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**Empirical Investigation of the impact of online Word of Mouth on
Customer-Based Brand Equity in the German product market**

Matthias Johannes Eckes

152113355

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ABSTRACT

Title: Empirical Investigation of the impact of online Word of Mouth on Customer Based Brand Equity in the German product market

Author: Matthias Johannes Eckes

English version

For companies, intangible assets like their brands are gaining importance. Consequently, it is crucial for marketers and for academia to understand how to build and nourish strong brands. Brands deliver value to the company and are a signal of differentiation in the customer's mind. The brand equity residing in the mind of a customer can define the strength of a brand. In addition, previous research indicates that word of mouth (WOM) is a strong influencer on the customer's perception in any purchase situation. Hence, this study was a step forward and brings the concepts of customer-based brand equity (CBBE) and WOM together. Therefore, a model was developed that captures the effects of manipulated WOM on the CBBE, representing the strength of a brand. Further, the researcher was interested if the effects of positive or negative WOM are moderated by the knowledge level of the customer. Using a longitudinal study design, a sample of 36 participants was exposed to either positive or negative WOM. The results of the repeated CBBE measures indicate that negative WOM has a negative impact on CBBE. Additionally, results show that novice customers are with the magnitude and number of effects stronger affected by negative WOM than brand experts. An influence of positive WOM on the CBBE could not be found. The study allows two distinct implications to protect and build a strong brand. First, an increase of the knowledge level of customers via brand education. Second, leverage on social media to encourage customer feedback.

Portuguese version

Para as empresas, os ativos intangíveis, assim como as suas marcas, estão a ganhar importância. Por conseguinte, é crucial para os comerciantes e para a academia compreender como construir e nutrir marcas fortes. As marcas geram valor para a empresa e são um sinal de diferenciação na mente do cliente. O valor adicional atribuído à marca e que está presente na mente do cliente pode definir o poder da mesma. Além disso, pesquisas anteriores indicam que a word of mouth (WOM) é um forte influenciador na percepção do cliente em qualquer situação de compra. Assim, este estudo foi um passo em frente e traz os conceitos de customer-based brand equity (CBBE) e WOM juntos. Por conseguinte, foi desenvolvido um modelo que capta os efeitos da WOM manipulado no CBBE. Além disso, o investigador estava interessado em verificar se os efeitos da WOM positiva ou negativa são moderados de acordo com o nível do conhecimento do cliente. Utilizando um desenho de estudo longitudinal, uma amostra de 36 participantes foi exposta a uma WOM positiva ou negativa. Os resultados repetidos das medidas CBBE indicam que uma WOM negativa tem um impacto negativo sobre o CBBE. Uma influência da WOM positiva no CBBE não foi encontrada. O estudo permite duas implicações distintas para proteger e construir uma marca forte. Em primeiro lugar, um aumento do nível de conhecimento dos clientes através da educação na marca. Em segundo lugar, a influência dos meios de comunicação social para incentivar o feedback do cliente.

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1. INTRODUCTION

1.1. Problem Definition and Relevance

A brand is “a name, term, design, symbol, or any other feature that identifies one seller’s good or service as distinct from those of other sellers.”

(American Marketing Association, 2016)

In today’s businesses brands are one of the most valuable intangible assets of a company (Kotler & Keller, 2012). Strong brands deliver value to the firm and to the customer (Yoo, Donthu & Lee, 2000). As such, they signal quality, lead to loyalty, make the brand less vulnerable against competitors marketing activities, increase margins, show inelastic consumer responses to price increase and are ultimately source of competitive advantage (Hoeffler & Keller, 2003). Subsequently, it is of marketer’s interest to acquire distinctive skills in careful planning, understanding and execution of strategic brand management activities to nourish strong brands. In this context the most visible theme in recent marketing literature is the conceptualization of brand equity and the efforts to find various approaches to study it (see Aaker, 1991; Keller, 1993; Lassar, Mittal & Sharma, 1995; Yoo & Donthu, 2001; Yoo et al. 2000). Hence, brand equity has become the key to understand the mechanisms and impacts of today’s holistic marketing activities (Christodoulides & Chernatony, 2010).

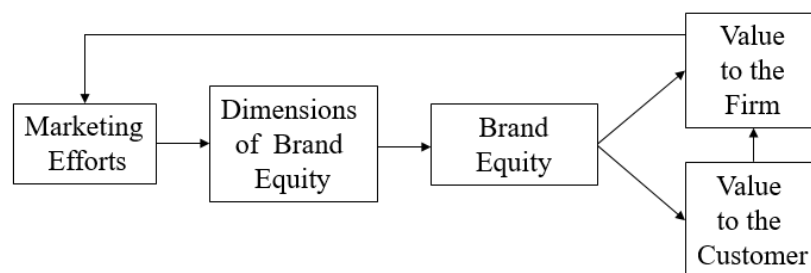


Figure 1: Conceptual Framework of Brand Equity (Yoo, Donthu & Lee 2000)

In general, the effects of marketing activities attributed to the brand are defined as brand equity (Keller, 1993). In the words of Yoo and colleagues (2000), brand equity is the incremental utility or value added to a product by the brand name residing in marketing efforts (Figure 1). While brand equity can be studied from a financial viewpoint for accounting purposes or for mergers and acquisitions, this paper focuses on a second perspective- the so-called customer-based brand equity (CBBE), which mirrors the associations that a customer bears towards a brand (Lassar et al., 1995). The reasons for choosing this approach to study brand equity are

threefold: (1) it is most prolific to study brand equity from the cognitive consumer perspective since its dimensions are revealing the core motives of consumer decision making, (2) managers lack customer based methods to evaluate brand equity which are essential to define knowledge structures they would like to create, (3) it allows to understand the driving force for incremental financial gains of the firm.

Past literature paid much attention on defining the dimensions of CBBE, which are by today consistently named as brand awareness, brand loyalty, perceived quality, and brand associations (see Aaker, 1991, 1996; Pappu, Quester & Cooksey, 2005; Yoo & Donthu, 2001). However, little research has focused on actually understanding how to build brand equity, or in other words, on studying the effects of marketing mix elements on the CBBE. One of the earliest marketing elements is word of mouth (WOM) (Dellarocas, 2003). Research indicates that WOM has a stronger influence on behavioral attitudes and sales than traditional marketing mix elements (Buttle, 1998; Martensen & Gronholdt, 2015). Especially with the vast change in information technology, driven by the internet as a game changer, WOM is given new significance in the recent years. Particularly, young consumers tend to prefer online channels to become smarter and better-informed customers (Accenture, 2013). While most research focuses on the underlying motivation and strategies to enable WOM (see Dellarocas, 2003; Saenger, Thomas & Johnson, 2013), empirical evidence regarding the effects of WOM communication on the firm's performance is rare (Trusov, Bucklin & Pauwels, 2009). In this context, Keller and Lehmann (2006) emphasize the growing importance of branding and call for further research on this topic. Following their call, the objective of this thesis is to bring the concepts of WOM and CBBE together. Subsequently, it's the aim to develop a model that captures the impact of online WOM on the strength of a brand which is reflected by CBBE.

1.2. Research Questions

In order to understand how online WOM affects the favorability and strength of associations a customer has towards a brand it is key to empirically investigate the interaction of online WOM and the multidimensional CBBE. At this point it is crucial to distinguish between positive and negative WOM. Whereas negative WOM may lead to a dilution of brand equity, positive WOM has the power to foster the favorability of a brand (Bambauer-Sachse & Mangold, 2011). While some studies exist that investigate the effect of WOM on sales, purchase intention or product attitude (see East, Hammond & Lomax, 2008; Mittal, Ross & Baldasare, 1998) there is to the knowledge of the researcher no such a study that focuses on the impact of positive and negative

WOM on CBBE in the marketing literature. Therefore, the purpose of this thesis is to fill this gap and contribute to the current research. As such, this study is a step forward to a more profound understanding of both concepts and their interaction. By doing so, the thesis adds value to academia and provides managers with a more thorough understanding of building strong brands by leveraging the effects of online WOM. As being the most powerful element of the marketing mix WOM is mentioned by several scholars (see Chen & Xie, 2008; Libai, Bolton, Bugel, de Ruyter, Götz, & Risselada, 2010). The following chapters present the research done on CBBE and WOM. Moreover, a method is developed that measures the impact of positive and negative WOM on the different dimensions of CBBE. To do so, we conduct the research along the case of the largest provider of grills and accessories in the German market, Weber-Stephen GmbH. Taking all these points into account this thesis aims to assess the impact of positive and negative online word or mouth (WOM) on the customer-based brand equity (CBBE) across different customer segments. In this course, the following research questions need to be addressed:

RQ1: How can customer-based brand equity be defined, conceptualized and measured?

The first research question aims to deliver a fundamental understanding of the evolution of CBBE by studying the various approaches of scholars. Consequently, different concepts, measurement scales and limitations are presented and discussed in the literature review section. As a result, by answering RQ1 essential insights for the design of the research model of this thesis are given.

RQ2: What are the key characteristics of word of mouth and how can it be measured?

Being the second component of the following research model, word of mouth and its characteristics are examined. To understand the importance of WOM, it is crucial to delimit it from other marketing mix elements in its function and effectiveness. In addition, different ways to measure WOM are discussed to incorporate the most suitable in the design of the present research.

RQ3: What is the impact of positive and negative online WOM on CBBE?

Following the overall problem statement, RQ3 aims to analyze the effects of online WOM on CBBE. In order to do so, we focus with this study on the impact of WOM on CBBE in the German product market. Based on the results of the previous research questions, the employed research model follows a segmentation between different levels of knowledge customers have related to a brand. Subsequently, the combination of primary and secondary research provides research and managers with a profound understanding on how WOM influences the strength of a brand across different customer segments.

1.3. Structure of the Thesis

To answer the research questions, chapter 2 gives an overview on the brand equity and WOM literature. In addition, it includes a discussion about the multidimensionality of CBBE as well as the different approaches to conceptualize WOM. In this manner, measurement scales of the components of CBBE and WOM are discussed in general. Chapter 3 introduces the case company Weber-Stephen GmbH. Along this company research will be conducted. Subsequently, the research model is explained in chapter 4. Chapter 5 introduces the methodology. This includes the presentation of the research method, the instrument development and the data collection. In chapter 6, the research model is empirically tested, analysed and results are presented. Finally, several findings and managerial implications resulting from the analysis are shown in chapter 7. Further, chapter 8 stresses the limitations of the dissertation and gives an outlook on future research opportunities.

2. LITERATURE REVIEW

The following literature review provides information about the current knowledge with its substantive findings in the areas of customer-based brand equity and word of mouth. It refers to findings from secondary sources and lays the foundation for the development of further, primary research. It includes two distinct sections. The first one refers to the dimensions of CBBE and the second one to the characteristics of WOM.

2.1. From Brand Equity to the Dimensions of Customer-Based Brand Equity

The concept of brand equity emerged in the late 1980s, early 1990s with the broadly consistent definition of Farquhar (1989) as the additional value given to the product by the brand. Even as most researcher come to similar definitions (see Aaker, 1991; Keller, 1993; Yoo et al., 2000) there is little consensus on an exact definition. Among several scholars, Aaker (1991) provides the most comprehensive definition of brand equity: *“A set of assets and liabilities linked to a brand, its name and symbol, that adds to or subtracts from the value provided by a product or service to a firm and/or to that firm’s customers”* (p.15).

As mentioned before, brand equity can be studied from two perspectives. First, it can be analysed from a financial perspective with a well-known model developed by Kapferer (1997). This model focuses with an inside-out view on the assessment of the monetary brand value and ultimately the firm’s financial value. Second, it can be studied from a consumer-perspective that assesses the value of the brand to the consumer with its favourability and strength of association with an outside-in view. The second approach of studying brand equity was established by Aaker (1991) and Keller (1993), who mentioned the term CBBE first. Keller (1993) assessed brand equity via consumers’ memory based associations to a brand. Further, the author classified the overall brand knowledge into the categories brand image and awareness. Although Keller (1993) developed a fundamental framework to measure CBBE, scholars often adopt a four dimensional model based on Aaker’s model (1991). Aaker (1991) was the first author who conceptualised brand equity with four core and one additional dimension. These are: *brand awareness, brand loyalty, perceived quality, brand associations and other proprietary brand assets*.

Based on this concept, the underlying idea is that there is only value to the investors if there is value to the customers. This assumption is as well supported by Cobb-Walgren and colleagues (1995), who measured CBBE based on the concepts of Aaker (1991) and Keller (1993) with

four dimensions. From that on many researchers adopted the four-dimensional approach, which is now widely used when it comes to measure CBBE (see Aaker, 1996; Yoo & Donthu, 2001; Washburn & Plank, 2002; Pappu et al., 2005). In contrast, a model proposed by Yoo and colleagues (2000), which identifies only three dimensions by combining brand awareness and brand associations into a single dimension got later rejected by Yoo and Donthu (2001).

Along with the conceptualization of CBBE by Aaker (1991), Keller (1993) and more recent research, this study follows the model proposed by Yoo and Donthu (2001). Their research design employs a four-dimensional approach to measure CBBE and includes the following dimensions:

- (1) *Brand Awareness*: The first dimension is the “ability of a potential buyer to recognize or recall that a brand is a member of a certain product category” (Aaker, 1991, p. 61). The construct relates to the strength of a brands’ occurrence in consumer’s minds. Literature provides several definitions (Appendix 1) but along with the definition of Aaker (1991), - Keller (1993), and Rossiter and Percy (1987) have a similar approach and stress two components of brand awareness; recognition and recall. Brand recognition relates to the idea that a customer confirms prior exposure when presented with the brand. Whereas brand recall is a component where the customer is able to retrieve the brand from memory when given the product category (Keller, 1993). Today’s market researcher use aided and unaided brand awareness as synonyms for these terms.

More recently, Aaker (1996) adopted a different perspective and distinguished between different levels of awareness. Aaker (1996) emphasized that in different industries the benefit of various awareness measures differs. As such, in a springing market with new players the recognition might be important, whereas in an established market like the automobile industry with overall high records of brand recognitions the focus shifts to being the top-of-mind (the first-mentioned brand in a recall task). In this context, the study states that brand awareness is an important component of CBBE since it can affect attitudes, perceptions and associations with the brand (Aaker, 1996). This can be fruitful especially since it raises the likelihood that the brand becomes part of the consideration set. For instance, in low involvement consumer journeys brand awareness can be the determining condition in the absence of well-formed attitudes (Keller, 1993).

Besides, brand awareness can be characterized according to its breadth and depth. While depth relates to the ease the brand comes to customer's mind, breadth relates to the range of different categories and situations the brand comes to mind (French & Smith, 2013). The measurement of brand awareness knows different approaches. For example, Yoo and colleagues (2000) examined perceived marketing mix elements in their study indirect. They measure six items on a 5-point Likert scale. As such, they applied self-confirmatory questions like: *I know what X [brand name] looks like; I am aware of X or I can quickly recall the symbol of X*. In contrast, Chandon (2003) recommended to assess the brand recall component first by asking for brands in a category or consumption occasion (e.g. *Please name all the brands of beverages you can think of.*) In a second step, Chandon (2003) used an aided recognition question by providing the participant with a stimulus (e.g. brand name or an ad). This is followed by questions like: *Do you remember having seen this brand before?*

The approach of Chandon (2003) is direct and refers straight to marketing mix elements. By doing so, further conclusion can be drawn. For instance, information about brand dominance (e.g. only brand recalled) and being the top of mind (recalled first). Concluding, direct measurement proposed by Chandon (2003) seems more sophisticated, since it is aligned with the previous research that distinguishes between recall and recognition (see Keller, 1993; Aaker 1996). Moreover, it provides more valuable information for the strategic management.

- (2) *Brand Loyalty*: When assessing CBBE brand loyalty serves as a *sine qua non* condition and is therefore the uncontroversial second cornerstone. The loyalty to a brand is the most important factor to explain brand choices of consumers and was originally defined as repeat purchase by being the function of a psychological process (Day, 1969). More recently, Aaker (1991) defined it as “the attachment that a customer has to a brand” (p. 39). As comparison, Yoo and Donthu (2001) took a slightly different and more attitudinal perspective by defining brand loyalty as being loyal to a focal brand as the intention to be the primary choice.

A vast amount of research was done in the marketing and consumer behavior literature to understand the concept of brand loyalty (Jensen & Hansen, 2006). For instance, a study of Allaway and colleagues (2011) confirmed that brand building efforts even in

the supermarket industry with low switching costs translates into shopping loyalty, higher levels of spending and person-to-person promotion of the brand to others. Among most industries loyal customer of a brand buy more, are willing to pay more, create higher revenues, stock returns and favors positive WOM with building resistance to marketing activities of competing brands (Dick & Basu, 1994).

As mentioned before, Yoo and colleagues (2000) studied the perceived rather than actual marketing elements, since they explain consumer behavior more effectively. Having said that, the measures of loyalty should focus on intentions to buy the brand on the next opportunity, the likelihood to recommend the products or services and the degree of satisfaction (Aaker, 1996). Along with prior research, Allaway and colleagues (2011) adapted previous validated scales to measure loyalty in the grocery industry. They assessed loyalty via a Likert-scale with questions like: *I feel loyal to this store; I trust this store or I encourage others to go to the store*. In comparison, Pappu and others (2005) only examined loyalty along two factors with the feeling of loyalty towards the brand and being the first choice. Their limitations recommended for future research to implement a minimum of three items for factorial analysis. Lastly, a loyalty measure proposed by Aaker (1996) is the willingness to pay a premium over a no-brand or competing product.

(3) *Perceived Quality*: Perceived quality is the third key component of brand equity (Aaker, 1996). Inherent to the meaning of the term it is not the actual, objective quality of the product or service but the subjective evaluation by the customer. Zeithaml (1988) defined perceived quality as the product's superiority or excellence with a higher level of abstraction that does not focus on specific product attributes. The author further stated, that the subjective quality is shaped by the past product experiences, individual needs and overall consumption situations. All these components build perceptions and subsequently trigger "price premium, price elasticity, brand usage and, remarkably, stock return" (Aaker, 1996). Perceived quality signals, along with brand associations, value to the customer. In addition, it is a point of difference to products from competing brands. Ergo, "to the degree that brand quality is perceived by consumers, brand equity will increase" (Yoo et al., 2005, p. 197).

When it comes to the measurement, Aaker (1996) highlighted the importance to distinguish the perceived quality responses between loyalty segments. These can be loyal customers versus switchers, no customers or customers who are loyal to another brand. Beyond that, equally important is to provide an appropriate frame of references to the respondents. This is because, it makes a difference if the respondents compare between all products in one industry or just products of a certain category. On top of this, the possibility of tracking the relative score differences over time including a provided frame of references will add value (Aaker, 1996).

The literature showed fairly similar indicators when assessing the perceived quality (see Aaker, 1996; Allaway et al., 2011; Yoo et al., 2000). Varying in the number of items, they broadly consist of general quality and satisfactory questions paired with competitor comparisons (e.g. *The likely quality of X is extremely high; The products at this store are very satisfactory compared to other stores*).

- (4) *Brand Associations*: The fourth important component of CBBE is brand associations (Aaker, 1991; Keller, 1993). It indicates “the meaning of the brand for customers” (Keller, 1993, p. 3). Brand associations are core to decision making since they help to process information (French & Smith, 2013). The associations to a brand can be formed by direct or indirect contact with the brand. Further, by studying brand associations, managers receive guidance to enhance CBBE. In addition, brand associations provide value to the customers with reasons to buy and offering point of differences compared to other brands (Aaker, 1991). Additionally, some authors also highlighted that brand associations can be differentiated between three distinctive components (Aaker, 1996). First, the *brand value* component that focuses on the value proposition of the brand and includes functional benefits of the service or the product. A brand by its definition should create value to the customer, which make it less vulnerable to the marketing campaigns of competitors. The measures can be value-for-money and reasons to buy this brand over the brand of competitors. The second component is *brand personality* which has been extensively studied by Aaker (1997), who defined it as “the set of human characteristics associated with a brand” (p. 347). It increases preferences, usage and evokes emotions, which further affects trust and loyalty. By developing scale measures of brand personality she confirmed five dimensions: sincerity, excitement, competence, sophistication, ruggedness. Third, *organizational associations* refer to the competence

and the image of the association that is behind the brand (Pappu et al., 2005). The brand represents more than just products and services. It has nowadays a greater responsibility than just offering solutions to problems, it has to create value to all communities -not just its customers- to be recognized as an organization to admire or trust.

Despite the importance of these three components, it is difficult to measure them separately. Therefore, it is a valid approach to consider a set of items which goes across the three mentioned different components (see Pappu et al., 2005). For example, Pappu and others (2005) measured brand associations along five items: *up-market, tough, like the company, proud to buy, trust the company*. It is seen as reasonable to adopt this approach.

Overall, when studying the multidimensionality of CBBE it is important to recognize that there is no single measure that can conduct all different components and that there is no such a thing as a one-size-fits-all model. Therefore, depending on industry, culture, product or services the dimensions with its measures need to be adjusted accordingly. Moreover, from past literature it has become clear that the different dimensions are interdependent and not exclusive to each other (Lassar et al., 1995).

2.2. Characteristics of Word of Mouth

Word of mouth (WOM) is one of the earliest marketing elements and acknowledged in the field of consumer behavior for more than half a century. Arndt (1967) defined WOM as person-to-person communication where the receiver perceives the communicator as non-commercial regarding a brand. More recently, other researchers followed the same approach and refer to a person-to-person conversation between consumers about a product, service or brand (see Chatterjee, 2001; Sen and Lerman, 2007).

The importance of WOM is recognized by marketers and sociologists for many years. Hence, a vast amount of studies is done to understand its effects and to design measures for WOM (see Herr, Kardes & Kim, 1991; Liu, 2006). By doing so, it has become clear that WOM is the most powerful marketing mix element and influences the decision making in most purchase situations (Dichter, 1966). A study mentioned by Trusov and colleagues (2009) confirmed that traditional forms of advertising are losing effectiveness. The findings show that fewer people tend to buy products due to advertisement. On the other hand, information shared via WOM communication are perceived as more reliable, credible and trustworthy (see Chatterjee, 2001; Godes and Mayzlin, 2004; Liu, 2006). Besides, several researchers stressed the importance to

distinguish between positive and negative WOM (Bambauer-Sachse and Mangold, 2011). Positive WOM is a way of communication that shares favorable experience. In opposite, negative WOM reports disappointing experience with a product, service or brand. Furthermore, some studies showed that negative WOM can have a stronger effect (Herr et al, 1991) than positive WOM. In contrast, Liu (2006) concluded by studying online reviews that WOM increases the sales irrespectively of the valence. In addition, a study of East and others (2008) came to the result, that positive WOM has a greater impact than negative WOM on the purchase probability. Summarized, it seems still controversial if the influence of negative versus positive WOM has a stronger impact.

Moreover, it is also important to understand the motives of WOM by the customer and the effects on the brands' success. This is especially important in a world where communication is facilitated by the internet (Saenger, Thomas & Johnson, 2013). Consequently, with the spread of the internet in the recent decade the WOM communication is not any longer limited to the peer group of the individual. One communicator can potentially reach a global audience (Chen and Xie, 2008). This so-called online WOM communication is due to its accessibility and higher reach assumed to be more effective than offline WOM (Chatterjee, 2001). Especially the growing importance of consumer generated reviews get stressed in recent literature. As prime example accounts Amazon.com, which offered consumer generated posts to products on their webpage already in 1995. By time the number of consumer reviews grew up to 10 million (Chen and Xie, 2008). The study of Chen and Xie (2008) observes the actual effects of online consumer product reviews in consumers' purchase decision. As a result, they draw the conclusion that consumer reviews are especially important for unsophisticated consumers (e.g. novices). Other studies confirmed the relevance of online reviews for customers when gathering pre-purchase information. In this context, Mangold and Smith (2012) stated that "Millennials and other consumers are able to influence literally thousands of purchase decisions" (p. 150). The power of reviews seems uncontroversial. Therefore, companies should try to leverage the effects by encouraging customers to participate in the review process and showcase positive reviews (Mangold and Smith, 2012).

When it comes to the measurement in consumer research, many study designs exist to capture consumers' likelihood to spread WOM of a specific brand (Saenger et al., 2013). As such, some capture consumers' intentions to spread WOM on a single item or multi item scale (Reichheld, 2003). While others conduct self-reports of past WOM engagement (Mowen, Park & Zablah,

2007). In addition, some studies examine the underlying motives of consumers to spread WOM (see Ahuvia, 2005; Saenger et al, 2013).

Another common way to investigate the effect of WOM on consumer decision making or the brand success is to manipulate WOM in an experimental setting. For example, Gupta and Harris (2008) manipulated the number of available online product recommendations. The findings indicate that specifically highly motivated consumer increase the time spent on seeking information of the product with the number of recommendations. Additionally, highly involved consumers are more likely to switch from the declared preference if the recommendations differ from their initial. A different study by Bone (1995) manipulated the valence of WOM and exposed the participants in an experimental setting with positive and negative WOM to measure its effects. The research confirms the influence on immediate and delayed product judgements. Moreover, these effects seem stronger in a disconfirming (negative WOM) setting.

In summary, it becomes evident that online WOM, especially customer-produced product recommendations, have a strong influence on customer's choice. Despite some previous research measured the immediate effect of WOM through sales, this is a short-term oriented approach, which is not giving enough insights on how WOM actually affects the overall long-term success of a company. Therefore, in order to make strategic decisions it is necessary to develop WOM measures that are able to grasp the impact of online WOM on the different dimensions of CBBE, since it reflects the strength of a brand and is the outcome of successful mid- to long-term investments in brand building activities.

3. INTRODUCTION OF THE CASE COMPANY: WEBER-STEPHEN GmbH

In order to measure the impact of online WOM on CBBE we decided to investigate the effects along the case company Weber-Stephen GmbH. The decision to use one case company improves the internal validity with a data collection that is richer and of greater depth than a pure experimental lab design. By doing so, the substantial findings of this study can be transferred to companies in the same or other industries. Moreover, the conclusions can be incorporated in the strategic decision making of the marketing and other corporate functions by the focal firm.

History

Weber-Stephen is a manufacturer of premium charcoal-, gas- and electro grills as well as accessories. The company was founded in 1952 by George Stephen and headquarters in Palatine, Illinois – USA. George Stephen laid the foundation for the success with the invention of the first kettle barbecue. As a result, Stephen became a leading brand with many following models initially in the American, then in the global market. Today, the products are distributed under the trademark Weber in 72 countries worldwide through local sales agents or via established local branches. In 2015, Weber-Stephen employs more than 10.000 people globally in their corporate functions as well as in the production affiliates in USA and China. The company states its mission as: *For Weber it is important to make people happy. Therefore, we develop excellent products and inspire to use and enjoy them.* This is supported by the four core values: *authentic, excellent, inspiring, bonding.*

Weber-Stephen in Germany

The German branch was set up in 2005 and is located in Ingelheim am Rhein from where the markets Germany, Austria and Switzerland are steered. With a headcount of 155 employees it created revenues of 132 Million Euro in the fiscal year 2014. In the last decade the regional branch recorded an immense growth in sales with yearly rates up to 15%. The success is supported by marketing campaigns that focus on the experience of grilling and living outdoors. In coordination with the HQ in USA the German affiliate is free to execute the marketing and sales strategy within the region.

Strategy & Challenges

The German Weber subsidiary has focused successfully with 360°-marketing activities on creating brand awareness to establish a market for premium grills. For example, in 2016, Weber targeted with the campaign “My First Weber” on the customer group of young consumer, so-called Millennials. The company aimed to break a stigma of being up-scale and not affordable for the younger segment. With all the different activities, the brand recognition via an aided awareness test has doubled within the last four years to 61% in 2014 (Figure 2). With this result the company holds the market leadership, achieves the highest score across the industry players and takes the dominant market share with 39% of sales in the premium grill segment. In the context with the fight for market share with the six main competitors in the market a fierce competition is one of the challenges that is going to emerge in the upcoming years.¹

The company faces similar situations in all markets in the EMEA region (Nordics, Benelux,

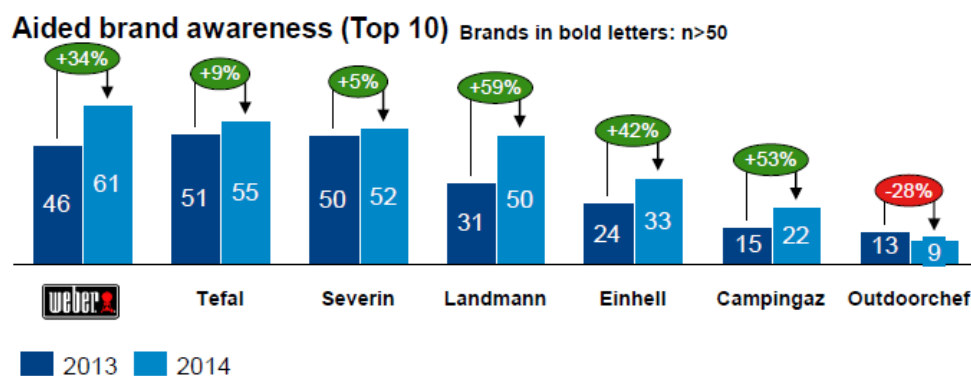


Figure 2: Weber Grill Watch Survey (Gfk, 2015)

France). According to the management team, the strategy to make Weber less vulnerable against main competitor moves is to align the European marketing activities with the aim of ensuring a consistent brand identity in all markets. This could strengthen the brand across the individual countries. As such, it is the top management’s goal to assimilate the different activities to reduce costs and to create a similar image of the firm and its products.

Previously the individual country units have been in charge of setting up and manage their own website. However, due to new strategic goals, one prioritized project is to establish an integrated brand and e-commerce page. This page is planned to be rolled out in all European markets to ensure a consistent branding. Since the German market is the most developed one, it has been chosen as the first country where the new website went live in March 2016.² Monitored by

¹ Find a full analysis of the level of competition within the industry along Porter’s five forces in Appendix 2.

² Weber-Stephen GmbH website: www.weber.com/de

Weber-Stephen Germany, the brand's new website offers the ability to buy the full assortment online with shipment of the products within three days and free of charge. In addition, a new function incorporates the opportunity for customer to share product based feedback. These reviews are shown on the product detail page and contain a rating of the product on a five-star scale and text based ratings. By giving the customer the opportunity to share their experience via reviews the page adds not only transparency to the customer but also a source of information for the company. While in the past Weber showcased exclusively selected, mostly positive reviews it wants to resign from this practice and publish all reviews. This is considered to be done in a later version of the website. Weber is concerned that especially unsatisfied customers make use of online reviews which would not mirror the true picture of the quality and services. However, it remains unclear to Weber-Stephen how user generated content impacts the strength of the brand irrespectively of its valence. Facing this challenge makes Weber-Stephen an adequate case where along the company the impact of online WOM on CBBE can be studied.

4. RESEARCH MODEL AND HYPOTHESES

As a result of the CBBE and WOM literature (chapter 2), together with the additional insights from the case company Weber-Stephen (chapter 3), this section presents the model and the hypotheses which will be tested. The aim of this study was to examine the potential impact of online WOM on the consumer perceptions of a brand in the product category of premium grills. Since there was no model that was uniformly applicable, it was fruitful to develop a study design tailored to the characteristics of the present research.

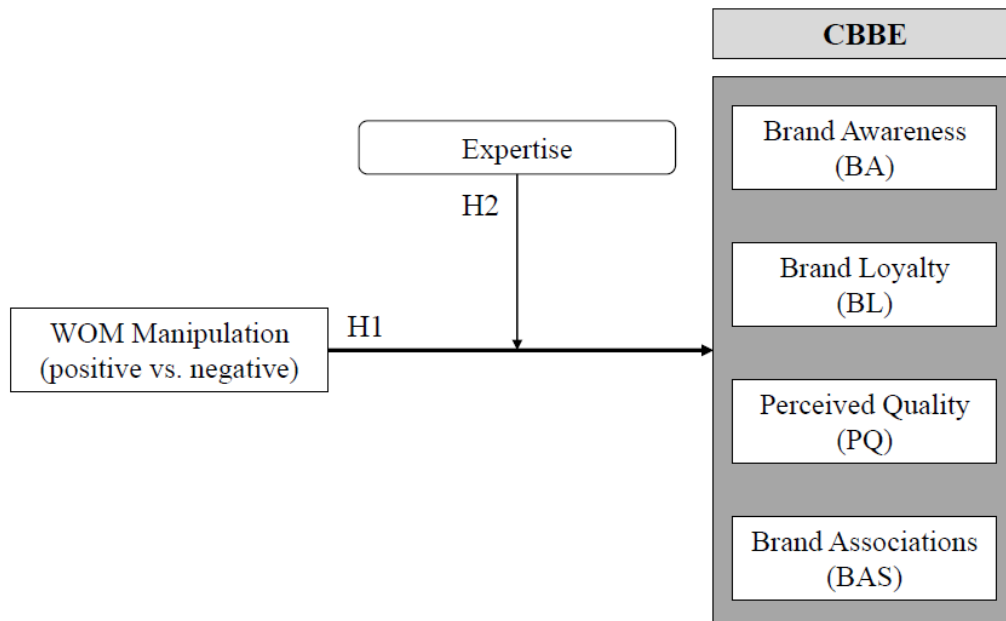


Figure 3: Conceptual Framework (own contribution)

In order to do so, a construct was developed that is based on the findings of previous research and captures the impact of positive and negative WOM on the different dimensions of CBBE (Figure 3). These dimensions were profoundly defined and conceptualized by the study of Yoo and Donthu (2011) along four dimensions: *Brand Awareness*, *Brand Loyalty*, *Perceived Quality* and *Brand Associations*. As such, CBBE represented the dependent variable of the concept. Being the overall research problem, a variable that embodies the impact of the manipulated WOM (independent variable) was employed in the design of the study. In addition, one moderator was included which reflected the different knowledge levels of the participants had (Expertise).

All in all, the conceptual framework incorporated two hypotheses:

(1) Previous research suggested that WOM has a significant impact on sales in the service and the product category (see Herr et al, 1991; Liu, 2006). However, research did not agree on the direction the valence of WOM influences the sales. But it can be assumed that WOM has an impact on the overall perception of the brand as well. This leads to hypothesis 1:

H1. Positive (negative) WOM has a positive (negative) effect on the Customer-Based Brand Equity (CBBE) of a brand.

(2) Research of Maheswaren and Sternthal (1990) concluded that customers with high knowledge about a product category or brand (experts) favor different type of messages than customers with a low knowledge in a category (novices). While experts favor attribute related messages, novices favor benefits related type of messages. Further, a study of Chi, Feltovich and Glaser (1981) confirmed that experts elaborate on new message exposure by setting it into relation to prior gained knowledge. In opposite, novices are more likely to interpret the exposed message more or less literally. Bringing both studies together, the approach was to investigate if experts and novices respond different in their perceptions about the brand when they get exposed to new WOM. It was expected that experts with an already gained prior brand knowledge change their perception about a brand less than novices, who have little knowledge about the brand.

H2. The higher (lower) the brand knowledge is the lower (higher) should be the impact of positive or negative WOM on the CBBE of a brand.

5. METHODOLOGY

Goal of this chapter is the presentation of the research method and the description of the employed instruments.

5.1. Research Method

In the previous chapter 4, it became evident that a study design which is able to grasp the impact of WOM on CBBE is desirable. Therefore, this study manipulated the independent variable WOM. However, as one single WOM exposure most likely would not have an immediate direct significant effect on consumer's perceptions about the company (CBBE), we opted to expose participants to WOM during a one-week period, and to assess CBBE only after that week. The WOM variable was in the case of Weber-Stephen represented by the customer product reviews on the webpage. We followed a research method that comes with a three step approach: (1) pre-measure: initial assessment of the CBBE with an online survey in order to set a reference point; (2) WOM manipulation: splitting the group into two and exposing them to either positive or negative WOM via online customer based reviews during five consecutive days; (3) post-

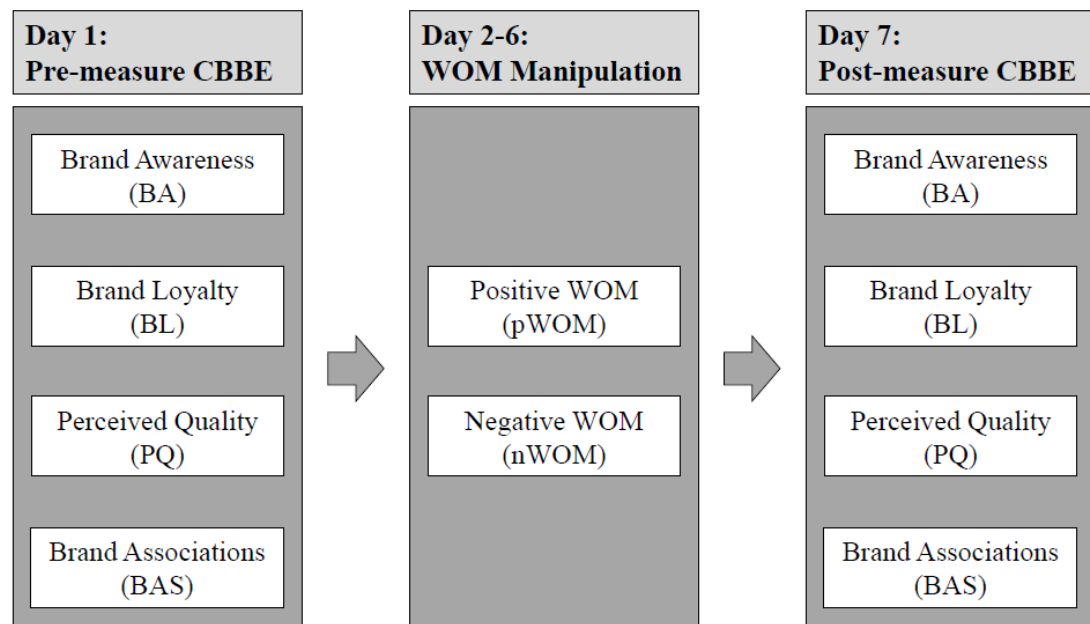


Figure 4: Methodology Procedure (own contribution)

measure: final assessment of the CBBE with an online survey in order to evaluate the impact of the manipulation (Figure 4). This approach allowed to investigate the cause and effect relationships through direct manipulation of the independent variable WOM and the control of the extraneous variable CBBE by applying a pre-and post-measure.

Step 1: Day 1 – Pre-measure CBBE

The first step aimed to assess the CBBE at an initial point of the study. By doing so, this became a point of reference and control of the dependent variable WOM. All participants had to complete this first assessment via an online survey at the first day of the study.

Step 2: Day 2 to 6 – WOM Manipulation

After the first assessment, the participants were split into two groups. One group was exposed to positive WOM, the other group to negative WOM on each of the five consecutive days (day 2 to 6). Participants received the invitation via e-mail to read reviews of Weber products (either positive or negative, depending on the condition participants were in). The five presented reviews were about different products and accessories of Weber to level out any individual preferences of the participant. By splitting the participants into two separate groups it became possible to compare the impact of positive and negative WOM on CBBE in one study design.

Step 3: Day 7 – Post-measure CBBE

In the final step, the participants were invited to once again answer an online survey. This online survey was in its structure similar to the initial survey of CBBE. The consistency allowed for direct comparison and application of statistical methods for pre-/post measures (e.g. paired samples test).

5.2. Instrument Development

Following prior research an online survey was used to answer the research questions, to test hypotheses and to provide solutions to the overall problem statement (see Aaker, 1996; Alleaway et al., 2011; Chandon, 2003; Pappu et al., 2005; Yoo et al. 2000). The survey was developed based on the literature review and organized in four parts (see Appendix 3):

Pre-measure CBBE

Part one gave a short introduction to the procedure of the overall research project. This included the clarification of the time which is needed to participate and a contact person in case of occurring questions. More important the participant got assured that all data is treated confidential, which is a crucial part of online surveys (Evens and Mathur, 2005). In addition to the introduction, a request for the e-mail address was prompted to track the respondent throughout the project as well as a question regarding the age in order to qualify the respondent for this study.

Part two comprised the assessment of the CBBE of the Weber-Stephen brand (Figure 5). All incorporated items were adopted from prior research and rephrased to fit the context of grilling with the focal brand. All constructs of CBBE were assessed at least along three items, making it a minimum threshold for statistical analysis according to a study of Pappu and others (2005).

Brand awareness measures were adapted from Aaker (1996) and a working paper of Chandon (2003). The dimension of brand loyalty was based on the research of Alleaway and others (2011) and Yoo and others (2000), and assessed via five items. Perceived quality was based on the survey of Yoo and others (2000) and Aaker (1996). Being the fourth dimension, brand associations got measured with the items adapted from Pappu and others (2005).

Part 2: Customer-Based Brand Equity	
Brand Awareness	
<i>(adapted from Aaker, 1996; Chandon, 2003)</i>	
<i>Brand recall</i>	
Q1a	Please name the first three brands of grill manufacturer that come to your mind
<i>Brand recognition</i>	
Q1b	Which one of those symbols belong to Weber Grill?
<i>Brand familiarity</i>	
Q1c	To what extent are you familiar with Weber?
Q1d	Do you or your family own a Weber product?
Brand Loyalty	
<i>(adapted from Alleaway, Huddleston, Whipple & Ellinger, 2011; Yoo, Donthu & Lee, 2000)</i>	
Q2a	I consider myself as loyal to Weber
Q2b	Weber would be my first choice
Q2c	I would recommend Weber to my friends
Q2d	I'm willing to buy Weber in the future
Perceived Quality	
<i>(adapted from Yoo, Donthu & Lee, 2000; Aaker, 1996)</i>	
Q3a	The brand delivers durable and reliable products
Q3b	Weber must be of very good quality
Q3c	The quality of Weber is very high
Brand Associations	
<i>(adapted from Pappu, Quester & Cooksey, 2005)</i>	
Q4a	Weber is a company I can trust in
Q4b	I am proud to buy products of Weber
Q4c	I can identify myself with people who buy Weber
Q4d	I like the brand Weber
Q4e	Weber is up-market

Table 1: Customer-Based Brand Equity Measure (own contribution)

The third part of the survey was designed to assess the participant's knowledge of Weber and followed an approach of Maheswaran and Sternthal (1990) (Figure 6). In order to apply the loyalty measure of the previous part the participant had to be sufficiently familiar with the brand but not necessarily an expert. To distinguish between the two groups, a 10-item questionnaire was employed. The participants indicated their responses either by agreeing or disagreeing with each statement along with a do not know response. By doing so it could be classified between two levels of knowledge – experts and novices based on a median split.

Part 3: Expertise	
<i>(adapted from Mashewaran & Sternthal, 1990)</i>	
Q5a	Weber Grills get mainly fired up with 4 methods (charcoal, pellets, electric, gas)
Q5b	Weber is a German brand
Q5c	Weber does not only produce grills it also has grill academies to teach grilling
Q5d	Weber is known for chimney grills
Q5e	Weber sells not only grills but also food and spices
Q5f	Weber has commercials on TV
Q5g	Weber has not only grills but also smokers
Q5h	Weber sells a Weber Mini grill for kids
Q5i	One Weber slogan is: Living Outdoor
Q5j	Thomas Müller is a testimonial of Weber

Table 2: Expertise Measure (own contribution)

Part four focused on demographic questions regarding gender, income and occupation were asked in order to provide the opportunity to segment customers.

WOM Manipulation

Being the second step of the research, the participant got exposed to five positive or negative reviews (depending on the condition they were in). These reviews were taken from Amazon.com and embedded via an image editing tool into the environment of the Weber-Stephen website (Figure 7). During day 2 to 6 the participants received a link to Qualtrics³ where they got exposed to manipulated reviews and had to answer some questions regarding the review. First, it was asked if the participants are interested in this product category. Second, a manipulation check on a 7-point Likert scale was employed to check if the reviews were perceived as they intended to be: positive or negative.

³ Qualtrics is a state of the art online data collection and analysis tool.

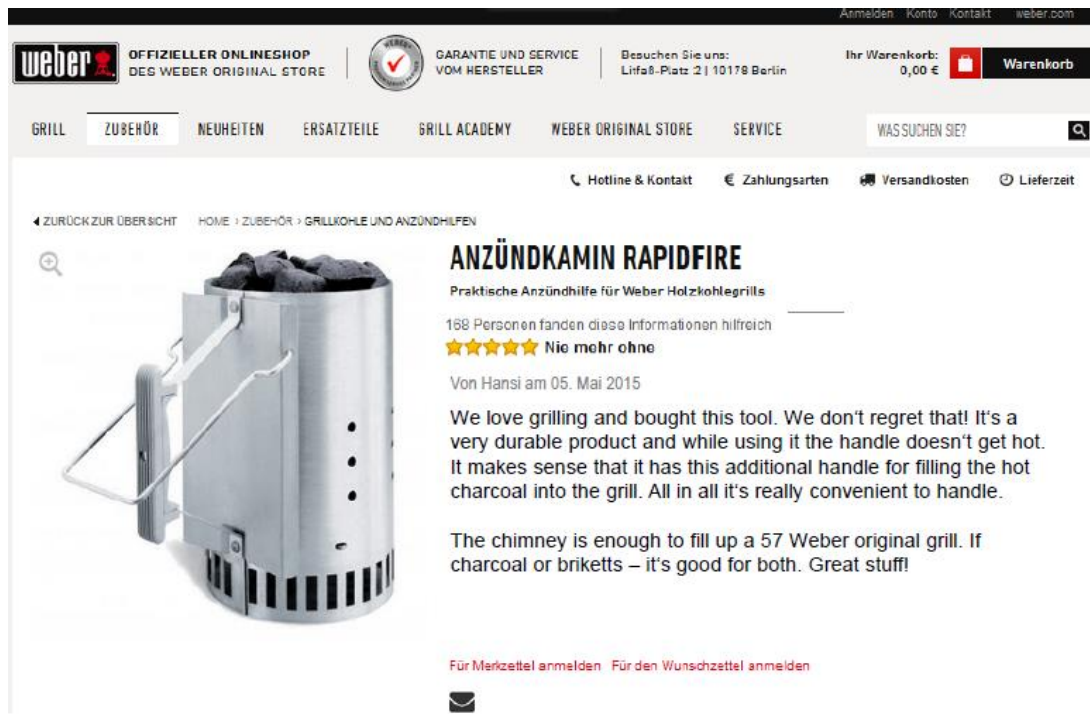


Figure 5: Example – Positive WOM Manipulation (own contribution)

Post-measure CBBE

In line with the initial assessment of the CBBE, the participants were invited via e-mail to answer a survey at day 7 of the study. This questionnaire was similar to the initial one in order to compare the differences and measure the impact of the online WOM on the CBBE (Appendix 4).

Following the development of the instruments and in order to leverage the strength and minimize the risks of an online survey, a pre-test was conducted with five students before the survey went online. This procedure is a valid approach and recommended by market researchers to improve the quality of studies (see Hammann and Erichson, 2006). Following the pre-test slight adjustments have been incorporated, which were mostly attributed to the clarification of issues. Lastly, the survey was published via the online survey tool Qualtrics.

5.3. Data Collection

In order to reduce the effects of economic, cultural, demographic and industry specific differences between other markets, the study was limited to Germany. The target population of this study was the group of young consumers, so-called Millennials. This segment consists of people born between 1980-1998. It is of interest to study this group for two reasons. First, Millennials hold preferences for online- versus in-store shopping (Accenture, 2013). Moreover, research states that 75% of Millennials are primarily responsible for purchase decisions

(Interbrand Design Forum, 2015). In addition, they are using the online channels like none of the other age-groups to become smarter and better-informed customers. Second, the case company recently carried out activities to target this segment by product line adjustment as well as marketing activities which are focused on young consumer. Subsequently, Millennials make an adequate segment to focus on in this research. In addition, it improves internal validity to study a single product category and a sample limited to 18-35 year olds. However, it is important to state that this improvement in internal validity leads to limitations on the generalizability of the research.

The above presented online survey was translated and conducted in German by using back translation from English. The data was collected during the last two weeks of April, 2016. For the research group of Millennials, it becomes evident that an online survey has significant advantages (Luo, 2009). As such, online surveys are more flexible, they can be administered in a time efficient manner and they can be conducted from anywhere at any time (Evans and Mathur, 2005). In addition, they are more convenient with a diversity of questions and an ease of data entry and analysis. In contrast, it is important to be aware of limitations by carrying out research solely based online. Since they are self-administrated, online surveys must be extremely clear to avoid dropouts. Moreover, there are risks that respondents lack online expertise and an invitation to a survey via e-mail can be perceived as junk mail. Lastly, security issues and privacy concerns remain important.

In line with previous research on the CBBE literature a convenience sample was applied. Therefore, the survey was initially sent to 65 contacts of the researcher and their contacts through social media and e-mail. From the total population reached, 50 responses were received in the pre-measure stage. This group was then split into two for the second step. In the five consecutive days one group got exposed to positive reviews and the other one to negative reviews. To participate in the final survey (post-measure) the participants had to be traceably exposed to at least three of the five manipulated reviews. In the end and after step three, all obtained surveys were checked for completeness. After the data set was cleaned of inconsistent and ambiguous responses, 36 usable questionnaires were left. In this sample 17 had been exposed to positive and 19 to negative WOM.

Although the number of obtained responses is not very high, the sample is similar to several ones reported in other studies that involved repeated behavioral measures and longitudinal

observations (for example Gailliot et al. (2007), n=38, n=12, n=17, n=18). It is then with confidence that we proceeded with analysis.

6. RESULTS AND ANALYSIS

After the methodology and research model, instrument development and data collection has been presented. The following part will analyse the collected data and report the results. First, the sample characteristics will be shown. Second, the validity of the measurement model will be tested. Third, the scale reliability of the different dimensions will be tested. Fourth, the results of the longitudinal study will be investigated according to the research questions and hypotheses. By doing so conclusions and implications of this study can be drawn.

6.1. Sample Characteristics

The total of 36 considered responses contained more male (61,1%) than female participants (38,9%). Being a precondition to be a young consumer, 47,2% of respondents were in the age of 23 to 25, followed by the 26-29 years old (38,9%). Further, the majority of the sample were students (52,8%). Moreover, 58,3% of the respondents owned or had a family member who owned a Weber product. As mentioned before, to measure the expertise a 10-item questionnaire was employed. The respondents were considered as experts, if they answered at least five questions correct. If they answered less than five questions correct they were considered as novices. In total the sample contained 21 experts and 15 novices. The full set of demographics and characteristics is illustrated in table 3.

Measure	Item	Frequency	Percentage
Gender	Male	22	61,1
	Female	14	38,9
Age	18-22	2	5,6
	23-25	17	47,2
	26-29	14	38,9
	30-35	3	8,3
Occupation	Student	19	52,8
	Full-time employed	13	36,1
	Part-time employed	2	5,6
	Others	2	5,6
Income	<500	8	22,2
	500-1500	11	30,6
	1500-2500	8	22,2
	2500-3500	2	5,6
	>3500	6	16,7
	No answer	1	2,8
Expertise	Novice	15	41,7
	Expert	21	58,3

Table 3: Sample Characteristics (own contribution)

6.2. Manipulation Check

In the second step of the research the participants were exposed to either positive or negative WOM during five consecutive days. Following each exposure to the product review, participants were asked to answer to what extent they perceived the review as positive or negative. This manipulation check was measured on a 7-point scale (1=Extremely positive; 7=Extremely negative). Analyses of the manipulation check showed that on average the means for the positive WOM (pWOM) exposure are 2,041, whereas the negative WOM (nWOM) condition perceived their reviews with an average of 5,885 throughout the five days as negative (Table 4). This mean difference was tested with an independent samples test for all five days of exposure.

	pWOM	nWOM	t-test
Day 1	2,357	5,353	t(29) = -8,587***
Day 2	2,125	6,235	t(31) = -17,073***
Day 3	2,059	6,263	t(34) = -15,438***
Day 4	1,733	6,105	t(32) = -20,074***
Day 5	1,929	5,467	t(27) = -15,151***
Average	2,041	5,885	

Note: *p<.05; **p<.01; ***p<.001

Table 4: Independent Samples test of WOM Manipulation (own contribution)

The results of the t-tests were significant ($p < .001$), signalling that there is a significant difference in the variance of the means between the pWOM and nWOM condition during all five days. As a result, it can be assumed that the manipulation of the WOM had the effect it intended to have across both conditions.

6.3. Scale Reliability and Construct Validity

To test the internal consistency of scales, which contain several items that are interrelated, Cronbach's α (alpha) is a widely used measure in science. It describes the measurement of a sum or average of multiple survey items. If the measurement of those items is "parallel", they are considered to have similar variances (Bonett and Wright, 2015). Cronbach's alpha is expressed as a number between 0,1 and 1. Nevertheless, there is little consensus among researchers on what limiting value Cronbach's α need to fulfill in order to indicate internal consistency. In the past there were different reports about the acceptable values of alpha showing internal consistency, ranging from 0,7 – 0,95 (Graham, 2006).

In the present study a minimum threshold of 0,7 was applied in order to signal internal consistency of the different dimensions. The reliability was tested for the dimensions that

contained several items, intending to measure the same construct. These dimensions were Brand Loyalty (BL), Perceived Quality (PQ) and Brand Associations (BAS).

The test for internal consistency of the CBBE dimensions showed an aggregated alpha of 0,84 (Table 5). For the dimensions BL and PQ, the applied limiting value of 0,7 was exceeded (BL=0,804; PQ=0,869), while for BAS a value below 0,7 was reported.

Item	Cronbach's α
Aggregated	0,84
Brand Loyalty (BL)	0,803
BL1	
BL2	
BL3	
BL4	
Perceived Quality (PQ)	0,869
PQ1	
PQ2	
PQ3	
Brand Associations (BAS)	0,673
BAS1	
BAS2	
BAS3	
BAS4	
BAS5	

Table 5: Reliability test for CBBE dimensions (own contribution)

A separate test for the dimension BAS showed that the alpha of the scale could be lifted above the threshold (0,7), from 0,673 to 0,753 if the item BAS5 would be deleted (Table 6). Hence, BAS5 was excluded from the further analysis to distinctively improve the internal validity.

Item	Cronbach's α	α if item deleted
Brand Associations (BAS)	0,673	
BAS1		0,636
BAS2		0,556
BAS3		0,558
BAS4		0,558
BAS5		0,753

Table 6: Reliability test for Brand Associations scale (own contribution)

Following the reliability test, a factorial analysis investigated the construct validity. Prior research recommended a variety of minimum sample sizes to obtain factor results that are stable and closely to the population factors. Those minimum sample sizes range from a minimum of 100 to 500 cases. However, a research by MacCallum, Widaman, Zhang and Hong (1999) found that a factorial analysis even with samples of below 100 cases can lead to a good recovery of

population factors. For that, it is required that the factors have high communalities (mean level of communality $>.7$) and that the factors are well determined.

The factorial analysis along the 11 items⁴ showed with the KMO of 0.75 and Bartlett test ($p<.001$) that the data were suitable for the validity test (Appendix 5). In addition, the mean level of communalities (0.78) indicated that even the respectively small sample was able to generate stable factors. The extracted factors confirmed the proposed conceptualization of CBBE. Hence, the four-dimensional model was validated and adopted.

6.4. Results and Analysis

6.4.1. Main Results

Having the core dependent variable of the model characterized and validated, it was possible to dig deeper into the analysis of the before measures in order to get a sufficient understanding of the company's CBBE.

At a first step of the questionnaire, the unaided brand awareness got assessed via a recall test. In 25% of all responses the Weber brand was the only brand recalled, indicating a dominant position in the sample population. Moreover, among the cases where more than one brand got recalled (69%) Weber has been in 52% of those responses top-of-mind. In 6% of the considered cases no brand could be spontaneously recalled.

Nevertheless, to be qualified to hold and indicate perceptions towards the brand in the survey, participants had to have at least a basic awareness of the brand. Assessed via a self-confirmatory question exceeding a minimum of 2 on a 7-point scale had to be sufficient in order to be qualified. In average the participants indicated an awareness of 5,639 (Table 7).

Dimension	N	Minimum	Maximum	Mean	Std. Deviation
Brand Awareness (BA)	36	2	7	5,639	1,726
Brand Loyalty (BL)	36	3,25	7	5,111	0,852
Perceived Quality (PQ)	36	2,33	7	5,611	0,938
Brand Associations (BAS)	36	3,75	6,75	5,104	0,764
Σ CBBE _{before}	36	3,75	6,42	5,278	0,685

Table 7: Descriptives of CBBE_{before} dimensions (own contribution)

⁴ Note: BAS5 was excluded after reliability test

When it comes to the three remaining dimensions of CBBE, Weber scored highest on the dimension PQ (5,611). With a mean difference of 0,5 BL (5,111) and BAS (5,104) were rated lower. In average a CBBE_{before} of 5,278 could be achieved. These values standing alone are solely indicating the status quo and have an internal relation. As mentioned in the literature review, it is necessary to track those values over time and/or compare them to competing brands in order to profile the company's moves and measure the impact of strategic decisions. However, this was not integral to this study.

In order to test for the hypotheses, we then analyzed between the CBBE_{before} and CBBE_{after} measure via paired samples tests. First, the analyses went along the two grouping conditions of pWOM and nWOM to test hypothesis 1. Second, within those groups the analyses differentiated between the level of expertise (novices vs. experts) to test for hypothesis 2.

6.4.2. Results H1: WOM Grouping Condition

Results indicate that, as expected, participants in the nWOM condition revealed a negative impact on CBBE (nWOM: CBBE_{before} = 5,219, CBBE_{after} = 4,741, $t(18) = 4.005$, $p < .01$) (Table 8). Regarding the participants in the pWOM condition, results could not indicate any significant impact of WOM on the CBBE (pWOM; CBBE_{before} = 5,343, CBBE_{after} = 5,314, $t(16) = 0,187$, non-significance on the applied levels). The results partly supported our H1, that the nWOM exposure led to a decrease in CBBE. Whereas, an exposure to pWOM for participants in the other condition could not support the H1 regarding an expected increase of CBBE.

Condition	Mean _{before}	Mean _{after}	Δ Mean	t-test
pWOM	5,343	5,314	-0,029	$t(16) = 0,187$
nWOM	5,219	4,741	-0,478	$t(18) = 4,005^{**}$

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 8: Paired Samples test for pWOM/nWOM condition (own contribution)

Additional analyses, digging deeper into the dimension level, revealed that in the nWOM condition only on the dimensions BL and PQ significant differences between the repeated measures could be found (Table 9). The dimension PQ was affected significantly the most with a decrease of -1,158 ($p < .001$) followed by BL with a decrease of -0,369 ($p < .01$).

Condition	Dimension	Mean _{before}	Mean _{after}	Δ Mean	t-test
nWOM	Brand Awareness (BA)	5,474	5,895	0,421	t(18) = -1,509
	Brand Loyalty (BL)	5,053	4,684	-0,369	t(18) = 2,480**
	Perceived Quality (PQ)	5,579	4,421	-1,158	t(18) = 4,888***
	Brand Associations (BAS)	5,053	4,75	-0,303	t(18) = 1,926

Note: *p<.05; **p<.01; ***p<.001

Table 9: Paired Samples test for nWOM on CBBE dimension (own contribution)

The same test on the dimension level for the pWOM condition did not show any significant differences in the means between the repeated measures (Table 10).

Condition	Dimension	Mean _{before}	Mean _{after}	Δ Mean	t-test
pWOM	Brand Awareness (BA)	5,824	5,765	-0,059	t(16) = 0,324
	Brand Loyalty (BL)	5,177	5,044	-0,133	t(16) = 0,661
	Perceived Quality (PQ)	5,647	5,765	0,118	t(16) = -0,582
	Brand Associations (BAS)	5,162	5,132	-0,03	t(16) = 0,158

Note: *p<.05; **p<.01; ***p<.001

Table 10: Paired Samples test for pWOM on CBBE dimension (own contribution)

6.4.3. Results H2: WOM on Expertise

In a second step the dummy variable expertise was added to the analyses which lead to a differentiated picture (Table 11). It became evident that in the nWOM condition the group of Novices revealed a significant negative impact of WOM on the CBBE (nWOM, Novices: $CBBE_{before} = 5,250$, $CBBE_{after} = 4,650$, $t(9) = 3,696$, $p < .01$). In the group of Experts which was exposed to nWOM the negative impact is lower and only on a 10%-level significant (nWOM, Experts: $CBBE_{before} = 5,185$, $CBBE_{after} = 4,842$, $t(8) = 1,996$, $p < .1$).

In opposite, for the pWOM condition even a differentiated analysis along the variable expertise did not reveal any significant differences between the $CBBE_{before}$ and $CBBE_{after}$ means.

Condition	Group	Mean _{before}	Mean _{after}	Δ Mean	t-test
pWOM	Novices	4,733	4,533	-0,200	t(16) = 0,187
	Experts	5,597	5,555	0,042	t(11) = 0,822
nWOM	Novices	5,250	4,650	-0,600	t(9) = 3,696**
	Experts	5,185	4,843	-0,342	t(8) = 1,996

Note: *p<.05; **p<.01; ***p<.001

Table 11: Paired Samples test for expertise grouping (own contribution)

6.4.4. Magnitude of the effect of nWOM on CBBE dimensions

After the statistical data analyses showed that nWOM had among the group of novices a significant negative effect on CBBE, it was of interest to study the effect size within the

different dimensions of CBBE. Therefore, additional tests were applied to get to a more thorough understanding of the underlying events.

The paired samples test for the different dimensions along the nWOM condition and levels of expertise revealed the following.

Novices: In the nWOM condition the WOM exposure to the group of Novices was impacting the dimension PQ with a difference of -1,467 the most ($t(9) = 4,491, p < .01$). This is followed

Condition	Dimension	Mean _{before}	Mean _{after}	Δ Mean	t-test
nWOM (Novices)	Brand Awareness (BA)	5,000	5,500	0,500	$t(9) = -1,048$
	Brand Loyalty (BL)	5,075	4,500	-0,575	$t(9) = 3,363^{**}$
	Perceived Quality (PQ)	5,833	4,367	-1,467	$t(9) = 4,491^{**}$
	Brand Associations (BAS)	5,050	4,800	-0,250	$t(9) = 1,291$

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 12: Paired Samples test for nWOM (Novices) on CBBE dimensions (own contribution)

by a significant but lower impact on BL (nWOM, Novices: Mean_{before}: 5,075, Mean_{after}: 4,500, $t(9) = 3,363, p < .01$). For the dimensions of BA and BAS no significant differences in the group of Novices, exposed to nWOM, can be reported (Table 12).

Experts: In the nWOM condition the WOM exposure to the group of Experts had a significant impact only on the dimension PQ (nWOM, Experts: Mean_{before}: 5,296, Mean_{after}: 4,481, $t(8) = 2,511, p < .01$). On the dimensions BA, BL, BAS no significant mean differences could be measured (Table 13).

Condition	Dimension	Mean _{before}	Mean _{after}	Δ Mean	t-test
nWOM (Experts)	Brand Awareness (BA)	6,000	6,333	0,333	$t(8) = -1,155$
	Brand Loyalty (BL)	5,028	4,889	-0,139	$t(8) = 0,588$
	Perceived Quality (PQ)	5,296	4,481	-0,815	$t(8) = 2,511^*$
	Brand Associations (BAS)	5,056	4,694	-0,361	$t(8) = 1,368$

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 13: Paired Samples test for nWOM (Experts) on CBBE dimensions (own contribution)

In conclusion, to both groups in the nWOM condition, it can be stated that Novices perception of a brand is more vulnerable to nWOM than the perceptions of Experts. This can be reported on the number and on the magnitude of the effects. An additional test among different age groups did not reveal any insights that suggested the impact of the valence of WOM is dependent on the age. Similarly, tests did not show any differences between male and female participants.

7. CONCLUSION

This chapter aims to offer an overview of the main findings as well as recommendations for managers. These findings and recommendations are resulting from the conducted primary and secondary research along the research questions.

7.1. Answers to research questions

Regarding the first research question, we proposed a model to assess CBBE. The model was based on prior research from where it became clear that CBBE is reflecting the strength of a brand. Previous research applied a variety of different conceptualizations. However, a four-dimensional approach proposed by and based on the findings of Yoo and Donthu (2001) seems to be most prolific. They propose for the assessment of the CBBE a measure along the dimensions brand awareness, brand loyalty, perceived quality and brand associations on multi-item scales. When investigating the CBBE this way it has to be clear that those dimensions are interdependent and not exclusive to each other (Lassar et al., 1995). Further, the questions need to be tailored to the industry characteristics. That said, the CBBE can have an internal relation when comparing the scores on the different dimension and tracking them over time. However, to get a thorough understanding of the underlying events it is fruitful to not just assess the overall CBBE but to investigate the moderating factors like in our case expertise. Subsequently, this adds value to strategic decision making. Lastly, it is valuable when the scores of the CBBE dimensions get compared to competing brands in the industry in order to generate an external relation. This allows to profile the perceived value proposition of the focal firm by its customers and map it against other industry's players.

Regarding research question 2, the secondary research revealed that WOM is one of the earliest and most powerful marketing mix elements. WOM is defined as person-to-person communication perceived to be in a non-commercial setting. Moreover, it is characterized as an influencer of most purchase decisions and is sensed as more reliable, credible and trustworthy than traditional advertising. The measurement of WOM is defined in different ways across past literature. Some measured the likelihood of spreading WOM, some investigated the underlying motives to spread WOM and others investigated the effect of WOM on sales with exposure to reviews. Another way to study WOM is through a manipulative approach making it possible to measure the direct effects. The manipulation can be executed by controlling the number of available reviews or manipulating the valence of reviews. Therefore, the present study followed a manipulative approach, which made it possible to investigate the effects of

WOM on the CBBE in a direct way. Previous research mostly focused on the effects of WOM on sales with an immediate assessment. However, when it comes to measure the effects of WOM on knowledge structures like the CBBE it seems adequate to work with repeated measures and delay times as presented in this thesis. This longitudinal study is able to grasp the lasting effects of WOM and showed significant results.

7.2. Answer to RQ3 and findings of longitudinal study

In order to measure the effect of WOM on the CBBE a model was employed that exposed participants to manipulated WOM. To control the effects repeated surveys (pre- and post-measure) captured the impact on CBBE. This study design led to significant results and is replicable to other companies and industries.

The results of the longitudinal study (seven days) indicated that nWOM has a negative effect on the CBBE for the focal company, whereas CBBE is not affected in any way by pWOM. This was particularly interesting since past studies around the effect of WOM on sales came to inconsistent results. A deeper analysis of the different dimensions revealed that nWOM had, especially for the dimension of Perceived Quality, a harmful effect. Moreover, customer lost loyalty towards the brand in the nWOM condition represented by a negative effect on the dimension Brand Loyalty.

In addition, a differentiated analysis along the moderator Expertise revealed that Novices are stronger affected by nWOM than Experts. As such, the magnitude of the effect of nWOM on the Perceived Quality of Novices towards the brand is stronger than on the Expert group. Furthermore, while the dimension Brand Loyalty is significantly negatively affected by nWOM in the Novices group, Experts do not seem to loose loyalty to the brand when they get exposed to nWOM.

7.3. Managerial Implications

From the previous chapters we can draw practical implications and offer remarks for the focal company and businesses in similar situations. In general, our suggestions imply a strategy to reduce the number of novice customers via external brand education and branded experience. In addition, we see opportunities to leverage on social media expertise to improve customer satisfaction, reduce negative publicity and spread brand knowledge. This should be backed by a professionally handled two-way communication between the company and its current and prospective customers.

The results of the study showed that particularly novices are affected by nWOM in their quality perceptions and loyalty towards a brand. Since experts are less affected in the number and magnitude of effects, it is of interest for the focal company **to reduce the number of novice customers of the brand**. It can be assumed that a company with a large customer base of novices would be incentivised to make efforts and turn novices into experts. By doing so, the level of expertise increases which minimizes the harmful effects of nWOM on the CBBE.

Following these findings, Weber-Stephen can utilize several options in order to protect and enhance the strength of the brand. **One way of doing so is through external brand education for customers**. This could increase the knowledge and expertise about the brand. In order to do so, the company would need to strongly align the value proposition first. As a second step, they would need to choose the audience and channels on which selected the target group can be reached. In our case, the audience are the customers of Weber. Although, the current infrastructure with sales agents and dealers can be used to reach out to the customers in traditional ways it would be beneficial to link it to other activities as well. As brand education is not only about telling the values of a brand but also about generating emotional involvement through branded experiences. This can **turn customers into advocates and novices into experts**.

Next to traditional marketing channels these **branded experience can be an effective way to educate customers and emotionally tie them to the brand**. At the moment, Weber-Stephen uses this strategy to generate brand experience with its so-called Grill Academies. In Germany Weber has currently 25 Grill Academies where grill chefs show customers the variety of meals they can prepare on a grill and teach them how to grill with Weber products (Appendix 6). For 2016 it is estimated that more than 100.000 people participate in those courses (Evers, 2016). This is a unique way of bringing current and future customer closer to the brand by educating them. When linking the results of the study with the current business model, it becomes clear that the overall brand could be strengthened if the structure of the Grill Academies will be used to educate customers and turn them into experts and brand advocates. In addition, event marketing could be another way to promote the values of the brand and spread knowledge about Weber. This could be achieved by grill shows and live events at the point of sale or events where the target group of Weber is present.

A second way of strengthening the brand is to **reduce negative WOM by embracing social media**. As touched on briefly in the literature review encouraging customers to share feedback

and especially showcase positive feedback benefits the reputation of a brand. This is grounded on the business case of Dell. Around 2005, Dell experienced a huge negative publicity on the web that threatened the reputation and ultimately the revenues of the company (Agarwal, 2013). At that time Dell was not actively handling any social media channel. However, dissatisfied customers complained about Dell's poor products and services. Phrases like "Dell Hell" and "Dell Sucks" soon became popular on social media. Until the mid of 2006 Dell did not take action. From then on Dell took up the challenge and rapidly embedded social media in all of its business functions. With its presence on Facebook, Twitter, YouTube and by allowing customer reviews and ratings on the company webpage, Dell went beyond an observing role. Specialized business teams actively joined conversations on social media and enabled a two-way communication with their customers. **This active approach significantly improved customer satisfaction, reduced negative WOM and encouraged to share positive reviews and ratings.**

The business case showed that, even if it seems ultimately not under the control of a company if customers share positive experiences, there are ways to monitor and lead the publicity with its valence of your brand. Furthermore, a two-way communication with customers allows not only **to gain customer insights, but also enables to share knowledge and educate about your brand the same time.** Subsequently, if a company is able to significantly reduce negative publicity, potential novice customers would be less likely exposed to negative WOM that could harm their perception of the brand.

Overall, it is valuable for any company to foster the brand knowledge and reduce the number of dissatisfied customers. In this course and with the decreasing effectiveness of traditional media branded experience in its full variety of on- and offline possibilities is a way to foster customer relationship as well as protect and nourish a strong brand. The best advertisement will always be your happy customer.

8. LIMITATIONS AND FUTURE RESEARCH

Although this study is statistically significant and allows for comprehensive recommendations it is only a starting point for further investigation in this field of research. As such, this thesis explores one way of measuring the effects of WOM on CBBE. The feasibility and validity of the model has been focused. However, like in any other study, limitations have to be addressed.

First, the sample with 36 considered cases is limiting the generalizability of the study. Even though it led to significant results it is likely that the small sample size is not representative for the entire population of young consumers and therefore biasing the results. For example, above 50% of the respondents were students, which is over representing the share of students among millennials in Germany (30%).

Second, we only tested one product category. Richer insights could have been achieved when studying various product categories from e.g. low-involvement to high-involvement goods. Further, the study was limited to one country, Germany, which makes the results less transferable to other countries due to cultural differences.

Third, the model considered product reviews, which reflects only one way of spreading WOM. Future research should take different channels of WOM into account, compare their importance and give them the respective weight. However, different industries, cultures and business models require adapted structural models. There is no such a thing as a one-size-fits-all model.

Fourth, it needs to be mentioned that the test for reliability of the questionnaire and validity of the construct delivered significant results. As such, the items of the different factors measure the same underlying construct. Nevertheless, even the factorial analysis indicated to be significant and has sufficient factor loadings with a high level of communalities, the considered sample size is referring to the literature relatively small. The paper we referred to of MacCallum and others (1999) stressed that even if it is possible to analyze along a small sample, it is not recommended to do that routinely. For a high-quality factor analysis, the lack of a large sample can be leveled out by high communalities. In opposite, a large sample can level out a low level of communalities (MacCallum et al., 1999). Concluding, the sample size is not the only determinant variable to achieve stable results.

However, as mentioned before there is an interdependence between the four dimensions. Subsequently, by measuring CBBE researcher need to be aware of the halo effect, which is a

cognitive bias in which the high rating on one dimension influences the rating of the overall entity of the model (Beckwith, Kassarian & Lehmann, 1978).

In conclusion and taking this research as a step forward, further research opportunities could develop a way on how to integrate the assessment of the CBBE in the business operation and reporting system of companies. Since intangible assets becoming more and more important we see monitoring of brand equity from a non-financial point as essential to strategic decision making of any business and from increasing relevance. As a guidance for managers it is crucial to get a sufficient understanding of the CBBE of their brand and to start actively building it. This is not only important to predict the outcome of decisions but also to maintain a differentiation between their own and the competitor's business – “the first sign a strong brand is fading is usually its loss of differentiation” (Aaker 1996, p. 114).

9. APPENDIX

Appendix 1: Definition of Brand Awareness (adapted from Fleischmann, 2015)

Researcher	Definition
Aaker 1991, p 61	“Brand awareness is the ability of a potential buyer to recognize or recall that a brand is a member of a certain product category.”
Aaker 1996, p. 114	“Brand awareness reflects the salience of the brand in the customer mind.”
Aaker 2002, p. 330	“reflects the presence of the brand in the mind of customers”
Alba and Chattopadhyay, 1985, p. 340	“The term may refer to all the brands known to the customer of just those brands that can be recalled at a specific point in time.”
American Marketing Association, 2016	“Brand awareness is a marketing concept that enables marketers to quantify levels and trends in consumer knowledge and awareness of a brand's existence.”
Chandon, 2003, p. 1	“Brand awareness measures the accessibility of the brand in memory.”
Keller 1993, p. 3	“It is related to the strength of the brand node or trace in memory, as reflected by the customers’ ability to identify the brand under different conditions.”
Rossiter & Percy 1987, p. 140	“the buyer’s ability to identify (recognize or recall) the brand within the category in sufficient detail to make a purchase.”

Appendix 2: Porter’s Five Forces analysis

Porter defines competition as the profitability between five competitive forces. (1) *power of suppliers*; (2) *power of customers*; (3) *threat of new entrants*; (4) *threat of substitutes*; (5) *competition between existing rivals*.

(1) Power of suppliers.

Weber’s supplier structure is lean. The charcoal grills are self-manufactured in USA. Whereas the gas- and electro-grills are supplied by a contracted manufacturer in China. Since, it is a single supplier the risk that the supplying company is putting pressure on Weber is increasing with the number of produced products.

(2) Power of customers.

Weber has with its unique marketing strategy a dominating standing in the market. This translates into premium prices and stands for quality, premium and experience like no other brand. Market research shows that an average Weber customer spends 306€ on Weber products while the industry's average is 175€.

(3) Threat of new entrants.

Weber is dominating the market in terms of brand awareness, revenues and customer spending on Weber products. This frontline position shows the profitability of the market and makes the market an attractive one for new entrants.

(4) Threat of substitutes.

Especially the German market is known for a high DIY culture. People love to build things themselves. Therefore, home built grills are still common. Moreover, kitchen accessories are a threat to replace grills.

(5) Competition between existing rivals.

Within the industry mainly seven companies are fighting for market share with new product innovations and a high visibility at the POS. This leads to a fierce competition between the existing firms within the market to expand the own stake.

Appendix 3: Questionnaire to pre-measure

Part 1: Introduction & Entrance Qualification	
	Dear participant, thank you for taking the time to participate in this survey. I'm a student from Universidade Catolica Portuguesa Lisbon, School of Business and Economics, and conduct this research project for my Master thesis. The research is about customer generated online reviews for a study of the grill market and we ask you to complete one short study today and another one in one-week time. During this week we may send you some information via e-mail and you may be asked to answer some questions. In total it will not consume more than 30 minutes of your time (spread along the one-week period). All information collected will be treated confidential and will be used for statistical matters only. There are no right or wrong answers. In the end of the study we will raffle a grill accessory (~30€) among all participants. In case you have any further questions, please get in contact with me: mjeckes@gmail.com - We thank you in advance for your collaboration.
Q0a	Would you like to participate in this project? This research focuses on young consumer. Therefore, you need to be in a certain age group in order to participate
Q0b	Please indicate your age below: Throughout the following days we maybe get back to you. For this purpose
Q0c	only, please indicate your email:
Part 2: Customer-Based Brand Equity	
Brand Awareness	
	With the following questions we would like to get understanding of your knowledge and awareness of the German grill market. <i>(adapted from Aaker, 1996; Chandon, 2003)</i> <i>Brand recall</i>
Q1a	Please think about grilling and name the first three brands of grills that come to your mind <i>Brand recognition</i>
	From now to the end of the survey please only think of Weber grill. Weber is a manufacturer of grills in the German market.
Q1b	Which one of those logos belong to Weber?
Q1c	To what extent are you familiar with Weber?
Q1d	Do you or your family own a Weber grill?
Brand Loyalty	
	Now we will ask you some questions about your relationship to the brand Weber. Please indicate to what extent you agree with the following statements: <i>(adapted from Alleaway, Huddleston, Whipple & Ellinger, 2011; Yoo, Donthu & Lee, 2000)</i>
Q2a	I consider myself loyal to Weber
Q2b	Weber would be my first choice
Q2c	I would recommend Weber to my friends
Q2d	I'm willing to buy Weber in the future
Perceived Quality	
	Think about the quality of products Weber sells. Please indicate to what extent you agree with the following statements: <i>(adapted from Yoo, Donthu & Lee, 2000; Aaker, 1996)</i>

- Q3a The brand delivers durable and reliable products
 Q3b Weber must be of very good quality
 Q3c The quality of Weber is very high

Brand Associations

You're almost done with this part. Just let us know your opinion about the Weber brand.

Please indicate to what extent you agree with the following statements:

(adapted from Pappu, Quester & Cooksey, 2005)

- Q4a Weber is a company I can trust in
 Q4b I am proud to buy products of Weber
 Q4c I can identify myself with people who buy Weber
 Q4d I like the brand Weber
 Q4e Weber is up-market

Part 3: Expertise

Now we would like you to share with us what you know from WEBER brand and products

Just to remind you - there are no right or wrong answers.

(adapted from Maheswaran & Sternthal, 1990)

- Q5a Weber Grills get mainly fired up with 4 methods (charcoal, pellets, electro, gas)
 Q5b Weber is a German brand
 Q5c Weber does not only produce grills it also has grill academies to teach grilling
 Q5d Weber is known for chimney grills
 Q5e Weber sells not only grills but also food and spices
 Q5f Weber has commercials on TV
 Q5g Weber has not only grills but also smokers
 Q5h Weber sells a Weber Mini grill for kids
 Q5i One Weber slogan is: Living Outdoor
 Q5j Thomas Müller is a testimonial of Weber

Part 4: Demographics & Exploratory Questions

- Q6a What is your gender?
 Q6b What is your current occupation?
 Q6c How much is your monthly income (growth in €)?

Thank you for taking part today. We'll get back to you in the following days.

Appendix 4: Questionnaire to post-measure

Part 1: Introduction

Dear participant, Thank you for taking part at the research project the last 6 days. Today we kindly ask you to answer the last set of questions.

Q0a We kindly ask you to name your e-mail address a last time:

Part 2: Customer-Based Brand Equity

Brand Awareness

(adapted from Aaker, 1996; Chandon, 2003)

Brand familiarity

Q1a To what extent are you familiar with Weber?

Brand Loyalty

(adapted from Alleaway, Huddleston, Whipple & Ellinger, 2011; Yoo, Donthu & Lee, 2000)

Q2a I consider myself loyal to Weber

Q2b Weber would be my first choice

Q2c I would recommend this brand to my friends

Q2d I'm willing to buy Weber in the future

Perceived Quality

(adapted from Yoo, Donthu & Lee, 2000; Aaker, 1996)

Q3a The brand delivers durable and reliable products

Q3b Weber must be of very good quality

Q3c The likely quality of Weber is very high

Brand Associations

(adapted from Pappu, Quester & Cooksey, 2005)

Q4a Weber is a company I can trust in

Q4b I am proud to buy products of Weber

Q4c I can identify myself with people who buy Weber

Q4d I like the brand Weber

Q4e Weber is up-market

Part 3: Closing

That's all. Thank you for participating in this research project, if you are interested to get the results of this project please send an e-mail to: Matthias Eckes.

Appendix 5: Results Factorial Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling		,750
Bartlett's	Approx. Chi-Square	278,119
Test of	df	55
Sphericity	Sig.	,000

Communalities		
	Initial	Extraction
BL1	1,000	,649
BL2	1,000	,765
BL3	1,000	,650
BL4	1,000	,907
PQ1	1,000	,877
PQ2	1,000	,866
PQ3	1,000	,847
BAS1	1,000	,709
BAS2	1,000	,760
BAS3	1,000	,718
BAS4	1,000	,841

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a			
	Component		
	1	2	3
PQ2	,915		
PQ1	,911		
PQ3	,885		
BL3		,476	
BL4		,879	
BL2		,792	
BL1		,720	
BAS4			,888
BAS2			,774
BAS3			,722
BAS1			,533

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Appendix 6: Weber Grill Academy



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