means of two groups (Hair et al., 2019, p.53). The data followed the requirements to allow a t-Test since the dependent variables (demographic information categories means and product category involvement scale means) were continuous, the independent variable (method) was categorical and the samples were independent and random. Furthermore, the test of normality indicated that the dependent variables were not normally distributed (sig<.05). Nevertheless, the sample size allows the violation of normality and all the assumptions for the t-Test were met (Hair et al.,

2019, p.401). For the test of homogeneity of variances the Levene's test was consulted. When the value of the Levene's test significance was lower than .015, the variance in the mean values for participants of both methods was significantly different and thus the "equal variances assumed" row was consulted to compare the means. On the other hand, when the value was bigger than .016 the "equal variances not assumed" row was read.

Results The results shown in Table 3 reveal significant differences only between the age of the participants and the language used (sig. 2-tailed< .005). Interestingly, no significant difference was found for any of the other demographic categories. Also, no significance was found between the means of the product category involvement scales either. The highest mean difference was presented for the age variable at a 7.17. The findings indicate that despite the sample being gathered from two different populations, the similarities are quite extended. Likewise, the two samples were equally involved as consumers in the product category of facial creams. This affinity between the samples allowed for further comparisons despite the difference in the samples sizes.

VARIABLES	F (Sig.)	t	Sig. (2-tailed)	Mean Difference
Gender	3.55 (.061)	-1.19	.234	-
Age	46.66 (.000)	5.00	.000	7.17 (1.43)
Level of Education	1.69 (.197)	-2.65	.010	-
Country of Residence	27.94 (.000)	-2.641	.009	-
Country of Origin	6.59 (.011)	-1.40	.163	-
Language Used	155.87 (.000)	4.96	.000	.38 (.07)
Annual Net Income (€)	.607 (.437)	-1.88	.062	-
Product Category Involvement	.175 (.676)	1.64	.104	-

Table 3: T-Test for demographic information and product category involvement between the 2 methods

4.2 Validation of the eCBRM method

The validation of the eCBRM method included conducting analysis between the samples of the two methods. First the mean values (and standard deviation) for the evaluation-enjoyment scale as well as for the amount of brands mentioned and duration for both methods were studied. Also, a Factor Analysis was employed to improve the reliability of the evaluation-enjoyment scale. The adjusted constructs can be found on figure 9. In addition, t-tests and Hotelling's T2 tests were used to present statistically significant differences between the two methods.

4.2.1 Between Samples

Respondents' Usage Experience Comparison As mentioned earlier, items 1-3 constitute the "ease of use", items 4-7 the "perception of time", items 8-10 the "enjoyment", items 11 and 12 the "perception of time" and items 13-15 the "Reflectiveness" categories. Firstly, the reliability of the evaluation-enjoyment scale needed to be assessed. The Cronbach's alpha value for the 15 items of the scale was .832 for the eCBRM and .848 for the Traditional method. Values that are above .8 are considered good (George & Mallery, 2003). Thus the internal consistency of the items was good and the evaluation scale was deemed reliable and consistent.

Table 4 presents the mean and the standard deviation values for the evaluation-enjoyment scale for each method separately. Overall the mean value for the eCBRM method's enjoyment-evaluation scale was at 5.9 and at 5.4 for the Traditional Likert-scale method. More specifically, for the eCBRM method, the mean for the "ease of use" category was calculated at 6.2 whereas for the Traditional Likert-scale method at 5.7. For the "perception of effort" category it was 5.5 for both. The mean for "enjoyment" was 6.3 for the eCBRM method and 5.14 for the Traditional method. For "perception of time" it was 5.9 and 5.4 for each. Finally for "Reflectiveness" it was calculated at 5.9 and 5.2 respectively.

VARIABLES	**METHOD**	
	eCBRM	**Traditional**
	N=50	N=150
	Mean (st. d.)	
Total	5.97 (.45)	5.43 (.75)
Ease of Use (Item1-3)	6.22 (.59)	5.75 (.95)
Perception of effort (Item 4-7)	5.56 (.86)	5.58 (1.06)
Enjoyment (Item 8-10)	6.36 (.61)	5.14 (1.11)
Perception of Time (Item 11-12)	5.97 (1.00)	5.43 (1.08)
Reflectiveness (Item 13-15)	5.91 (.95)	5.22 (1.17)

Table 4: Enjoyment scale mean values for the 2 methods, α=8.3 (eCBRM) and α=0.84(Traditional)

Brands Mentioned and Duration comparison An important remark is the contrast observed in the amount of brands mentioned during the two methods. In the case of the eCBRM method, participants had a mean of 5.20 with a standard deviation of 5.2 for the amount of brands mentioned. On the other hand, participants of the Likert-scale method had a mean of 2.6 with a st. deviation of 5.8. The minimum number of brands mentioned was 2 and the maximum was 9 in both cases. As can be seen in Table 5, participants named 4 or 5 brands during the eCBRM method but only 2 or 3 brands during the Likert-scale method.

Furthermore, Table 5 illustrates the mean values for the duration variable regarding the eCBRM and Likert-scale method respectively. In the case of the eCBRM method, time was monitored differently for the mapping and the survey completion stages. It should be noted that the mapping stage duration values did not include the explanation of the method. The mapping stage duration calculation initiated after the explanation and example had been given and ended once the participant was redirected to the survey. The total value represents the sum of these two durations. All duration values were calculated in minutes. The minimum time spent in total was 8.13 minutes and the maximum 38.52 minutes. The mean value for the eCBRM method total duration time was 13.58. In contrast, the mean value for the Likert-scale method was 9.2. Lastly, the minimum time spent in this method was 1.13 minutes and the maximum was 30.95 minutes.

VARIABLE	**Min-Max**	**eCBRM**		**Traditional**
		N=50		N=150
		Mean (st. d.)		
Amount of Brands Mentioned	2 - 9	5.20 (1.65)		2.62 (1.37)
Duration	1.13 - 38.52	13.58 (5.20)		9.21 (5.84)
Separate Durations		**Survey**	**Mapping**	
		7.78 (2.92)	5.80 (3.96)	

Table 5: Amount of Brands mentioned and Duration mean values

4.2.2 Factor Analysis

As mentioned above, the α-value for the evaluation scale was .832 and the internal consistency of the items was good. However, the value of Cronbach's alpha if item deleted was calculated at 8.5 for both the eCBRM and the Traditional method regarding the item "effort required to apply was low". Also, it was pointed out by the majority of the interview participants that the evaluation scale was too extensive and included too many items. Hereafter, a factor analysis was conducted to test if the underlying structure between the different variables and investigate construct validity. All items were measured in a Likert-scale setup and distance between the answers was the same, thus they had interval measurement level. Common factor analysis was chosen as the extraction method since the goal of the analysis was to test the common variance of the scale items. Appendix C includes the most important results of this Factor analysis.

The Keyser-Meyer-Olkin statistic was bigger than >0.5 (0.82) and the Barlett's test of sphericity was significant at .000< 0.5. Thus the data allowed for the factor analysis to be performed. In order to determine the number of factors to be extracted the Eigenvalues (value > 1 for a factor extraction), communalities (items with values < 0.2 must be removed) and the factor

matrix (factor loading indicate which variables load on which factors) were consulted. The results indicated Eigenvalues higher than 1 for 4 factors. The communalities table revealed that item 7, "effort required to apply was low" had a communality lower than 0.2 (.168). Also the factor matrix revealed that this item failed to load high enough on a factor. This comes in accordance with the Cronbach's alpha initial realization and as a result item 7 was removed.

The analysis was run again with an acceptable KMO value (.82) and a significant Barlett's test of sphericity (.000). This means that extracting item 7 was a good choice and it resulted in a positive outcome. Still, 4 factors had an Eigenvalues bigger than 1 and could be extracted. The oblique rotation method was selected since the nature of the underlying factors is common in the sense that all items are used to evaluate the respondents' usage experience. This is justified by looking at the factor correlation matrix which shows correlation values between the factors bigger than 0.23. Only the correlation between 2 factors had a low value (0.003) which can be explained by the fact that the dimension of "Reflectiveness" is measuring different constructs than the dimension of "Perception of Effort". The exact values are presented in appendix C.

The final dimensions extracted are as follows. Dimension 1 included items 1-3 and maintains its previous title as "ease of use" (α=6.9). Dimension 2 included items 4-6 and kept the "perception of effort" title with one less item (α=7.3). Dimension 3 contained items 8-12 and thus incorporated both the "enjoyment" and "perception of time" titles (α=7.8). Lastly, dimension 4 included items 13-15 and was still depicted as "Reflectiveness" (α=8.7). All chronbach's alpha values were good and indicated reliability. An overview of the new layout of the enjoyment-evaluation scale can be found in figure 9.

Construct	Item	
Ease of Use		
	1	This method is user-friendly.
	2	This method gives the possibility to recover from mistakes easily.
	3	I could use this method successfully the next time.
Perception of Effort		
	4	It was difficult for me to apply this method.
	5	I had to concentrate a lot while applying this method.
	6	I had to think very hard while applying this method.
Perceived Enjoyment and Time		
	8	This method is fun to use.
	9	I felt bored using this method.
	10	Overall, I enjoyed participating in this method.
	11	Time went by quickly while filling out this method.
	12	The time required to fill this method was very low.

Reflectiveness		
	13	This method really displays the way I feel about the different brands.
	14	This method enables me to uncover my trust in the brands.
	15	I feel that by using this method I was able to communicate my true feelings towards the brands.

Figure 9: Evaluation scale constructs adjusted

4.2.3 Comparing the two methods

Methodology Initially, it was examined whether an analysis of covariance (or ANCOVA) could be conducted to test the main and interaction effects of the categorical variable (method) on a continuous dependent variable (enjoyment scale dimensions) controlling for the effects of a continuous variables (product category involvement, age, gender and level of education), which co-varies with the dependent. It had to be insured that the ANCOVA assumptions were met in order to conduct the analysis and test the influence of the "product category involvement" on participants' evaluation-enjoyment and engagement. First it was established that the observations were independent, since the observations of the two samples had no relationship. Also the dependent variables were normally distributed as showcased from the Q-Q plots. Moreover, the linearity was assessed and the relations between the covariate and the dependent variables all appeared to be linear from the scatterplots. Then the variances of the dependent variables were checked for equality to ensure the assumption of homogeneity. The Levene's test was significant for all the dependent variables since their values were smaller than 0.05. This violated the homogeneity of variances assumption. Also, the equality among all subpopulations and ultimately homogeneity of regression slopes was checked. Here it was discovered that many of the dependent variables violated the assumption and could not go forth with the analysis. Only the dependent variables "perception of effort" and "ease of use" had significance less than 0.05 and thus met the assumption of homogeneity of regression slopes. The same violations of homogeneity of variances and homogeneity of regression slopes assumptions held for "amount of brands mentioned" and "duration" as the dependent variables. As a result it was not possible for an ANCOVA to be conducted.

After testing for the assumptions, a t-test analysis was conducted to evaluate the statistical significance between the evaluation scales of the two methods. Furthermore, a Hotelling's T2 statistical test was conducted to test the significance between the two methods. A Hotelling's T2 test is used to assess the statistical significance of differences between groups (Hair et al., 2019, p.461). First, the assumption of independence was ensured. For the linear relationship between

dependent and independent variables assumption the scatterplots were observed. The scatterplots for each variable in both methods indicated a linear relationship. Next, multicollinearity was checked via the Pearson correlation matrix. None of the correlation scores between the dependent variables had a value above 0.9 which proves no evidence of multicollinearity. This also indicates that the dependent variables were adequately correlated regarding both methods. In addition, the Q-Q plots showcased normality in the distribution for all variables in both methods. Lastly, the homogeneity of variances was tested via a Levene's test. When the Levene's test value was significant (<0.05), the assumption was violated and the means did not have equal variances. This was the case for all variables, except "ease of use", "perception of effort" and "Reflectiveness". The Pillai's Trace value was used to calculate Hotelling's T2 because the sample sizes of the two methods were different and unequal.

In addition and following the same methodology layout, an independent T-test and a Hotelling's T2 statistical test were conducted for the variables of "amount of brands mentioned" and "duration". The independence of the observations was ensured and the Q-Q plots for both duration and amount of brands mentioned showed a normal distribution. Here, the Levene's tests' was not significant (<0.05) for neither of the two variables. Hence, the assumption of equal variances was met. Table 6 showcases the results of the comparison between the eCBRM and the Likert-scale methods regarding participant enjoyment, amount of brands mentioned and duration.

Results The results of the independent samples t-test presented a significant difference between the two methods regarding the evaluation scale. In particular, the eCBRM method scored totally .62 more than the Likert-scale. It also received .94 more in the "perceived enjoyment and time" and .68 more in "Reflectiveness" dimensions. The Hotelling's T2 test agreed with these results and revealed statistical significance (0.00<0.05) for the same dimensions. After looking at the Pillai's Trace value, the final T2 value was 36.64. This indicates that the eCBRM method was evaluated more positively overall in comparison to the Likert-scale method.

Also, the difference was significant for both the duration and the amount of brands mentioned variables. For the brands mentioned the mean difference between the two methods was 2.58 which showcases that participants of the eCBRM method mentioned 2 to 3 more brands on average. In addition, the mean difference between the two methods for duration was 4.36 which showcases that participants of the eCBRM method spent 4 to 4.5 minutes more to

complete the method. Again, the Hotelling's T2 test showed similar results indicating statistical significance (0.00<0.05) for both variables. After looking at the Pillai's Trace value, the final T2 value was 75.6. (T2=Pillai's Trace * (200-2)).

t-test (df= degrees of freedom)	Evaluation scale					Brands and Duration	
	Enjoyment Total (14 items)	**Ease of Use**	**Perception of effort**	**Enjoyment and Time**	**Reflectiveness**	**Amount of Brands mentioned**	**Duration**
F (sig)	11.3 (.00)	4.41 (.03)	4.41 (.03)	13.0 (.00)	3.26 (.07)	6.34 (.013)	1.86 (.174)
t (df) (sig)	5.44 (198) (.00)	1.14 (198) (.25)	1.14 (198) (.25)	6.52 (198) (.00)	4.12 (102.5) (.00)	10.8 (198) (.000)	4.9 (93.43) (.000)
Mean Diff.	.62	-	-	.94	.68	2.58	4.36
	Hotelling's T2						
F (Sig)	29.62 (.00)	1.32 (.25)	1.32 (.25)	42.6 (.00)	13.8 (.00)	118.42(0.00)	22.05 (0.00)
Pillai's Trace	.180					.382	

Table 6: T-Test and Hotelling's T2 test results

4.3 Trust Measures

Apart from proving the eCBRM method's enjoyment level superiority in comparison to the Traditional method, it was important to also provide some proof that both methods functioned properly. For this reason the mean values and the correlation between the trust measures and trust outcome variables and map distance scores were tested for both methods. More particularly, it was examined how the two types of trust measures relate to each other and how they relate to the theoretically expected constructs of word of mouth and repeat purchase intention. The comparison was conducted between the most trusted the random brands mentioned as well as the merged data set.

First, the trust scale and the trust outcomes scale were both tested for reliability. The distinction was made between the scales regarding the most trusted and random brands. Regarding the eCBRM method, the Cronbach's alpha values were 0.80 for the trust scale (Most Trusted), 0.91 for the trust-outcomes scale (MT), 0.716 for the trust scale (Random), and 0.92 for the trust-outcomes scale (R). For the Traditional Likert-scale method, the Cronbach's alpha values were .84 for the trust scale and .84, .90 for the trust outcomes scale of the most trusted and random brands respectively. All values were considered good since they were above 0.7 (George & Mallery, 2003) and the two scales were considered reliable for both methods. Also none of the Cronbach's alpha values if item deleted revealed an item as not useful.

4.3.1 Within sample comparisons

Regarding the eCBRM method, the distance scores were compared with the trust scores indicated by the participants. To do this the distance scores had to obtain values from 1 to 7. The formula "(sqrt(coordinatea^2+coordinateb^2))*6/100)+1" was employed to all the coordinates of the most trusted and random brands placed on the map to calculate the comparable distance scores. Also, the trust and trust-outcome scales needed to be reversed because in their original form a value of 7 corresponded to "strongly agree" and thus indicated the highest level of trust. On the contrary, a high map distance score indicated a small level of trust. As has been mentioned previously, the "me" point represents the absolute trust that a participant feels towards a brand. After the conversion of the score values, the closer to 1 a distance value was, the closer to the centre of the eCBRM the brand was placed, which ultimately corresponds to higher levels of trust.

Table 7 illustrates the mean values of the distance from the "me" centre point of the eCBRM and of the trust and trust outcome scales for the most trusted and the randomly mentioned brand names for all 50 participants. The mean value (and standard deviation) of the distance scores for the most trusted brand was 1.74cm (.44) and for the random it was 2.98 (1.49). Also, the minimum distance value was 1.08cm. Thus, the mean value for the most trusted brand is justifiably low and acceptable. In addition, the mean score of the brand trust scale was 1.35 (.49) and of the brand trust-outcome scale was 1.6 (.55) regarding the most trusted brand. The maximum value of both scales, after reversing, was 1 and corresponded to the maximum level of trust (1=strongly agree). Thus, the mean values of the scales showed a high, almost maximum, level of trust, positive word-of-mouth and repeat purchase intentions from the participants towards the brand that they marked as most trusted. On the other hand, the mean values of the brand trust scale was 2.36 (1.09) and of the trust-outcomes was 2.8 (1.3) for the random brand. Here the values were still high and indicated trust but on a more moderate level. From this it can be deducted that the participants clearly made a distinction between the most trusted and the random brands that they mentioned. This is also supported by the distance scores because in comparison to the most trusted brand, the random one appeared on the map approximately 1.24cm further from the center trust-point. Thus, the eCBRM method can be considered successful in aiding the recognition of a brand that is viewed as most trusted in a consumers' consideration set.

Furthermore, it was important for the correlation to be observed between the trust scale and the map distance scores as well as between the trust outcome scale and the distance scores. The Pearson's Correlation was chosen to correctly validate the method used since it is a bivariate correlation that solely accounts for the link between two variables and ignores any other variables' change (Hair et al., 2019, p.311). All the cases were independent to each other and the sample was large enough (N=50). Table 7 represents the correlation coefficients regarding the most trusted and the randomly named brand. Coefficients of >|0.50| indicate a high degree and strong correlation whereas values of <|0.49| correspond to a moderate degree and medium correlation and values <|0.29| are considered weak (Schober et al., 2018). Hence, the trust and trust outcome scales are considered to have a strong and significant correlation with values of 0.56 and 0.62 with the distance scores for the random brand. This is also the case for the merged data (N=100). The trust outcome scale appears to have a significant but weak correlation at a 0.29 value with the distance scores for the most trusted brand. However, the trust scale is presented to have a non-significant and very weak correlation at the value of 0.12 with the distance scores for the most trusted brand. This could be explained by respondents' differences in personality and habits. As participant 8 stated during the interview stage, "I trust this brand extensively but I would not swear that it is honest or safe. I only use this product from this brand and yes I trust and rely on it but they have other products which I have not tried." Also, participant 24 mentioned "I am not the type of person to convince others to purchase an item. I might subtly recommend a product that I like but I will not be persistent about it." Thus, very high levels of trust that were present in the map distance could potentially not be visible in the trust and trust outcome scale scores. This is an indication of the possible impropriety of the facial creams as a product category seen as most brands are not associated solely with the facial creams but offer multiple products with different purposes and brand images.

Min-Max Map Distance score: 1.08 – 6.93	**Means score (st. d.)**			**Correlation (significance)**	
	Map Distance	**Trust scale (Rev.)**	**Trust outcome scale (Rev.)**	**Between Trust scale and Distance**	**Between Trust outcome scale and Distance**
Most-Trusted Brand N=100	1.74 (.44)	1.35 (.49)	1.6 (.55)	0.12 (.382)	0.29 (.003)
Random Brand N=100	2.98 (1.49)	2.36 (1.09)	2.8 (1.3)	0.56 (.000)	0.62 (.000)
Merged data N=100	2.36 (1.25)	1.86 (.98)	2.25 (1.19)	0.63 (.000)	0.68 (.000)

Table 7: Mean Values Map Distance, Trust scale and Trust-outcome scales reversed-eCBRM method

4.3.2 Between samples comparison

A comparison was done between the trust and trust outcome scales of the two methods to test how do the two types of trust measures relate to each other. Both scales were checked for reliability in the previous step and an independent samples t-test as well as Pearson's Correlations aided the comparison. The mean values (and standard deviation) as well as the results of the t-test and the correlation coefficient values can be found in Table 8. For the eCBRM the non-reversed mean values were 6.64(.49) for the most trusted and 5.63(1.09) for the random brand. For the Traditional method, the mean score of the brand trust scale was 6.10 (.61) regarding the most trusted brand and 5.68 (.75) for the random brand. Here, value 7 was the highest and indicated the maximum level of trust (6=agree and 5=somewhat agree). Hence, the mean values of the trust scales showed a relatively high level of trust towards the brand that they marked as most trusted and a moderate level of trust for the random brand. The Traditional Likert-scale method could also be deemed successful in recognizing trusted as opposed to random brands and their trust levels.

Additionally, the t-test revealed statistically significant differences for the means of the trust scale regarding the most trusted brand and the merged data at 6.29 and 2.70 respectively. For the random brand the t-test was not significant and had a negative value of -0.34. This means that the eCBRM method resulted in higher levels of trust for the most trusted brand but not for the random brand. These results prove that the eCBRM method was more effective in providing higher levels of trust. In agreement, the correlation coefficients presented a very weak non-significant relationship with values of 0.13, -0.04 and -0.06 between the trust measures of the two methods for the most trusted, random and merged data. Correlation measures the monotonic association between two variables and describes how two variables vary together (Schober et al., 2018). The non-significant correlation values reveal that the higher levels of trust on the eCBRM do not correlate and vary differently than the levels of trust on the Traditional method which is in agreement with the t-test results.

	Mean (st. d.) Trust scale eCBRM	**Mean (st. d.) Trust scale Traditional**	**T-test (significance level)**	**Correlation between Trust scale eCBRM and Trust scale Traditional**	**Significance test**
Most trusted brand N=50 or 150	6.64 (.49)	6.10 (.61)	6.29 (.00)	0.13	.350
Random brand N=50 or 150	5.63 (1.09)	5.68 (.75)	-0.34 (.72)	-0.04	.783

Merged data N=100 or 300	6.14 (.98)	5.89 (.71)	2.70 (.00)	-0.06	.497

Table 8: Mean values, t-test and correlation coefficients of trust scales

Furthermore the correlation coefficients were checked between the trust scales of the two methods and the first trust outcome variable, namely word of mouth, to examine how the two trust measures relate to this theoretically expected construct. Table 9 illustrates the correlation coefficients between these variables. The correlation coefficient between the eCBRM trust scale and WoM showed significant and strong relationships for the random brand and merged data at 0.78 and 0.76 respectively as well as a significant moderate relationship at 0.41 for the most trusted brand. It is accepted that a wider range of the assessed values is more likely to show a higher correlation that a smaller range (Schober et al., 2018). Indeed, the scatter plots revealed the trust and wom scores scattered in a wider range which explains the high values of the correlation coefficients. For the Traditional Likert-scale method, the correlations were not significant between the trust and wom scales for the most trusted and the random brands with values of 0.04 and 0.12. Also, the merged data acquired a significant but very weak correlation at 0.11.

	Correlation between eCBRM Trust and WoM	**Significance test**	**Correlation between Traditional Trust and WoM**	**Significance test**
Most Trusted Brand N=50 or 150	0.41	.003	0.04	.570
Random Brand N=50 or 150	0.78	.000	0.12	.143
Merged data N=100 or 300	0.76	.000	0.11	.002

Table 9: Correlation coefficients of trust outcome variable: WoM

Moreover, the correlation coefficients were investigated between the trust scales of the two methods and the second trust outcome variable to examine again how the two trust measures relate to the theoretically expected construct of repeat purchase intention. Table 10 showcases the correlation coefficients between these variables. Here, the correlation coefficient between the eCBRM trust scale and repeat purchase intention revealed very similar results. In particular, the correlations indicated significant and strong relationships for the random brand and merged data at 0.81 and 0.82 respectively as well as a significant moderate relationship at 0.48 for the most trusted brand. The high correlation coefficient values are again justified by the trust and repeat purchase intention scores wide range on the scatter plots. The Traditional Likert-scale method

had non-significant almost non-existent correlations between the trust and wom scales for the most trusted and the random brands with values of 0.00 and 0.00 and only the merged data showed some significant but weak correlation at a value of 0.13.

	Correlation between eCBRM Trust and Repeat Purch. Intention	**Significance test**	**Correlation between Traditional Trust and Repeat Purch. Intention**	**Significance test**
Most Trusted Brand N=50 or 150	0.48	.000	0.00	.995
Random Brand N=50 or 150	0.81	.000	0.00	.970
Merged data N=100 or 300	0.82	.000	0.13	.024

Table 10: Correlation coefficients of trust scales and trust outcome variable, Repeat Purchase Intention

Lastly, it was important to test how the two trust measures relate to the theoretically expected constructs combined. For this the correlation coefficients were examined between the trust scales and the trust outcome scales with their two variables combined for the two methods and Table 11 presents the correlation coefficients. Similarly, the correlation coefficient between the eCBRM trust and the trust outcomes scale revealed significant and very strong relationships for the random brand and merged data at 0.86 and 0.85 and a significant moderate relationship at 0.53 for the most trusted brand. Correlation cutoff points are arbitrary and differ throughout the literature (Schober et al., 2018). Thus, the value of 0.53 could be considered to present a more than moderate correlation between the trust and trust outcomes scale for the most trusted brand. The correlation coefficient values are very high and an assessment of the scatter plots revealed a wide range of the values. As a result, it's reasonable to suppose that participants who gave a high score on the trust scale also gave a high score on the trust outcome scale. On the contrary, the Traditional Likert-scale method appeared to be significantly correlated only in the case of the merged data with a weak correlation value of 0.16. The correlation coefficients for the most trusted and random brands were non-significant with values of 0.02 and 0.06 respectively.

	Correlation between eCBRM Trust and Combined Trust Outcomes	**Significance test**	**Correlation between Traditional Trust and Combined Trust Outcomes**	**Significance test**
Most Trusted Brand N=50 or 150	0.53	.000	0.02	.738
Random Brand N=50 or 150	0.86	.000	0.06	.460
Merged data N=100 or 300	0.85	.000	0.16	.004

Table 11: Correlation coefficients of trust scales and 2 trust outcome variables combined

Conclusion This segment of the manuscript provides proof that the eCBRM functioned properly and embodied trust measures that related adequately to the theoretically expected constructs. It became clear that the correlations were significant and sufficiently strong between the trust and trust outcome variables both separately as word of mouth and repeat purchase intention as well as combined. The Traditional Likert scale method did not acquire significant correlations between the trust and trust outcome variables except in the case of the merged data. This could be explained by many reasons. First, the non-normal distribution of the Traditional methods' trust measures could be the cause of the low levels of correlation. In particular, the skewness and kurtosis empirical measures were assessed to describe the shape of the distribution for the trust scale, the word of mouth, the repeat purchase intention as well as the trust outcome scale combined of the Traditional Likert-scale method. Kurtosis is a measure of the distribution's "peakedness" or "flatness" as compared to the normal distribution, and a value near to 0 implies a normal distribution (Hair et al., 2019, p.94). Moreover, the skewness measures the symmetry of a distribution and values that range between -1 and +1 indicate an adequately skewed distribution (Hair et al., 2019, p. 48). The trust scale presented skewness values of -0.5 and -0.6 and kurtosis values at -.02 and 0.5 for the most trusted and random brands of the Traditional method respectively. Thus, the trust scales were very close to a normal distribution. However, the trust outcome scales appeared leptokurtic with heavier "tails" since the kurtosis values for the WoM, repeat purchase intention and trust outcomes combined were substantially bigger than 0. Also, the skewness had negative values below 0.8 regarding all the trust outcome scales of the Traditional method. Second, the apparent dissimilarity between the trust measures and the theoretically expected constructs of the Traditional method could be due to consumers' attitudes and habits toward trusted brands. In other words, consumers that trust a brand do not necessarily buy it repeatedly or talk extensively in its favor.

Additionally, the presence of an interviewer during the completion of the trust scales could have nudged and influenced the respondents to provide higher or more matching scores. The student-tutor approach was implemented during the interviews. The interviewer played the role of a student expecting answers from an expert in an attempt to make respondents feel that their opinion was valuable and correct (Adams & Cox, 2008). This approach could have resulted in higher trust scores but also more affiliation between the trust and trust outcome scales. What is more, respondents of the Traditional method could be less engaged in filling in the questionnaire

in an appropriate manner. It was mentioned previously that more than 40 total respondents were deemed invalid due to a less than 100% completion rate. It could be argued that a percentage of the respondents paid little attention to certain segments of the questionnaire resulting in non-correlated trust and trust outcome scales. However, significant positive relationships appeared in the area that was expected for the Traditional method, namely, the merged data set. Nonetheless, the analysis presented in this segment proves the correct use of the eCBRM method. The trust measures substantially relate to the theoretically expected constructs resulting in further proof of the methods' validity. In fact, the method allowed the participants to present and demonstrate their true feelings of trust towards brands in the facial cream product category. This actively demonstrates that the eCBRM served its purpose effectively in measuring the trust of consumers towards facial cream brands properly.

4.3.3 Most Popular Brand Names

A few interesting results came up concerning the order and names of the brands. The order of the brand placements was examined for both methods. It was noticeable, that in both methods most participants mentioned as "most trusted brand" the brand name that they had placed first in order on the map. On the other hand, the "random brand" name was, more often than not, the second in order placed brand. This results in two conclusions. First it becomes apparent that participants had the first two brand names intensely printed onto their consideration set and felt most strongly about them in comparison to all the others. Also, the second brand was on average less trusted than the first. This could provide evidence that in the facial cream product category consumers who trust one brand strongly rarely share the same intensity of trust with a second brand. This conclusion was supported by the participants' interview statements.

Furthermore, the brand names were coded and thus it was possible to monitor the ones that were mentioned most often. Table 12 includes some information on the most popular brand names. La Roche Posay was mentioned as a most trusted brand by 27.4% of participants for both methods combined. Also, Frezyderm was mentioned by 24.8% as a most-trusted option. In addition, La Roche Posay and Frezyderm were most often mentioned as random brands as well. Particularly, 23.3% of the total sample mentioned the first and 22% the second brand as their random brand names. The next most popular choices were Nivea, Apivita Vichy and Korres. It was quite clear that the brands of La Roche Posay and Frezyderm were not only considered very popular but also highly trusted in the facial cream product category.

Both studies included participants that in their majority were of Greek nationality. The Likert-scale study included international participants too but more than 80% of the participants either lived or originated from Greece. Thus, it can be assumed that the conclusions regarding the brands' popularity concern mainly the Greek market. Also it should be noted that the brands mentioned by the participants consisted of 96 different and distinct brand names. However, this manuscript provides reference only for the most widely mentioned either as the "most trusted" or as the "random brand" brand names.

Brand Names	**eCBRM**	**Traditional**	**Total**	**eCBRM**	**Traditional**	**Total**
	N=50	**N=150**	**N=200**	**N=50**	**N=150**	**N=200**
	Most Trusted			**Random**		
La Roche Posay	18	9.4	27.4	14	9.3	23.3
Frezyderm	10	14.8	24.8	18	4.0	22
Nivea	14	8.1	22.1	4	6	10
Apivita	10	8.1	18.1	4	7.3	11.3
Vichy	2	5.4	7.4	10	6.7	16.7
Korres	6	6	12	4	6.7	10.7

Table 12: Most mentioned brand names

4.4 Qualitative Research Insights

Another way to validate the eCBRM as a method was to gain insight regarding the reasons of brand placement on the map. Also, this examination revealed the most important factors and drivers of trust in the participants' consideration sets. The goal of a qualitative analysis is the systematic and rule-guided classification and retrieval of text (Cambell et al., 2013). Thus, text coding was conducted on the 50 transcribed interviews in the target language. Initially the interview texts were scanned for differences and similarities and open coding was administered. Next, the splitter coding method was followed in order to divide the transcribed interviews into simpler and more manageable points (Saldana, 2008, p.20). This resulted in eight different topics concerning results, texture, fragrance, packaging, price, recommendations, acquaintances and duration of use. Lastly a selective coding process allowed for these topics to be grouped together. It is common for rearrangements and new categorizitations to arise from a second Cycle of coding as additional patterns and meanings become apparent (Saldana, 2008, p.10). In fact, the selective coding cycle revealed four big code categories, namely, skin-type match, brand image, word of mouth and loyalty. Figure 10 includes these code categories, the split patterns as well as the frequency by which they were mentioned in the 50 total transcribed interviews. Also,

Appendix E presents the second-order words and phrases based on which the open coding was conducted.

Testing the reliability of the coding text was also of great importance. In-depth semi-structured interviews have proven to be challenging to establish intercoder reliability for, since they tend to generate more open-ended replies, demanding the use of many codes at the same time (Cambell et al., 2013). To ensure intercoder reliability, the theoretical framework, the research goal and the central research question of the study were highly linked with the coding process. Also, simpler coding patterns are preferable to more complicated ones when attempting to improve intercoder reliability (Cambell et al., 2013). The splitter method allowed for a more focused and distinct analysis, from the beginning, leading to adequate reliability of the coded data.

Skin-Type Match The most common answer given by participants when asked for the reason behind the map placement of a brand was "because I am satisfied with it". The elaboration of this initial statement included a short or extended explanation of how the brand matched their skin types. In fact, all 50 participants commented on either the 'result' or the 'texture' of the face cream and their skin after using a particular brand. The 'result' construct included words and phrases that were mostly representing the participants' type of skin and requirements, for example, "it was really effective for me", "it gave me good results", "it gave me the proper moisturizing", "it matched my skin and my complexion". On the other hand, the 'texture' represented statements regarding the facial cream, like, "it is too heavy and too oily", "it is light", "it has a nice texture".

In total the patterns of the code 'skin type match' were mentioned 423 times. From which it became apparent that the most important reason for placement and thus the most crucial driver of trust was the effect of the product when used and the degree that the product fits with the costumers' skin type as well as requirements. Also, in most cases the brand they trusted the most was the one they were using in that particular time period. This could be due to the fact that skin changes over time and the discontinuation of a specific treatment or product may result in negative symptoms (Maul et al., 2020). Furthermore, many comparisons were made between brands based on the elements of 'result' and 'texture'. Participants were keen on expressing which brand they trust the most in comparison to others while having in mind the creams' texture

and how it matched their skin. Lastly, brands were often repositioned on the map with the criterion of how much two brands were similar concerning their texture.

Brand Image The second most common reason for placement was the image of the brand. Here the construct of 'fragrance' included concepts that negatively or positively described the smell and scent of the face cream. Participants strongly voiced their opinions regarding their wants and preferences and mentioned concerns like "I prefer a strong/neutral scent in my face cream", "I want the fragrance to feel fresh". The 'packaging' construct covered matters concerning the outer physical image of the product like a vessel, jars and bottles. Lastly, the 'price' construct contained the perceived price opinions, for example "too expensive" or "affordable price". All in all 'brand image' and its constructs were mentioned 263 times, 160 times less than the 'skin-type match' code.

A very noticeable point was the fact that fragrance, packaging and price were more often than not mentioned in a more degrading manner. As participant 25 stated "I pay attention to the fragrance but it's not the first thing I notice. The most important thing for me is that the cream matches my complexion well". Similar answers accompanied the elements of the packaging and price. In particular many respondents linked "nice packaging" with a "good first impression" but the majority claimed that a less presentable packaging would not discourage them from trusting the product or staying loyal to it, if the fit of the actual product was satisfactory. This lead to the result that participants were interested in the brand image elements but they did not prioritize them. Fragrance, packaging and price were neither the most important nor the strongest drivers of trust. However, many participants claimed to have lost trust towards a brand because its fragrance was too strong for them or the price too high. No such claim was made regarding the packaging. Also the amount of comparisons between brands based on the brand image elements was more restricted but still present.

Word of Mouth The wom code included the constructs of 'recommendations' and 'acquaintances' and was mentioned 107 times in total, 316 less than the 'skin-type match' code. The most mentioned words in this category was "doctor", "tester/sample", "mother/grandmother", "sister" and "friend". Interestingly, many participants placed brands really close to them on the map simply because someone they knew trusted it a lot, despite having had no personal experience of their own with the brand. They claimed to trust the brand in a great extend since someone

trustworthy to them advocated for it. Also, it was common for participants to buy a brand after a doctor recommended it or after they were provided with samples from a pharmacy. It should be noted that although recommendations and acquaintances was a driver for trust, participants were still hesitant. In other words, despite placing trust in a brand that was recommended to them, the most important priority was still the skin-type match. Moreover, no comparisons between brands were made based on the constructs of the 'wom' code.

Loyalty The last code was mentioned 69 times in total and represents an extended duration of use. It was the least mentioned matter and it came up 354 less times than the 'skin-type match' code. In this case, some participants chose to compare their most trusted-most used brand to all the others as they were placing them on the maps. Participants often placed brands really close to them on the map while stating an extended time period of use. This period differed between participants and ranged from a couple of months to more than four years. The participants that had loyalty as the most important trust driver were also not familiar with many brand names other than the one they trusted the most. From this it can be deducted that trusted brands are viewed holistically by consumers and are likely to be bought repeatedly.

Code	Split patterns	Frequency
Skin-type Match	Result	252
	Texture	171
Brand Image	Fragrance	129
	Packaging	91
	Price	43
Word of Mouth	Recommendations	35
	Acquaintances	72
Loyalty	Duration of use	69

Figure 10: Reasons of placement on the eCBRM
Note: Frequency= the number of times a second-order item was mentioned during the eCBRM method interviews. Second order items can be found in Appendix E.

To conclude, the most important reason for placing a brand on the eCBRM was how much it fit and matched the participants' skin and their requirements. Brand image elements such as fragrance, packaging and price played a role and had an influence on consumers' trust but only initially. More precisely, consumers paid attention to these elements and they influenced their

positive view of the brand. However, they did not yield high levels of trust unless the product was tested and satisfactory skin fitness was proven. Also, recommendations and acquaintances played an important role in the levels of trust a consumer had towards a brand. It was often observed for participants who had little to no personal experience with a brand to place a great deal of trust on them. Nevertheless, the result was still the same. Despite verbally reported high levels of trust, no repeated purchase and loyalty resulted from recommended brands unless the participant had tested and approved of the brand and its match with their complexion. Lastly, participants who were loyal to a brand for an extended period of time had strong positive attitudes towards it and expressed attitudinal and behavioral brand loyalty. It became clear that the insights deriving from the qualitative research supported and confirmed the theoretical background segment of this manuscript.

5. Discussion and Conclusions

The objective of this research was to validate the CBRM as a measurement method able to capture the full complexity of consumer-brand relationships, within a predetermined product category. A new online platform was developed making it possible for the eCBRM method to be tested on several aspects. More explicitly, the focus lied in examining the method's effectiveness in measuring brand trust in the facial cream product category. In order to regulate this examination, two independent studies were conducted. A comparison between the two studies resulted in multiple theoretical and managerial contributions.

Based on the results of the comparisons between the eCBRM and the Likert-scale methods, it can be concluded that the eCBRM was more enjoyable for the participants, kept them more engaged and nudged them to reveal higher levels of trust towards brands. Also the analysis of the interview transcriptions highlighted the methods' capability to dive deep into the consumer consideration set and investigate what makes a brand trustworthy. Furthermore, the eCBRM method proved more exact and detailed than the existing and traditional Likert scale approach since it incorporates distance scores and a visual depiction of the consumer's thought.

First, as table 6 presents, there was statistically significance difference monitored for the total evaluation scale values between the two methods. The eCBRM method was perceived and evaluated as more enjoyable overall. Also, the difference was statistically significant for two of the new constructs revealed from the factor analysis. In particular, participants rated the eCBRM higher for 'Enjoyment and Time' as well as 'Reflectiveness'. The categories of 'Ease of Use' and 'Perception of Effort' did not show a statistically significant difference. Nonetheless, the mean value for the "Ease of Use" category in the eCBRM method revealed a score of almost 6, which indicates the perception of the method as sufficiently 'easy'. These outcomes illuminate the competence of the eCBRM method in appearing enjoyable, not too lengthy in time and reflective of the participants' true thoughts and feelings towards brands. As a result, the eCBRM could be characterized a fun, fast and accurate method that captures participants trust towards brands in the facial cream product category. However, both methods were perceived similarly difficult by respondents.

Second, a statistically significant difference was also present regarding the amount of brands mentioned and the total duration during the two methods. As can be seen in table 6, the eCBRM methods' participants mentioned 2.5 more brand names and spent 4.36 more minutes, on

average, in comparison to the Likert-scale method. This is an indication of the ability of the eCBRM method to keep participants involved and engaged and thus interested in mentioning more brands and prolonging the practice. As a result, the eCBRM method appears superior for both the amount of brands mentioned and the duration variable. Still, it could be argued that the eCBRM method is predetermined to outweigh the Likert-scale method in duration values since it involves both the mapping and the survey completion stage. However, the majority of the first method's participants named 4 or 5 brands whereas most of the participants of the second method named only 2. This goes to show that even though the first method is lengthier by nature, the participants were still involved enough to mention more brands and thus extend the duration even further. Also, the first stage of both methods requested for the participants to remember and name brands from their consideration set. Hence, the first step of the Likert-scale method could be deemed equal to the mapping stage of the eCBRM method. Thus, the argument discussed can be considered weak.

Furthermore, the comparison between the trust scale and trust outcome scale revealed the proper use of the eCBRM method by respondents and its validity. In fact, a comparison between the map distances and the trust scales and trust outcomes scales determined the acceptable functionality of the eCBRM. More precisely, table 7 presents the noticeable difference between the means as well as the correlation between map distance, trust and trust outcome scores of the most trusted and the randomly selected brands. All correlation coefficients, except in the case of the most trusted brand, revealed a high or moderately high correlation. This actively demonstrates that participants were able to differentiate between the most trusted brands in their consideration set and rank them accordingly. The weak correlation between the trust and map distance score was a result of inequalities found between the trust scale items and participant personal view of trust in the facial cream product category. In other words, participants who trusted a brands' product and placed it really close to them on the map did not necessarily view the brand as honest or safe. Respondents were encouraged to consider their connections with brands in the context of their whole ecosystem and category environment. The theories of option attractiveness (Tversky & Simonson, 1993) and preferred choice dependency (Howes et al., 2016) were supported.

Also, table 8 reveals that the eCBRM yielded higher levels of trust regarding the most trusted brand which could explain the fact that no significant correlation was found between the trust scales of the two methods. eCBRM participants appeared to trust their "most trusted" option

more in comparison to the Likert-scale. As a result, we may infer that when assessing consumer-brand relationships, it is vital to evaluate all interactions that occur in the context, rather than considering them as interactions that exist in a bubble, separately from their ecosystem. The trust outcomes scales scores did not show a statistically significant difference.

Moreover, Tables 9, 10 and 11 illustrate the high correlation found between the trust and trust outcome scales for the eCBRM method. From this the validity of the method was realized since it became apparent that the trust measures related adequately to the theoretically expected constructs. On the contrary, the Traditional Likert-scale method appeared to have little to no correlation between its trust measures and the trust outcome scales. This inaccuracy could be due to the deviation of the scales from a normal distribution. Additionally, table 12 reveals La Roche Posay and Frezyderm as the most mentioned and trustworthy brands. For both methods combined, La roche posay was mentioned by 50.7% of the respondents either as the most trusted or the random brand. Also, for the same population Frezyderm was mentioned as a random or a most trusted brand by 46.8% of the respondents.

Lastly, the interview transcript coding revealed the most commonly mentioned reasons for map placement, which at the same time were the reasons for a brand to be perceived as trusted. As depicted in figure 10, participants placed closest to them and trusted the most, brands that they had tested and felt like they matched their skin and complexion. Brand image constructs such as fragrance, packaging and price did influence a participants' trust but only as a first impression. Also, the opinion and the recommendation of friends, family and doctors were often an important reason for a brand to be perceived as very trustworthy, despite the lack of essential personal experience. Nevertheless, the fit of the product with their skin was such an important driver that in its absence, the brand was not deemed reliable even if the brand image was satisfactory and the brand had been recommended by trustworthy to the participant people. Notably, the most important and common reason for trusting a brand so wholeheartedly and ultimately expressing such high levels of loyalty, was the proven match of the brands' product with the participants' skin type.

In addition, participants that had been loyal to the brand for an extended period of time advocated for it intensely and placed a high level of trust on it. In fact, very loyal customers could not name many other brand names except from the one they had been loyal to and trusted the most. This could explain the limited amount of brands mentioned in both methods. These insights

support the connection between brand trust and other related constructs of the consumer-brand relationship as presented in figure 1. Principally, it was proven that high levels of trust lead to extended and long-lasting loyalty (Chaudhuri & Holbrook, 2001, Bart et al., 2005). Also, repeat purchase intention (Zboja & Voorhees, 2006, Bart et al., 2005), positive consumer attitude (Chaudhuri & Holbrook, 2001) and positive word of mouth (Sallam, 2016, Bart et al., 2005) were confirmed to be forceful outcomes when brands were considered vastly trustworthy.

5.1 Theoretical Relevance

This manuscript aimed to contribute to the research in the field of consumer-brand relationship measurements. The creators of the CBRM recognized the potential of this tool for measuring and researching relationships between brands and their consumers. Through the empirical investigation of this study the validity of the eCBRM was established. The eCBRM was verified as a sufficient and enjoyable method in measuring consumer's trust for multiple brands simultaneously in a product category which offers a new option for consumer mapping techniques. It provides a reliable brand map that takes into consideration the competitive environment brands exists in. Contrary to methods such as the BCM (John et al., 2006) and the BANV (Schnittka et al. 2012) it focuses on more than one brand at a time. Also, it could be considered superior as a method to measure trust in consumer-brand relationships in comparison to traditional survey methods (e.g. Morgan & Hunt, 1994, Chaudhuri & Holbrook, 2001, Hess & Story, 2005) since it allows for examination of multiple brands simultaneously, from the consumers' point of view, while taking into account category involvement and other personal differentiating factors.

Also, the digitalization allows for an easy and quick placement of the brands on the map which could lead to the interview procedures becoming obsolete and the data collection simplified. This characteristic permits the method to be used with a variety of data gathering techniques and to acquire significantly bigger and broader samples. Lastly, standard measurement criteria testing should be used for both traditional Likert-scale and brand-mapping techniques because they provide affirmation of the accuracy and preciseness (John et al., 2006). The eCBRM was evaluated for its reliability and validity resulting in further proof that the method measured what it was indented to measure.

5.2 Managerial Relevance

This research intends to provide practical value for marketing practitioners in addition to theoretical contributions. Loyal and enduring customer relationships are both a priority and an advantage for marketers (Veloutsou, 2015). The eCBRM method provides a visual representation of how people think about brands and what influences their trust towards them. This could allow managers to understand the most important drivers of trust but also what are the elements that differentiate various brands in the same product category. Although customers often perceived brands as similar for a variety of reasons, their most trusted brand option was always differentiated. Thus, the eCBRM could be used as a management tool to investigate the drivers of trust and gain a larger spectrum of the ties people form not just with a brand but also with their category's rivals. Brands that operate in a highly competitive environment could use this knowledge to understand their position in the product category and attain dominance.

Also, since the eCBRM has been validated as a fast, fun, accurate and relatively easy method, professionals can employ it to facilitate interdepartmental communication. Companies perform better when specialized departments are coordinated (Hauser, 1993). The eCBRM could thus aid marketers to make the drivers of trust and the points of comparisons with competitive brands salient to other departments. Lastly, brand recall has been proven to be a strong determinant of brand trust. In fact, the most trusted brand was the first mentioned brand for a large portion of the population. Also, the random brand was often the second in order mentioned brand name. This goes to show that the eCBRM can be used for examining and revealing a consumers consideration set and how they view consumer-brand relationships. Consumers have been known to reach a limited number of brands from those they come in contact with for purposes of creation, support and self-concept communication (Sung & Kim, 2010, Schooten & McAlexander, 1995). Practitioners should capitalize on this notion and utilize the eCBRM to learn how consumers view trust and ultimately gain an important position in their minds as trustworthy.

6. Limitations and Future Research

There are still a few challenges to work out when it comes to validating the eCBRM method and determining its applicability in a variety of situations. First, it would be useful to evaluate the effect that the product category involvement, the age, the gender, the educational level and the annual net income would have as covariates both in the evaluation scale and the given trust scores. Previous research on the CBRM indicated that the level of involvement with the product category as well as the age of the participant did have significant effects on how the participant approached the method and how much they enjoyed it (Buunk C., 2020). This manuscript failed to provide information on such an effect due to unsuitability of the data set for an ANCOVA analysis. Future research should undertake this impediment and investigate if and how participant's identity and consumption background influences both the way they use the method and how they perceive it.

Second, it became apparent that the eCBRM could be improved if systems able to portray the true relationships behind brands were incorporated to the method. This issue has been addressed by similar brand concept maps research (e.g. John et al., 2006). The interview procedure was useful for developing an idea behind the reason of placement and the connection placed brands had to each other in the minds of the consumers. Additionally, by prompting participants to label each brand they named, it was easier to detect when a repositioning had been made. For example, if brand 1 was positioned first but after brand 2 was mentioned the first choice was positioned further away, it was still visible that brand 1 was named first. However, the mentality behind the initial distance between brands as well as the repositioning can be considered somewhat subjective and abstract. In fact, the analysis of the transcriptions brought to light that a very important reason for a participant to consider two brands similar and equal was the result they saw on their skin. Nevertheless, this concept is highly abstruse and could have a different meaning for everyone. A future implementation of the eCBRM should be augmented by a more structured interview based on causal reasoning procedures and a revised map design. As participants 3 and 7 pointed out, it would be useful if the map was divided by colors so that similar brands are all positioned on the same map area. These colors could also obtain a faded element allowing for more trusted brands, which are closer to the "me" point, to be highlighted by a brighter color whereas less trusted brands would be accompanied by a more faded color palette.

Furthermore, the design of the online CBRM provided the coordinates of each brand mentioned but did not highlight the relationship between them. Also, the survey following the mapping procedure focused on only two brands, the most trusted and a randomly selected one. Thus, analysis was conducted and information gathered regarding only one combination of brands. For example, the interview transcripts analysis revealed that brands that were trusted based on recommendations and acquaintances rarely resulted in repeat purchase intention and high levels of loyalty. However, these brands were infrequently mentioned in the place of either the "most trusted" or the "random brand". Thus, there were no trust outcome scores to compare and validate the statements of the participants. Future research should take advantage of the coordinates that the platform provides and promulgate its use for demonstrating the relationship and the different levels of trust between each brand mentioned and not only two.

Third, the respondents of both methods were in their majority female, between the ages of 28-35 and acquired a bachelor's degree. Also, most participants lived and originated from the country of Greece and had an annual net income between 7.500 and 14.999euro. Thus, it can be assumed that the final data set may not be representative of a wide portion of the population. Less Covid19 restrictions could aid in the use of a sample that leads to more generalizable results. Lastly, the product category of facial creams proved to be a little restricting. It became apparent that consumers are so loyal to their most trusted facial cream brand that they don't keep plenty of other brands in their consideration set. The product category was ideal to illuminate the concept of trust but not the utility of the eCBRM. Future research could experiment with different and less high-involvement product categories to test the method.

In conclusion, the eCBRM has been validated to be an enjoyable and representative of the consumers' trust towards brands method. Although improvements in certain areas remain a challenge, the digitalized version of the Consumer Brand Relationship Map is a very promising concept and has the potential to significantly expand the consumer-brand relationship research.

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8. Appendices

Appendix A: Introduction CBRM method, in-person interview

The first part is the welcoming text and was completed based on the Boyce & Neale (2006) interview guide. The second part is the method explanation and was based on Cecile Buunks' (2020) master's thesis.

I want to thank you for taking the time to meet with me today and participate in this study. My name is Charikleia Nikolaou and this study is part of my Master's thesis in Marketing at Radboud University , under the supervision of Dr. Csilla Horváth. In this study, I would like to learn about how you feel towards brands in the category of facial creams.

The interview should take around half an hour. I will be taping the session because I don't want to miss any of your comments. Because we're on tape, please be sure to speak up so that we don't miss your comments.
All responses will be kept anonymous and confidential. This means that your interview responses will only be used for the purposes of this study and we will ensure that any information we include in our report does not identify you as the respondent. Remember that you don't have to talk about anything that you don't want to and you may end the interview at any time.
Are there questions about what I have just explained?
Are you willing to participate in this interview?

Signature:
Date:

The method we will be using is called the Consumer Brand Relationship Map or CBRM in short. We will be using the online version through "this website" thus we will be referring to the method as the eCBRM. Please type in your personal electronic devise this URL or feel free to use mine and access this website.

I will now explain the model and how it works. This is what the model looks like; the circle in the middle represents you. During our interview I will ask you to think of a brand in the category of facial creams. It does not matter which brands you mention. They can be national or international, known or unknown. Once you think of a brand you need to indicate the level of trust you feel towards it and place it on the map accordingly. The closer you place the brand to "you", the more you trust the brand. Similarly, the further you place the brand in the circle, the less you feel like you trust it. Also the distances between the different brands matter. The closer two brand are to each other the more they are alike in your opinion. After you have placed the brand according to your personal level of trust towards it, you can type in its name on the right side of the map. After you are done with the first brand name you can move to the next one and repeat the same procedure. You are allowed to mention up to 12 brands. The minimum number of brands you can mention is three. If you wish to change the placement of the brands along the way you can do this by deleting the previous brand name and position and creating it again according to the new placement you have in

mind. Please think out loud during this process, I would like to gain insights in why you choose to place brands in specific points. Note that the initial placement of the brands is not final. You are free to move them around as much as you want, during or after you are done mentioning brand names. Just make sure to express yourself out loud if and when you make a change. I would like to know your mindset.

Now I will give you an example with me in the middle in order to explain the model more practically. The category I will be using is pasta. When I hear the category of pasta, the first brand that comes to my mind is Barilla. So I write down Barilla and place this here, which is really close to me. I have been buying this brand for years and know it's good quality every time so I trust it very much. I really like how they taste and if someone else says they don't like this brand I try to defend its nice elements. The next pasta brand I mention is Misko. I write down the name and place it here, which is quite close to me but not as close as Barilla is to me. Also, because in my opinion these are two completely different types of pasta, I place them far from each other. The third brand I mention is Melissa. I write down the brand name and place it here. Melissa is not a very trustworthy brand for me because I don't buy it often and haven't tested its reliability so I place it far away from me. However Misko and Melissa are somewhat similar in my opinion so I place them close to each other. The reason why I think these two brands are similar is because they have the same image and packaging, The fourth brand I mention is ΜΑΚΒΕΛ. I personally never buy this brand, however it is one of my mom's favorites so I remember it.

I could go on with this and name all the pasta brands I know and place them on the map according to how much I trust them.

Is this example clear for you? Do you think you could do this within the category facial creams? Okay, great! You can start now. Remember, think out loud and focus on trust.

You have mentioned twelve brands/You can't recall any more brands. That is enough for now.

I want you to take a look at your model with all the brands. Are you satisfied with the placement? Is there anything you would like to change?

I have sent you a Qualtrics survey that I would like you to complete here with me. Please open the file I have sent on your email/ use my device to fill it in.

First I will ask you to tell me your opinion about the method you just used.

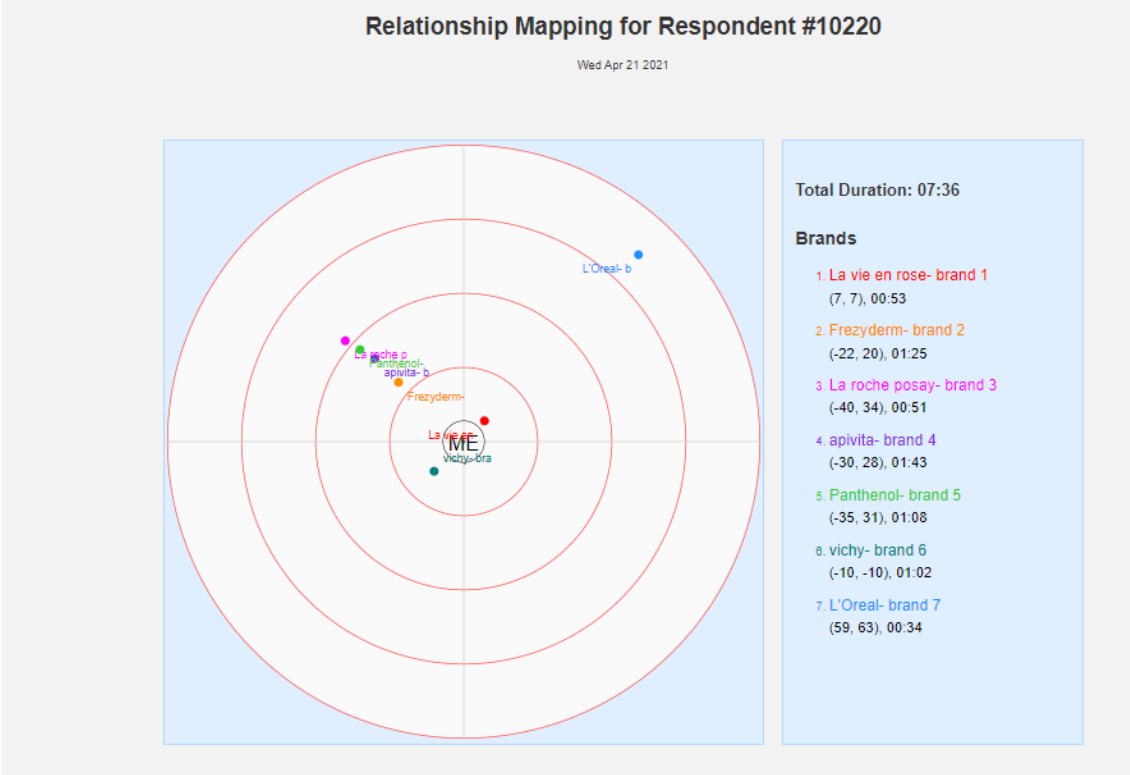
Now I will ask you to recall the facial cream brand that you placed on the CBRM and you feel that you trust the most. Please fill in this short questionnaire answering how much you agree or disagree with these statements. Also, please complete this second questionnaire answering how likely you are to do these things, keeping the same brand in mind.

Now please think back to a second, random brand that you placed on the CBRM. The placement of this brand does not matter. I ask you to complete the same two questionnaires a second time for this particular facial cream brand.

Now I will ask you to complete this questionnaire on how involved you are to the facial cream product category and answer how much you agree/disagree with the statements. Finally, some general, demographic questions.

I will be analyzing the information you and others gave me and submitting my thesis report in approximately two months. I would be happy to send you a copy to review at that time, if you are interested. Thank you for your time and participation.

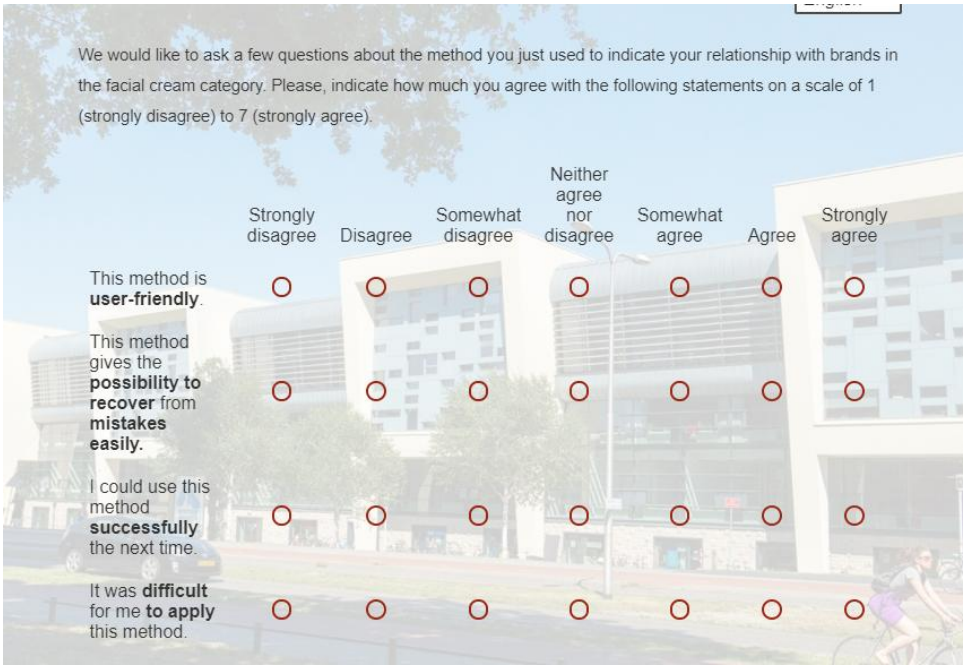
Appendix B: eCBRM example map containing 7 brands



Appendix C: Factor Analysis for evaluation scale

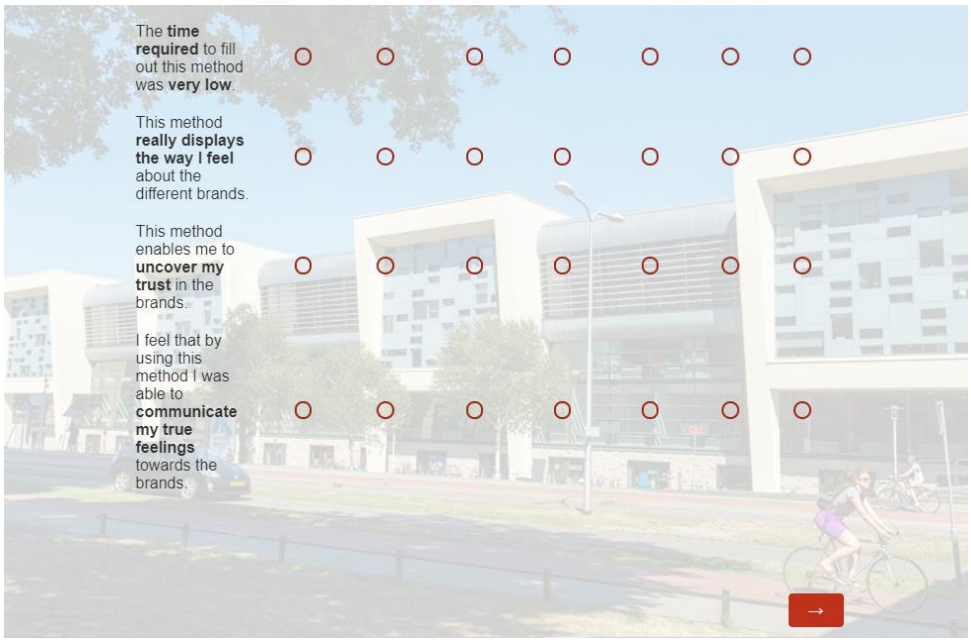
	KMO	Bartlett's	Communalities (initial)	Total Variance explained Eigenvalues	Cumulative %	Correlations (factor a-factor b)
Round 1	.820	.000	.168 (for Item 7)	5.18	34.55	2.31 (1-2)
				2.15	48.89	.492 (1-3)
				1.30	57.58	-.539 (1-4)
				1.06	64.70	-0.03 (2-3)
Round 2	.821	.000	>.2 (for all items)	5.17	36.98	-.375 (2-4)
				2.08	51.88	-.429 (3-4)
				1.10	59.74	
				1.03	67.11	

Appendix D: eCBRM and Likert-scale Surveys (Qualtrics)

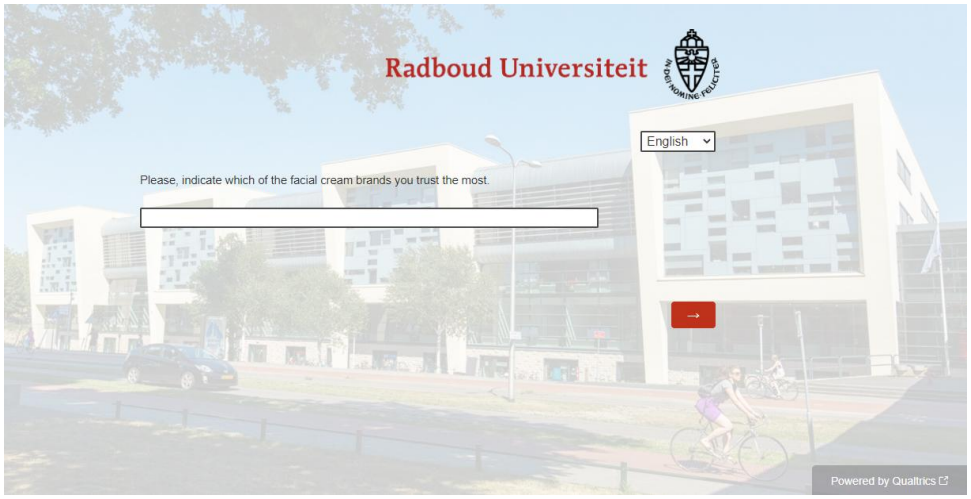


P1: Evaluation scale a

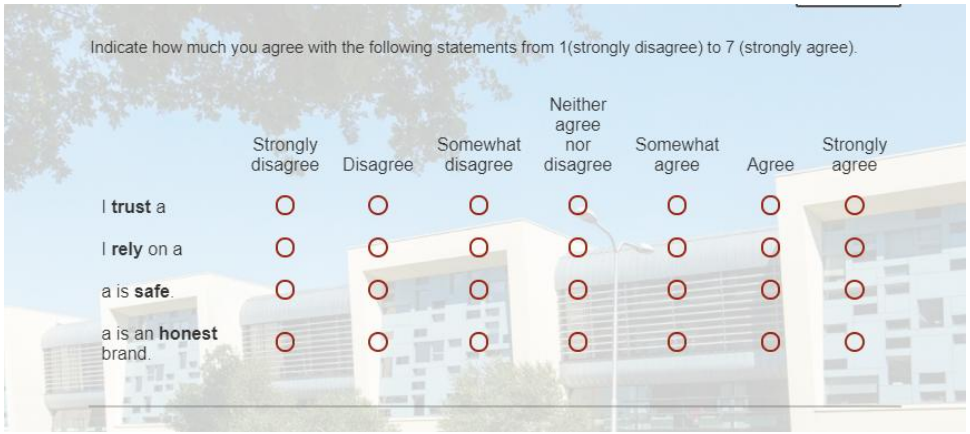
P2: Evaluation scale b



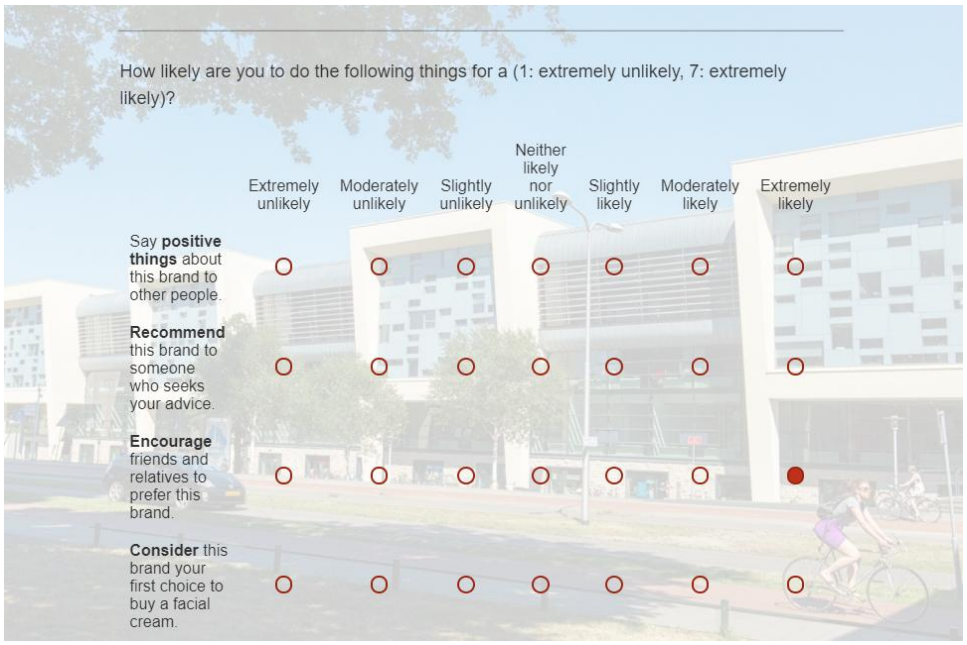
P3: Evaluation scale c



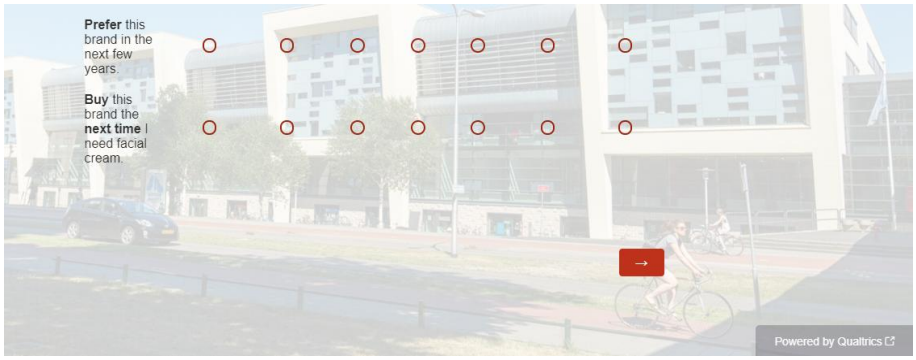
P4: Brand Indication



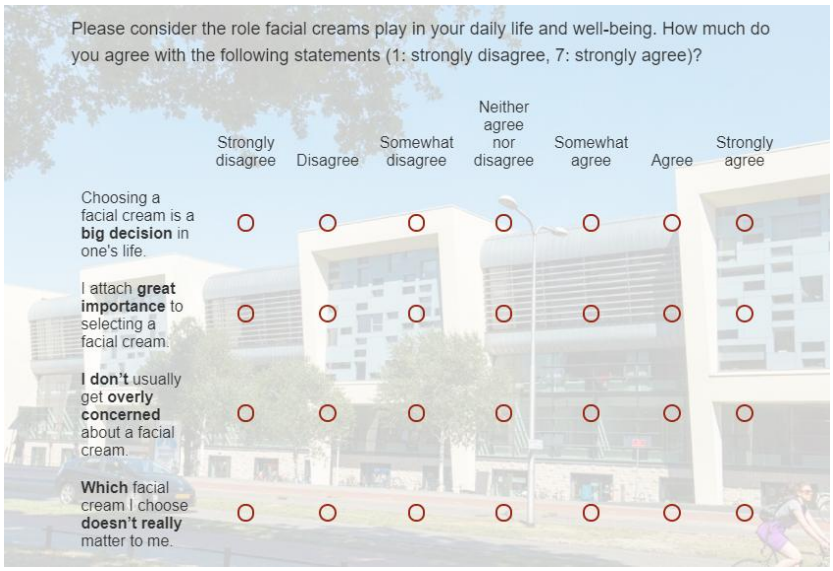
P5: Trust scale



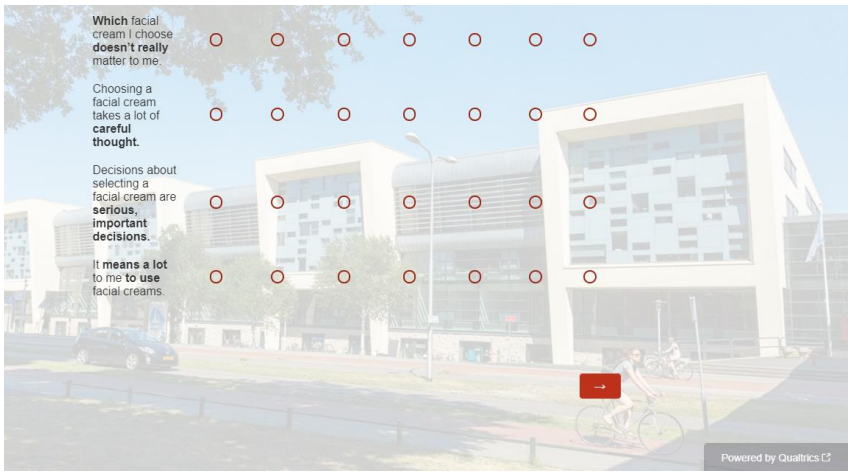
P6: Trust Outcomes scale a



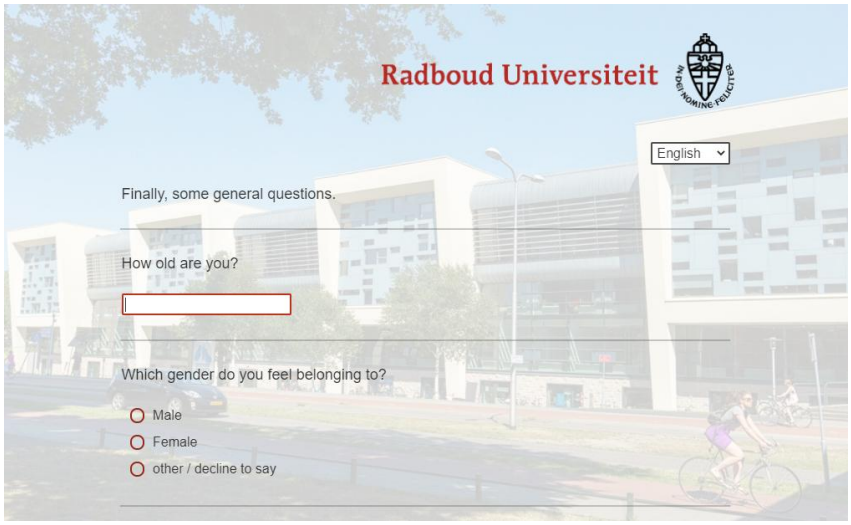
P7: Trust Outcomes scale b



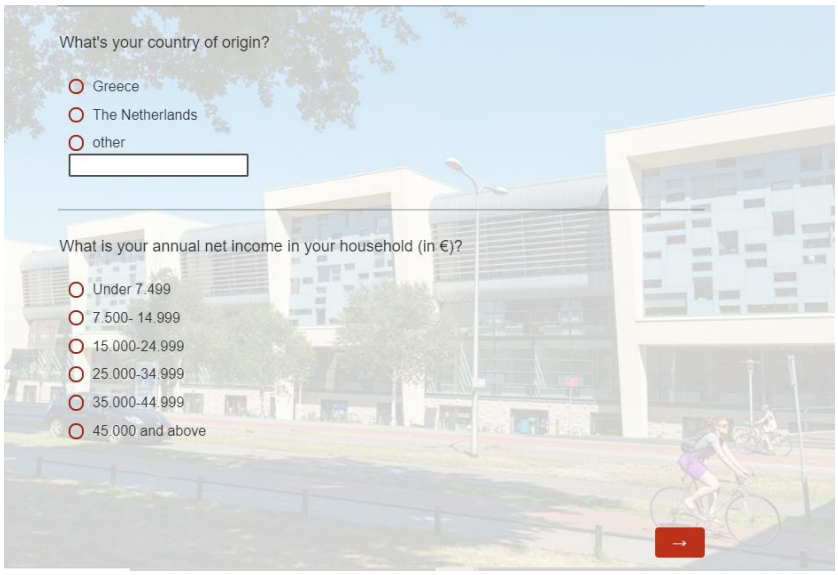
P8: Product Category Involvement scale



P9: Product Category Involvement scale



P10: Demographic Information a



P11: Demographic Information b

Appendix E: Interview Transcriptions Coding

Code	Splitting method constructs	Frequency	Total
1. Skintype Match	**Result**		**423**
	"result" and "job"	79	
	"match" and "sits"	90	
	"help"	18	
	"Moisturizing"	65	
	Texture		
	"oily" and "heavy" and "creamy" and "light"	42	
	"Skin" and "texture"	129	
2. Brand Image	**Fragrance**		**263**
	"smell" and "fragrance"	129	
	Packaging		
	"packaging" and "jar" and "bottle"	91	
	Price		
	"price" and "cost"	43	
3. Word of Mouth	**Recommendations**		**107**
	"recommended" and "tester" and "samples"	35	
	Acquaintances		
	"remember" and "know from"	72	
4. Loyalty	**Duration of Use**		**69**
	"years" and "time" and "months"	69	