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**The Use of Crowdsourcing as a Strategic Marketing Tool -
An Examination of Brand Perceptions and Behavioral Intentions**

- Master's Thesis -

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Abstract

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The aim of this study is to understand how crowdsourcing campaigns in an online environment can change brand perceptions and behavioral intentions of non-participating customers. Therefore, the thesis connects two major concepts. First the phenomenon of crowdsourcing will be discussed with emphasis an emphasis on its use in marketing. Then crowdsourcing will be lined to the theoretical concept of consumer-based brand equity. The study is based on a quantitative survey in form of an experimental design, with 30 participants each in the control as well as the experimental group. The resulting findings indicate a partial influence of crowdsourcing campaigns on non-participants' brand perceptions and behavioral intentions. The connection between the two concepts is strongly mediated by the customers' familiarity with the brand in question, though. Overall, the study contributes to the literature of brand equity by extending the theoretical concept in regard to the influence of online crowdsourcing. The thesis also adds to the small research body of crowdsourcing by examining its use as a strategic marketing tool and by filling the existing research gap concerning the effects of crowdsourcing on non-participants. The results can help managers to recognize the importance of online crowdsourcing as a strategic marketing tool and to gain a better understanding of how non-participating customers perceive this tool of customer engagement.

Keywords: Crowdsourcing, Marketing, Brand Equity, Brand Perceptions, Behavioral Intentions, Non-participants

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1. Introduction

Chapter 1 will provide a background of the phenomenon of crowdsourcing including its current state of usage in society. The determined research gap will be presented as well as the study's intended contribution to theory and practice. Then, the purpose and scope of the thesis will be highlighted and lastly, the chapter will end with an outline of the thesis.

1.1 Background

In 2006, TIME Magazine named 'You' as the person of the year, acknowledging "the small contributions of millions of people" (Grossmann, 2006, no pagination) to the Web 2.0. Every day, individuals share and create content online, collaborate with each other or contribute to an online community and thereby slowly develop and improve the Web. Hence, it is no surprise that the term 'crowdsourcing' was coined by Jeff Howe (2006a) in the same year, which describes a decision to outsource a certain task or problem to a large and heterogeneous public – the crowd – in form of an open call.

The emergence and popularity of the crowdsourcing phenomenon can be largely attributed to the rise of the Web 2.0 (Füller, Bilgram, Koch & Rapp, 2013). Technological developments in the last decade fostered participatory tools and platforms, the expansion of social media and made the use of creative and collaboration tools fast and easy (Füller et al., 2013; Kozinets, Hemetsberger & Schau, 2008; Lakhani, 2013). This development led to an improved online customer engagement as companies have numerous opportunities to interact with their customers and involve them in company-related activities. The Web 2.0 enabled companies to easily interact with a large group of people at the same time without geographic restrictions (Djelassi & Decoopman, 2013), which is an essential prerequisite for crowdsourcing.

Companies, therefore, started to use crowdsourcing as a tool to tap into the knowledge and creativity of the crowd in order to co-create value, especially innovations (Sloane, 2011). With rapid technological developments, shortened product-life cycles and increased competition, companies recognized that they were not be able to stay competitive if they would not start seeking sources of innovation from outside

the company (Mladenow, Bauer & Strauss, 2014). Consequently, companies found a valuable tool to solve this in crowdsourcing and the Web 2.0.

In the last decade crowdsourcing has become increasingly popular and is no longer only used by digital pioneers (Lakhani, 2014; eYeka, 2014). Companies like Coca-Cola, Procter & Gamble, Ford, Nestlé or Samsung are all investing in crowdsourcing (eYeka, 2014). Fast Moving Consumer Goods (FMCG) brands even increased their investment from 2013 to 2014 by 46% (eYeka, 2014) and the consultancy firms Deloitte and Accenture declared crowdsourcing as one major technology trend in 2014 (Accenture, 2014; Shingles & Trichel, 2014). In their report, Accenture (2014) attributes the diffusion of crowdsourcing to the development of technology, strong first mover examples and improved crowdsourcing platforms. Nowadays, companies and other organizations use crowdsourcing to co-create innovation, collect ideas and information or solve scientific problems (Aitamurto, 2011). It is further used for a variety of marketing-related activities, such as research and development, promotion and advertising or marketing research (Gatautis & Vitauskaite, 2014). Furthermore, François Pétavy the CEO of eYeka, an online co-creation platform, explained that “major FMCG advertisers are investing more and more in crowdsourcing to stand out from the competition” (eYeka, 2014). This statement implies that, apart from the actual value creation, the act of crowdsourcing may have an effect on the consumers who are observing how the company engages with them. The implementation of crowdsourcing could possibly change the way in which consumers perceive the crowdsourcing company and distinguish it from other companies and brands whose advertising is becoming increasingly similar. This is a relatively new viewpoint and way of implementation of crowdsourcing by companies, which will be explored in the course of this Master’s thesis.

1.2 Research Gap and Contribution

The general body of research about crowdsourcing is still small and scholars have not agreed upon one standardized definition or a unified classification of different crowdsourcing practices (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). Therefore one has to be cautious while comparing different studies on the topic of crowdsourcing, as they are based on different definitions of the term and are examin-

ing different forms of crowdsourcing, like contests or collaborative communities. Most of the research about crowdsourcing deals with the application of it and other open innovation methods to generate value (Brabham, 2008, 2011; Howe, 2006a; Kozinets et al., 2008; Aitamurto, 2011) or to engage customers (Djelassi & Decoopman, 2013; Fuchs & Schreier, 2011; Brodie, Ilic, Juric & Hollebeek, 2013). Nevertheless, there is a lack of research concerning the application of crowdsourcing for marketing purposes (Gatautis & Vitauskaite, 2014). As explained in the preceding section, crowdsourcing can be used to generate value for different stages of the marketing process, like an idea for a commercial or consumer insights about a newly developed product, which was for example the research topic of studies from Whitley (2009) or Gatautis and Vitauskaite (2014). However, due to its rising popularity it becomes of interest if crowdsourcing has more benefits to companies than the actual value creation and if it is worth the investment. One step in that direction is taken by Füller, Bilgram, Koch and Rapp (2013), who examined how participants of crowdsourcing campaigns are turned into brand ambassadors, who voluntarily act as advocates for the brand and spread the marketing messages.

This study will examine the additional value generated by a crowdsourcing campaign in form of changed brand perceptions and behavioral intentions. Therefore, crowdsourcing as a strategic marketing tool and the concept of brand equity will be linked. According to the researchers' knowledge, this claimed connection has barely been made in previous academic work. It distinguishes the study from other papers that merely focused on the influence of crowdsourcing activities on single brand dimensions like brand personality (van Dijk, Antonides & Schillewaert, 2014) or customer engagement (Brodie et al., 2013; Sawhney, Verona & Prandelli, 2005). Brand equity, though, mirrors the value of the whole brand by representing "the value endowed by the brand to the product" (Farquhar, 1989, cited in Amselmsson & Johansson, 2014, p. 91). This study will place emphasis on one specific form of brand equity, namely consumer-based brand equity (CBBE), which generally describes the brand value resulting from the customers' perceptions of and responses to its marketing. In this regard, the well-established CBBE frameworks of Aaker (1996a, b) and Keller (1993) will be applied. They investigate brand equity from different customer perspectives, encompassing brand awareness, loyalty, perceived quality as well as associations of the brand.

Combining brand equity and crowdsourcing, this Master's thesis will examine the possible effect of crowdsourcing campaigns on brand perceptions, as reflected in its brand equity, and behavioral intentions towards the brand. This is of particular importance because an increasing number of companies invest in crowdsourcing these days and therefore, it is essential to identify whether benefits go beyond a stronger consumer engagement of participants and the creation of value in form of innovation and ideas. Companies could then not only benefit from the value creation but also from the brand perception shaping function of crowdsourcing campaigns, which eventually leads to changed behavioral intentions. Findings should encourage firms to reevaluate the importance of crowdsourcing as well as inspire them to evaluate the concept from a broader perspective, namely one that touches upon the field of marketing and branding.

This viewpoint is especially important considering the fact that the majority of consumers does not actively engage in crowdsourcing activities but might still be affected by the knowledge of their implementation. Almost all past studies in academia, except for van Dijk et al. (2014) as well as Fuchs and Schreier (2010), examine participants of crowdsourcing. However, those only account for a small portion of a company's customers or the group of people who are reached with a crowdsourcing campaign. Marsden (2009) states that just 10% of the audience will be active in a crowdsourcing campaign whereof only 1% will participate in the actual creation. This means that the majority of the audience, in fact 90%, does not actively engage in crowdsourcing. Because these non-participants are an essential customer group and might still be affected by the crowdsourcing campaign, this thesis will focus on non-participants' brand perceptions as well as their behavioral intentions towards a crowdsourcing company.

All in all, the theoretical contribution of this Master's thesis is planned to be twofold. First, it aims to contribute to the literature of brand equity by examining whether crowdsourcing has an effect on the different dimensions brand awareness, perceived quality of the brand, brand associations and loyalty as perceived by non-participants. Second, the paper extends the small research body about crowdsourcing and marketing and gives particular insights into the marketing effects of crowdsourcing itself and not only its use for marketing purposes. In addition, this study aims to fill the

existing research gap concerning the effects of crowdsourcing on non-participants' brand perceptions and behavioral intentions.

1.3 Purpose and Scope of Research

The purpose of this Master's thesis is to closely investigate if online crowdsourcing campaigns can be used by companies as a tool for advertisement and promotion to change the perception of a brand. In order to explore this issue, the following two research questions (RQ) have been formulated. They are later outlined by presenting the findings of the conducted quantitative study in form of an experimental research design.

RQ1: *To what extent does a company's usage of online crowdsourcing as a strategic marketing tool for advertisement and promotion impact non-participants' brand perception?*

RQ2: *To what extent does a company's usage of online crowdsourcing as a strategic marketing tool for advertisement and promotion impact non-participants' behavioral intentions towards the brand?*

Ultimately, the purpose of this study is to give some indication whether it is advisable for a company to advertise its crowdsourcing engagement or not, as these advertising and promotion efforts are also visible to non-participants. Companies could then use crowdsourcing as an additional branding tool.

This study will solely focus on the concept of crowdsourcing and therefore on the online environment, taking recent developments into account that more and more companies use the technological possibilities of the internet to create value with consumers. By doing this, the study will take a different approach than the study of van Dijk et al. (2014), which focused on brand and product perceptions of non-participants of offline co-creation projects. Crowdsourcing can occur in different forms, but the thesis will place emphasis on idea contests, which are characterized by a very large target audience as they do not require the participants to have particular skills (Lakhani, 2013). To increase the practical relevance, the paper will additionally concentrate on the FMCG sector, illustrated by the case of McDonald's, which was the first sector to use crowdsourcing and where its use is widely spread (Djelassi &

Decoopman, 2013).

Lastly, emphasis needs to be placed on the fact that the thesis will solemnly focus on crowdsourcing campaigns like the McDonald's 'Mein Burger' campaign which mainly experienced positive feedback. Campaigns which experienced negative feedback from press and participants might have a different influence on brand perceptions and behavioral intentions. Hence, those campaigns will not be subject of this Master's thesis and will therefore be abstained from discussing potential risks which crowdsourcing might contain for companies.

In order to explore the aforementioned RQ, this study will draw on 8 hypotheses which were deductively derived from existing findings concerning the phenomenon of crowdsourcing as well as the theoretical concept of brand equity. The claimed hypotheses will then be presented in a conceptual research model (see section 3.2) to visualize the proposed relationships between the two major concepts.

1.4 Thesis Outline

The present study is subdivided into six chapters. Following the introduction chapter, the concept of crowdsourcing will be elucidated in chapter 2. This is then followed by chapter 3 where a theoretical discussion of the concept of brand equity will be presented as well as the development of hypotheses highlighting the relationship between the two concepts. Afterwards, the conceptual framework will be presented based on the preceding theoretical findings. Chapter 4 will describe the methodology used in the quantitative study, which will test 8 hypotheses. The retrieved findings will be presented in chapter 5. The thesis will then discuss the main findings in chapter 6, illustrate managerial implications as well as theoretical contributions and conclude by outlining the limitations of the study and recommendations for future research.

2. Crowdsourcing

The following section will discuss the concept of crowdsourcing by outlining its origin and definition, followed by a demarcation from similar concepts. Crowdsourcing will then be discussed in the context of idea contests as well as in the field of marketing.

2.1 Origin and Definition of Crowdsourcing

Origin

Although the term crowdsourcing was coined by Jeff Howe in 2006, the origin of the concept and especially of value co-creation is not new. Companies started to use and integrate external competencies a long time ago but mainly focused on partners in their already existing supply chains and ignored the consumer as a source of competence for a long time (Prahalad & Ramaswamy, 2000). Only since the 1990's, the perspective of companies slowly changed from what Vargo and Lusch (2004) call a goods-centered to a service-oriented perspective. The former saw the consumer and the product separated. The product or value creation took place internally and was then distributed to the consumers (Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2004). The service-oriented perspective, however, is focused on consumers and considers it essential to integrate them and co-create value together (Vargo & Lusch, 2004). Thus, the traditional division of roles between the customer and the company does not exist anymore in the service-oriented logic. In the beginning, companies tried to foster relationships with their customers, gained their trust and started a two-way communication. In the past years this quickly developed into a form of dialogue where customers and companies create value together. This development can largely be attributed to technology and the internet which empowered consumers to an unprecedented extent, gave them access to more knowledge and provided them with the technological tools to interact with companies (Prahalad & Ramaswamy, 2000, 2004). Due to their new capabilities, consumers now want to actively participate in the value creation and shape their consumer experience (Prahalad & Ramaswamy, 2000). Therefore, companies were and are constantly searching for new customer engagement possibilities. On the one hand, this is done to improve the customer ex-

perience and engage customers and on the other hand, companies also benefit from the co-created value. Prior to the Web 2.0 companies were not able to interact with customers on a large scale. The proliferation of social media, mobile technologies and the constant development of digital interaction tools made it possible for companies to engage with a large group of customers at the same time and without geographic restrictions (Prpic, Shuklar, Kietzmann & McCarthy, 2015). Suddenly companies were able to access and harness the knowledge and ideas of an almost innumerable amount of people (Brabham, 2008, 2011). This development laid the foundation for the concept of crowdsourcing which is highly dependent on the interactive Web 2.0.

Definition

The term crowdsourcing was, as already mentioned in the introduction, first coined by Jeff Howe in 2006(b) in an article for the Wired magazine called “The Rise of Crowdsourcing”. Howe was inspired and influenced by James Surowieki and his book “The Wisdom of Crowds” (Howe, 2006a). Therein Surowieki describes the concept of collective intelligence: “under the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them” (cited in Selzer & Mahmoudi, 2006, p. 6). Crowdsourcing functions as a tool to access this collective intelligence or external competences.

Despite the widespread practical use of crowdsourcing, scholars have not agreed on one clear definition of crowdsourcing (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). Due to this reason, projects considered as crowdsourcing by one scholar might not be considered as such by others. One initial and rather vague definition of crowdsourcing was given by Howe in 2006(a) in a white paper: “crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call” (no pagination). The word crowdsourcing itself reflects its definition as it is a combination of the words ‘crowd’ and ‘outsourcing’, referring to the participants of crowdsourcing and outsourcing as a business practice (Prpic et al., 2015). The definition contains three essential parts: an open call, the crowd and a task.

First, an open call is an invitation to participate in a crowdsourcing project (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). Thereby the adjective open signifies that everybody is invited to follow that invitation and that no restriction or preselection criteria limit participation (Aitamurto, Leiponen & Tee, 2011). This is called a “true open call” by Estellés-Arolas and González-Ladrón-de-Guevara (2012, p. 196) who, in contrast to Howe (2006a, b), differentiate between different gradients of an open call. An open call might for instance be limited because it is posted into a specific online community whose members possess certain skills.

The second essential part of crowdsourcing is the crowd, which, as most scholars agree, is characterized as a large group of people (Kozinets et al., 2008; Estellés-Arolas & González-Ladrón-de-Guevara, 2012). Furthermore, many scholars agree that the crowd should be heterogeneous in its characteristics such as demographics and especially in their skills and knowledge (Selzer & Mahmoudi, 2012; Whitla, 2009; Lakhani, 2013). Lakhani and Jeppesen (2010) even found out that diverse crowds lead to better crowdsourcing outcomes. However, Brabham (2008) points out that a large part of the world population does not have access to the internet, especially high-speed connections, which would enable them to take part in crowdsourcing projects. This may limit the diversity of the crowd, as for instance certain age groups or nationalities are underrepresented. In addition, it is important that the individuals within the crowd are independent from each other. In that way they contribute to the project with different perspectives and the occurrence of ‘herd thinking’, where everybody is taking the same perspective, is prevented (Sloane, 2011). In this way companies gain access to a pool of people and their competences that is bigger than any international corporation’s workforce (Lakhani, 2013). Nevertheless, Estellés-Arolas and González-Ladrón-de-Guevara (2012) remark in their attempt to generate an integrated crowdsourcing definition that the exact size and composition of the crowd always depend on the particular crowdsourcing project.

Scholars have different opinions about the task or problem crowds are supposed to solve. It can range from simply sorting tasks to idea generation or new product development. Even Howe (2006a) does not provide a specification of the task in his crowdsourcing definition and later also acknowledged that the task does not need to be performed by the company in the beginning but can be uniquely performed by the

crowd. Whatever the task may be the crowd is asked to solve, it needs to have a clear objective (Kozinets et al., 2008; Estellés-Arolas & González-Ladrón-de-Guevara, 2012). Consequently, it can be inferred that platforms like Youtube or Wikipedia are not classified as crowdsourcing because even if people contribute value to the platform, they will not follow a specific objective apart from sharing content. This leads to another important characteristic of crowdsourcing, which excludes collaborative platforms to fall under the classification of crowdsourcing, namely that a company, organization or any other institution is the initiator of the crowdsourcing project and specifies its objective. In his definition, Brabham (2011) points out that the company is in control of the crowdsourcing process and its outcomes. Crowdsourcing is therefore a top-down managed process. However, the crowd and the initiator share the power because crowdsourcing would not yield any results without the contribution of the crowd in form of knowledge, skills or ideas (Aitamurto, 2014).

The company as well as the consumer can benefit from crowdsourcing. Through the crowdsourcing process the company gets access to ideas, innovations, information and external knowledge, which it uses to generate value (Aitamurto et al., 2011; Estellés-Arolas & González-Ladrón-de-Guevara, 2012; Sloane, 2011). Thereby crowdsourcing is especially worthwhile if the task is solved at a lower cost than it could have been done internally and if the solution turns out to be better and more adapted to customer needs (Whitla, 2009; Selzer & Mahmoudi, 2012). A common field of application is for instance the new product development (NPD) process, where crowdsourcing can be used for research and development purposes, co-designing or even branding (Mladenow et al., 2014). Crowdsourcing can also have other benefits for the company apart from the actual creation of value such as providing a tool to improve customer engagement and foster word-of-mouth marketing (Füller et al., 2013). The in research most mentioned benefit for the crowd is some kind of tangible recompense such as money or price reductions (Whitla, 2009; Estellés-Arolas & González-Ladrón-de-Guevara, 2012). This can also be considered as the extrinsic motivation for customers to participate in crowdsourcing projects. The participants' motivation can also be intrinsic, though. Customers may take part in crowdsourcing projects because they have fun carrying out the task, the desire to share their knowledge and talents, long for social recognition or want to be part of a community (Mladenow et al., 2014; Kozinets et al., 2008). Thus, different levels of

Maslow's hierarchy of needs are fulfilled like self-actualization or self-esteem (Sloane, 2011).

All in all, it is obvious that crowdsourcing developed since the initial definition and an increasing number of characteristics needs to be taken into consideration by now. For the purpose of this study, and taking the above clarifications and explanations into account, crowdsourcing will be defined by eight characteristics (Estellés-Arolas & González-Ladrón-de-Guevara, 2012, p. 197) which have been chosen based on the aforementioned conceptual definition:

1. Clearly defined crowd
2. A task with a clear goal
3. Recompense received by the crowd is clear
4. Crowdsourcer is clearly defined
5. Compensation (value) received by the crowdsourcer is clearly defined
6. Online assigned process of participative type
7. Open call of variable extent
8. Use of the internet

Critical Viewpoint of Crowdsourcing

Although crowdsourcing is largely seen as a tool for customer empowerment and engagement, some scholars point out that it can also be considered as a means for companies to exploit consumers and get access to a cheap workforce (Brabham, 2008, 2011; Whitla, 2009; Zwick, Bonsu & Darmody, 2008). Crowdsourcing is thereby used as a tool to access this workforce - the crowd. From this critical perspective, companies might benefit to a much larger extent from the value co-creation through crowdsourcing than participants do. First of all, the prize money or recompense of any kind is just a small fraction of the cost which companies would have spent if they had hired a professional advertising agency or performed the task internally, for instance. Secondly, in most cases crowdsourcing participants have to transfer all intellectual property rights of the idea or the like to the company, which then makes a profit from selling and marketing the created idea. Accordingly, crowdsourcing reduces the costs of generating ideas and producing them compared

to the respective cost in the normal labor market (Brabham, 2008). In addition, final products are often sold to the same people who took part in the crowdsourcing campaign and submitted the ideas (Zwick et al. 2008).

Apart from, in comparison to the obtained value, unproportioned recompense of the crowd, crowdsourcing might threaten jobs. Professionals who were previously hired by the company for example to create an advertisement or find a solution to a problem, might now be replaced by the crowd or are confronted with decreasing salaries for their work (Brabham, 2011).

2.2 Demarcation of Crowdsourcing from Other Concepts

The concept of crowdsourcing is frequently used in relation to other collaborative innovation concepts like open innovation, user innovation or co-creation (Aitamurto et al., 2011). The concepts of crowdsourcing and co-creation are often even used interchangeably. It is therefore of utmost importance to differentiate between these concepts in order to clearly define the scope of this study, develop a clear theoretical frame and assure the adequate application of the results and contribution of this study.

The concept of open innovation was popularized by Henry Chesbrough in 2003 (Schenk & Guittard, 2009). Chesbrough (2006) defines open innovation as follows: “open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation, respectively” (p. 1). The open innovation paradigm considers knowledge to be widely distributed and identifies a need to harness this knowledge. External ideas are therefore integrated into internal innovation processes and internal ideas are made available externally through, for instance, licensing or joint ventures (Selzer & Mahmoudi, 2012; Chesbrough 2006, Schenk & Guittard, 2009). Open innovation represents a shift away from closed-off internal innovation processes. The company increases the in- and outflow of ideas and opens up its processes. However, it is important to remark that in contrast to the open source concept, not all information concerning the value creation are made publicly available and accessible (Baldwin & von Hippel, 2011). Crowdsourcing and open innovation are based on the same principles of opening up the companies’ processes to the integration of external ideas.

Crowdsourcing can therefore be seen as a sub-concept of open innovation (Sloane, 2011; Aitamurto et al. 2011). However, interaction in crowdsourcing processes is targeted exclusively at the crowd and not at a variety of stakeholders, such as suppliers, as in the open innovation paradigm. Furthermore crowdsourcing is not just restricted to the creation of innovation but can also be used to merely generate ideas or information (Schenk & Guittard, 2009).

User innovation can be defined as “users innovating for themselves to make products and services they want without manufacturer assistance. It's an entirely independent activity; manufacturers can get involved, but users don't need them” (von Hippel & Euchner, 2013, p.15). In user innovation, users modify products in order to make them better fit their needs and wants. Accordingly, the process is initiated by the users (Schenk & Guittard, 2009). A company can then utilize those created products and ideas or even encourage and support the process. A user in this respect is an individual person, company or organization which benefits from the use of the created product or idea and not from selling it (Baldwin & von Hippel, 2011). In contrast, crowdsourcing projects are always initiated and controlled by the company (Brabham, 2011) and participants do not need to be users of the product or idea, although they can be. User innovation is also considered to be a subset of open innovation but scholars are not in agreement about whether crowdsourcing is a subset of user innovation (Aitamurto et al. 2011; Djelassi & Decoopman, 2013) or the other way round (Howe in Sloane, 2015). For the purpose of this study the researchers merely consider the two concepts to possess overlapping characteristics, in the case that users are part of the crowd in a crowdsourcing project or that companies are involved and benefit from user innovations.

The concept most closely related to crowdsourcing is co-creation. Co-creation is “an active, creative and social process based on collaboration between producers and users, initiated by the firm to generate value for customers” (Prahalad & Ramaswamy in Pétavy, Cére, Tan & Rot, n.d., p. 4). The definitions of co-creation and crowdsourcing are very similar, but the concepts still differ in some aspects. First, the concept of co-creation originated long before crowdsourcing in an offline environment (Prahalad & Ramaswamy, 2000, 2004). Consequently co-creation, unlike crowdsourcing, is not restricted to the internet as a medium. Furthermore,

crowdsourcing is often used for less complex tasks than co-creation. Sawhney et al. (2005) point out that the two concepts differ in reach and richness. Whereas crowdsourcing has a larger reach in terms of participants and also possible media attention, the results of co-creation are more extensive and the level of customer involvement is higher (Adams, 2013). In addition, co-creation has a stronger long-term focus than crowdsourcing because it also aims at building up communities, which can be used for future co-creation projects (Roser, Samson, Humphreys & Cruz-Valdivieso, 2009). The distinction of these two concepts is essential for this thesis, which solely focuses on crowdsourcing, because due to their different characteristics, the impact of the knowledge about a co-creation project could differ from the one of a crowdsourcing project.

2.3 Crowdsourcing as Idea Contests

Crowdsourcing can take many different forms. Brabham (2011) for instance distinguishes between knowledge and discovery management, broadcast search, peer-vetted creative production and distributed human intelligence tasking. Lakhani (2013) states that crowdsourcing can occur in the form of contests, a collaborative community, a complementor or labor market. Despite the varying typologies, most of them agree upon idea contests, also known as innovation/idea challenges (Malhotra & Majchrzak, 2014; Boudreau et al., 2011) or peer-vetted creative production (Brabham, 2011), as one category. Idea contests possess the characteristics of crowdsourcing projects as explained in section 2.1. Additionally, those projects only run for a limited amount of time in which participants can submit solutions to the task in order to win a reward (Walter & Back, 2011; Terwiesch & Xu, 2008). The most common reward consists of a monetary prize (Malhotra & Majchrzak, 2014) but rewards can also take other forms such as price reductions or social recognition (Lakhani, 2013).

There are different ways how the winner can be determined. One possibility is to let the crowd vote for the winner which Brabham (2011) calls peer-vetted creative production. The advantage is that the voting process substitutes market research about the preferences of the customers. However, the solution preferred by the crowd might not be the one which represents the best and most valuable solution to the task (Malhotra & Majchrzak, 2014). If not controlled carefully, peer-vetted contests may

even result in negative results and media coverage for the crowdsourcing company. This is especially the case when solutions gain the most votes which are inappropriate or when the provided toolkits are misused to ridicule the company. The manufacturing company Henkel, for example, tried to crowdsource a new logo for their dishwasher detergent and participants designed logos with slogans such as ‘now with fresh pretzel scent’ which quickly gained most of the votes (Breithut, 2011). To overcome these risks, another possibility of determining a winner is the evaluation and selection by a jury panel (Walter & Back, 2011). Often the two approaches to determine a winner are combined in idea contests (Malhotra & Majchrzak, 2014).

The whole concept of idea contests is based on the assumption that among the vast amount of submitted solutions, there will be one which is superior to the others or even better than what the company could have created internally (Brabham, 2011). Lakhani (2013) states that idea contests are especially useful “when it’s not obvious what combination of skills or even which technical approach will lead to the best solution for a problem” (no pagination). Therefore, a large and heterogeneous crowd might be best equipped to accomplish the task. Furthermore, Malhotra and Majchrzak (2014) argue that idea contests are more and more used to create “a form of buzz marketing and customer engagement” (p. 104), because they often do not generate ideas that are innovative enough to make the company gain a competitive advantage. This limitation as well as the fact that the invitation to participate is extended to a very large crowd makes idea contests particularly suitable for the purpose of this study. Therefore, it can be assumed that non-participants are more likely to notice idea contests in comparison to other forms of crowdsourcing which are less visible to the public.

2.4 Crowdsourcing and Marketing

To thoroughly understand and examine the purpose of this research study, it is important to differentiate between the different approaches of how crowdsourcing can be used for marketing purposes. It can be differentiated between three main utilization possibilities: the actual creation of value for different marketing functions, customer engagement and electronic word-of-mouth (eWOM).

First of all, crowdsourcing campaigns can be used to outsource a marketing activity, normally performed by the company itself or by its suppliers, to the crowd. Crowdsourcing can generate value for almost all marketing-related activities including product development, promotion and advertising or marketing research (Gatautis & Vitauskaite, 2014). For instance, in product development the task of the crowdsourcing project might be to design a new product which fulfills a certain purpose. Crowdsourcing can also substitute advertisement agencies, when the crowd is asked to come up with an idea for a commercial and produce it themselves (Pétavy et al., n.d.). It is especially useful for marketing and market research (Djelassi & Decoopman, 2013; Whitla, 2009). Crowdsourcing campaigns which include for example a voting based on preferences can substitute studies to find out if the product satisfies the needs and wants of the market. Furthermore, information for research purposes can be indirectly gained by studying participants' behavior or their submissions to contests.

Another utilization possibility of crowdsourcing is customer engagement. The “consumer engagement concept centers on specific interactive consumer experiences” (Brodie et al., 2013, p. 106), which in turn fosters a company's relationships with its consumers. The technological developments of the Web 2.0 expanded a company's possibilities and made it easier to interact with customers. The main benefit of customer engagement is considered to be increased brand loyalty (Füller et al., 2013). Some customers might even be turned into brand evangelist or ambassadors, who function as advocates for the brand. The latter is highly connected to the possibility of increased eWOM through the crowdsourcing campaign. If the participants of a crowdsourcing campaign are satisfied, they might engage in sharing their brand experiences with others online, thereby creating positive eWOM (Marsden, 2009). This can be regarded as free promotion and in the best case could lead to a viral diffusion of information and even the campaign itself (Füller et al., 2013). Thus, the crowdsourcing campaign might create a so-called ‘buzz’ (Djelassi & Decoopman, 2013; Prahalad & Ramaswamy, 2000), which can even be enhanced when different media outlets report about the crowdsourcing campaign. It is important to note that if customers are not content with the crowdsourcing campaign, eWOM could also quickly turn negative and harm the company.

The two latter utilization possibilities gain increasing importance as companies are starting to use crowdsourcing campaigns more as a promotional and strategic marketing tool to engage and increase awareness than creating real value (Marsden, 2009). This development is important in regard to non-participants as they are more likely to become aware of the crowdsourcing activities of a company.

3. Theoretical Framework

In this chapter the theoretical framework for the quantitative study will be presented. This includes a definition of the concept of brand equity as well as an outline of its possible measurements. The brand equity theory will be combined with the preceding findings regarding crowdsourcing in order to derive hypotheses for the study. The established relationships between the discussed concepts will then be visualized in a research conceptual model, presented at the end of this section.

3.1 Consumer-Based Brand Equity

The concept of consumer-based brand equity (CBBE) will be dealt with in the following section. The term's definition will be followed by a discussion of the major dimensions of the CBBE framework, namely brand awareness, perceived quality of the brand, brand loyalty and brand associations. Additionally, behavioral intentions as well as the mediating role of brand familiarity will be conceptualized.

3.1.1 Definition and Measurement of CBBE

In recent years, brand equity has become a well-discussed concept in the field of marketing. Even though numerous definitions and measurements exist in academia or as Berthon, Capon, Hulbert, Murgolo-Poore, Pitt and Keating (2001) state it, "perhaps the only thing that has not been reached with regard to brand equity is a conclusion" (no pagination), researchers commonly agree on the importance of brand equity for today's marketplace. It is widely known that companies can possibly achieve higher margins, stronger consumer purchase intentions and buying preferences, opportunities for brand extensions as well as more effective communication when having strong brands with positive brand equity in their portfolio (Keller, 1993; Rangaswamy et al., 1993; Cobb-Walgren et al., 1995 in Buil, de Chernatony & Martínez, 2008).

Farquhar's (1989) early definition stating that brand equity is "the value endowed by the brand to the product" (cited in Amselmsson & Johansson, 2014, p. 91) has often been used as a starting point to grasp the concept's complexity. A clear distinction

should be made between CBBE and financial brand equity. The former is the focus of this Master's thesis.

Aaker's (1996a, b) as well as Keller's (1993) CBBE frameworks have become the prevailing ones in empirical research. Aaker (1996b) describes the concept as "a set of brand assets (and liabilities) linked to a brand's name and symbol that adds to (or subtract from) the value provided by a product or service to a firm and/or that firm's customers" (p. 7). Keller (1993) rather considers CBBE as a process and outlines it "as the differential effect of brand knowledge on consumer response to the marketing of the brand" (p. 1). According to his research, CBBE results from customers' brand familiarity including their unique, strong and favorable brand associations compared to an unnamed or fictitious version of the brand. Hence, CBBE ultimately depends on what is on the customers' minds. Lassar, Mittal and Sharma (1995) summarize the main considerations of the two frameworks by listing five key characteristics of CBBE:

- It should rather be linked to customers perceptions instead of their objective indicators
- It is a global value which is associated with a brand
- This global value is rooted in the brand's name, not merely in physical features
- It is not an absolute measure but always needs to be considered relative to relevant competition
- It influences company's financial performance in a positive way

The second form of brand equity, financial brand equity, can be considered as the outcome of customers' responses to a certain brand name and hence, is based on CBBE. Being psychologically-oriented and rooted in the customers' minds in form of market perceptions, CBBE contributes to firms' financial performance. It can be considered as the driving force of a brand's higher profitability and market share (Aaker 1996; Keller, 1993; Yoo & Donthu, 2001; Christodoulidis & de Chernatony, 2010). CBBE premises a brand's power on its customer experiences encompassing what customers have felt, seen, learned and heard about the brand over time (Keller, 2008). Thus, it is of paramount importance for marketers to ensure the right product experiences by choosing the most effective marketing programs that allow the de-

sired feelings, thoughts, beliefs, perceptions, etc. to become linked to the brand (Keller, 2008). If this can be ensured, there will be a higher likelihood that customers (re)purchase the product and service, which is the reason why CBBE ideally leads to financial brand equity for companies. Positive CBBE arises from customers' greater confidence in one brand compared to competing ones. Lassar et al. (1995) consider it as "the enhancement in the perceived utility and desirability a brand name confers on a product. It is the consumers' perception of the overall superiority of a product carrying that brand name when compared to other brands" (p. 13).

Because of its highly strategic value, it is indispensable for firms' marketing strategy, tactical decisions as well as for potential brand extensions to be based on well-measured CBBE (Buil et al., 2008). Being rooted in perceptions (Keller, 1993), the concept needs to be measured and traced from a customer perspective (Lassar et al., 1995). For that reason, the following four dimensions are taken into account as suggested by the most widely accepted frameworks of Aaker (1996a, b) and Keller (1993):

1. Brand Awareness
2. Brand Loyalty
3. Perceived Quality of the Brand
4. Brand Associations

The following section will highlight each of these dimensions in more detail in the indicated order and link them to the aforementioned concept of crowdsourcing for marketing purposes. Hereby, the overall aim is to claim major hypotheses highlighting the effect of online crowdsourcing in marketing on non-participants' brand perceptions in terms of their brand awareness, brand loyalty, quality perception and brand associations. Additional to the applied brand equity framework, behavioral intentions will also be taken into consideration. This decision has been made due to the fact that CBBE is assumed to increase companies' market share and profitability (Christodoulidis & de Chernatony, 2010). From here on forth, the term brand equity will always equal consumer-based brand equity.

The researchers will place emphasis on the investigation of non-participating customers of crowdsourcing campaigns for several reasons. First, prior studies in academia solely focused on participants, except the work of van Dijk et al. (2014) and

Fuchs and Schreier (2010). Due to the fact, though that around 90% of customers take over a passive role in crowdsourcing campaigns (Marsden, 2009), they represent a highly important customer group for all engaging companies. As non-participating customers could still be affected by crowdsourcing campaigns, this study's scope is set on their brand perceptions as well as behavioral intentions. Because of the aforementioned research gap in this regard, the claimed hypotheses can merely refer to existing findings concerning participants of crowdsourcing. Those findings will then be transferred to non-participants, from which hypotheses will be derived capturing non-participants' perceptions and behavioral intentions.

3.1.2 Brand Awareness

According to Keller (1993), brand awareness consists of two major elements, namely brand recall as well as brand recognition. Aaker (1996a) even distinguishes further by including, next to the aforementioned elements, also top-of-mind (first brand recalled), brand dominance (the only brand recalled), brand knowledge/salience as well as brand opinion.

Customers' ability to recognize or even recall a brand in a given product category depends on how strongly the brand is present in their minds. Hence, it describes "the likelihood that a brand name will come to mind and the ease with which it does so" (Keller, 1993, p. 3). Especially for the purchase of low-involvement products, which is focused on in this study by taking the FMCG industry into account, it is essential for customers to be able to recognize them quickly among other brands. Even though customers might not hold any other specific brand associations, having a strong brand presence in mind can accelerate the decision-making process considerably (Keller, 1993). As Keller (1993) elaborates, the likelihood model by Petty and Cacioppo (1986) supports this assumption by suggesting that customers' decisions are mainly based on brand awareness when dealing with low involvement products. In turn, strong brand awareness can not only stimulate brand choice, but also customers' brand perceptions, attitudes and even loyalty (Aaker, 1996b).

Djelassi and Decoopman (2013) identified crowdsourcing as a new and innovative marketing tool which possibly creates a favorable 'buzz'. As a matter of fact, its growth highly depends on the campaign, its integrated communication channels as

well as sales promotions, to name a few essential elements. The two aforementioned authors believe that crowdsourcing campaigns make people not only talk about the crowdsourcing event as such but also about the brand, along with the company as an initiator. Thus, Djelassi and Decoopman (2013) assume that online crowdsourcing can lead to increasing brand popularity as well as brand awareness which leads to the following hypothesis:

H1: Non-participants tend to have a higher awareness for crowdsourcing brands than for non-crowdsourcing brands.

3.1.3 Perceived Quality of the Brand

CBBE does not merely imply that the brand is well-known in its product category, as outlined by the aforementioned concept of brand awareness, but that it is also perceived as valuable by customers. Consequently, quality represents a key aspect in the suggested brand equity framework. Perceived quality is a rather subjective instead of objective evaluation which exists in the customers' minds, is highly abstractive (Netemeyer, Krishnan, Pullig, Wang, Yagci, Dean, Ricks & Wirth, 2004) and attempts to capture "consumers judgement about a product's overall excellence or superiority" (Zeithaml, 1988, p.3). Aaker (1996b) identified perceived quality as the only brand association that can possibly drive the firm's financial performance as well as other elements of how the brand is perceived by customers. "Perceived quality is usually at the heart of what customers are buying, and in that sense, it is the bottom-line measure of the impact of brand identity" (Aaker, 1996b, p. 19). It can be considered as a form of value perception and thus, be associated with brand choice, brand purchase intent as well as customers' willingness to pay a premium price (Netemeyer et al., 2004). As with all other remaining dimensions of the brand equity framework, this dimension is based on customers' perceptions instead of those from managers or experts (Yoo & Donthu, 2001).

Co-created products are believed to better suit customers' needs and tastes which are reflected by the means of their empowerment (Dijk et al., 2014; Füller, 2010). Thus, it is more likely that customers establish higher levels of satisfaction as well as commitment towards brands which have partly been shaped by their personal brand

engagement (Nysveen & Pedersen, 2014; Hollebeek, 2011; Füller, 2010). Sloane (2011) even creates a link to the concept of crowdsourcing by stating that this specific form of online engagement positively stimulates customers' experiences with the product or service in question. Based on those findings, it is suggested by the researchers that similar effects might arise for non-participants when dealing with crowdsourcing brands. Thus, the researchers deduce for the following empirical research that customers who have never participated in any crowdsourcing campaign, generally evaluate crowdsourcing brands as being of overall higher quality in terms of products, customer service and store environment.

H2: Non-participants tend to perceive crowdsourcing brands being of higher quality than non-crowdsourcing brands.

3.1.4 Brand Loyalty

By defining it as customers' attachment towards a certain brand, Aaker (1996a) considers brand loyalty to be a core dimension within the CBBE framework. Customers' brand preference results in a higher likelihood of purchasing the brand as a first choice compared to any other offering (Yoo & Donthu, 2001). Thus, several advantages can be detected for companies such as the ones outlined by Aaker (1996a): "A loyal customer base represents a barrier to entry, a basis for price premium, time to respond to competitor innovations, and a bulwark against deleterious price competition" (p. 106).

Linking the dimension of brand loyalty to the concept of customer engagement, Nysveen and Pedersen (2014) suggest in their research that customers participating in co-creation perceive a stronger brand experience possibly leading to higher levels of brand satisfaction and finally, brand loyalty. This in turn is based on Hollebeek's conceptual model from 2011, which highlights that "customer involvement influence customer-brand engagement, that customer-brand engagement influence relationship quality (trust, commitment and satisfaction), and that relationship quality influence loyalty" (Nysveen & Pedersen, 2014, p. 810). Considering online crowdsourcing as one form of customer engagement with strong similarities to co-creation, the researchers expect similar consequences for non-participants of online crowdsourcing

campaigns. Füller et al. (2013) create a direct linkage between the concept of crowdsourcing and brand loyalty by assuming that crowdsourcing campaigns have the potential to strongly engage customers. Consequently, “firms may use crowdsourcing to turn consumers into loyal and committed brand ambassadors” (p. 43). For the empirical study similar findings are supposed by the researchers with regard to non-participating customers, leading to the third hypothesis:

H3: Non-participants tend to be more loyal towards crowdsourcing brands than towards non-crowdsourcing brands.

3.1.5 Brand Associations

Aaker (1991) defines the term brand associations as “anything linked in memory to the brand” (cited in Yoo & Donthu, 2001, p. 3). Brand associations can indicate different levels of strength. Hence, customers’ link to a certain brand is probably stronger when grounded on numerous experiences and exposures with that brand (Aaker, 1991 in Yoo & Donthu, 2001). While Aaker (1996b) assumes that brand associations are driven by the brand’s identity, Keller (2008) considers them as a reflection of the brand image which customers might hold. According to the former, the concept encompasses three different perspectives: the brand-as-product perspective (perceived value), the brand-as-person perspective (brand personality) and lastly, the brand-as-organization perspective (organizational associations). Each of these three perspectives will be outlined in the following:

Perceived Value

This dimension reflects the brand-as-product perspective by highlighting the brand’s value proposition. If brands fail to offer its customers superior value, they will probably not be able to compete on the market in the long run (Aaker, 1996a). Referring to the aforementioned findings highlighting the assumed higher quality perception of brands that have been created by the means of customer empowerment, similar can be assumed for the brand’s value. If the overall perceived quality of the crowdsourcing brand is high, the brand’s value will probably also be perceived as valuable by customers alongside. This inference leads to the following hypothesis to be claimed:

H4: Non-participants tend to perceive crowdsourcing brands being of higher value than non-crowdsourcing brands.

Brand Personality

The second dimension of brand associations, the brand-as-person perspective, has mainly been popularized by Fournier (1998). She considers a brand's personality not in terms of interpersonal attributes but rather "as the relationship role enacted by the brand in its partnership with the consumer" (cited in Keller, 2008, p. 388). The brand's personality can even create a link to customers' self-expressive and emotional benefits. Especially brands which hardly offer any physical differences compared to other brands can benefit from a strong personality based on which customers are able to make a visible statement to their social setting (Aaker, 1996a).

Concerning previous academic work dealing with crowdsourcing, the company attributes of being customer-oriented as well as innovative have mainly been put into focus. With regard to the former, customers do not only have stronger confidence in a brand which is perceived as customer-oriented, but they also have the feeling that the organization behind the brand honestly cares about them. Thus, it is easier to actually like the brand and the organization behind it (Aaker, 1996b). Fuchs and Schreier (2011) point out that customer empowerment is significantly and positively related to the perception of customer orientation. Additionally, Füller (2010) suggests that non-participating customers generally rate companies which explicitly interact with their customers as more customer-oriented and innovative. Referring to innovation, Dijk et al. (2014) support the assumption by stating that co-created products, as one form of customer engagement and being similar to crowdsourced products, lead to stronger perceptions of innovativeness by those not directly being involved in the creation process. Previous academic work also highlights several other attributes which possibly arise in the context of customer engagement and thus, can be linked to the paper's focus on crowdsourcing. Dijk et al. (2014) for example believe co-created products to be perceived as more authentic, unique and sincere among non-participants compared to non-co-created products. Djelassi and Decoopman (2013) identified in their empirical research that participants of crowdsourcing campaigns tend to establish an intensified brand image. According to them,

crowdsourcing can help promoting a young, but also exciting brand image to the public.

With crowdsourcing being one form of customer engagement and co-creation a highly similar concept, inferences are made to the context of online crowdsourcing. By taking the aforementioned findings into consideration, the researchers deduce that non-participating customers perceive the brand's personality of a crowdsourcing brand as more favorable than a non-crowdsourcing brand. In this context, the term favorable refers to the preceding brand attributes of being innovative, customer-oriented, authentic, unique, sincere, young as well as exciting.

H5: Non-participants tend to perceive a crowdsourcing brand's personality as more favorable than a non-crowdsourcing one's.

Organizational Associations

Lastly, brands can be looked at from a brand-as-organization perspective. According to Aaker (1996b), organizational associations encompass all organizational elements that can be found behind the brand including its people, values, skills and programs. Netemeyer et al. (2004) define organizational associations as "those beliefs held by the consumer that the company that markets the brand is honest, trustworthy, and cares about its customers" (p. 219). This highly corresponds with Aaker's (1996a, b) and Keller's (2008) assumption that brand credibility is an essential factor in terms of organization beliefs, including the dimensions of brand expertise, trustworthiness and brand likeability. "In other words, credibility measures whether consumers see the company or organization behind the brand as good what it does, concerned about its customers, and just plain likeable" (Keller, 2009, p. 68). Organizations can highlight these elements to emphasize that there is more behind a brand than simply its service or product as such. Referring to the applied brand of McDonald's in the paper's empirical study, "Ronald McDonald House, for example, adds to the visibility, image, and interest of McDonalds by suggesting that McDonalds as an organization is interested in more than fast food" (Aaker, 1996, p. 113).

Claims made by trustworthy organization are more easily believed by customers. Moreover, those organizations are perceived as honest, sensitive to their customers'

needs as well as dependable. Hence, trust plays a vital role in organizations' desired relationships with their customers (Aaker, 1996b) and can also be applied to the context of crowdsourcing. Crowdsourcing is considered being a tool which helps regaining customers' trust in the firms' marketing (Füller et al., 2013). Fuchs and Schreier (2011) believe non-participating customers to have more favorable corporate attitudes towards firms that focus on customer empowerment. They propose firms to consider customer empowerment strategies more strongly in order to improve general corporate associations held by the public. Füller (2010) also deals with organizational associations in his research and concludes that "an enjoyable and compelling co-creation experience positively affects trust" (p. 5). Participants are assumed to establish a relatively stronger relationship with an engaging company leading to higher levels of trust (Casalo et al., 2007; Hollebeek, 2011 in Brodie et al., 2013). Referring to the context of crowdsourcing, Füller et al. (2013) assume that it might create a more authentic and transparent image. It might transform customers into brand ambassadors "who enjoy a high level of trust and product-related product-credibility among their followers" (p.48). Based on all existing findings, the researchers suppose that non-participating customers perceive a crowdsourcing company as more favorable in terms of trustworthiness, likeability as well as credibility compared to non-crowdsourcing companies.

H6: Non-participants tend to perceive a crowdsourcing organization as more favorable than a non-crowdsourcing organization.

3.1.6 Behavioral Intentions

Even though, Aaker (1996a, b) and Keller (1993) do not explicitly list consumers' behavioral intentions in their CBBE frameworks as a separate dimension, it is indispensable to closely investigate them as they are strongly linked to the remaining dimensions of brand awareness, perceived quality, brand loyalty and associations. As aforementioned, CBBE can possibly result in firms' higher profitability and market share. Thus, all dimensions can in some way be linked to customers' purchase intentions or buying preferences. While strong brand awareness mainly influences brand choice, brand associations give customers a reason to buy the brand due to favorable

attitudes and feelings towards the brand and the organization. Perceived quality as well as brand loyalty cannot only result in brand choice and (repetitive) purchase intentions but also in the willingness to pay a premium price (Aaker, 1996a, b; Netemeyer et al., 2004).

Regarding companies' usage of crowdsourcing, emphasis should be placed on empirical findings indicating that customer empowerment might result in more favorable behavioral intentions of non-participants, including for example purchase intentions and positive word of mouth (Fuchs & Schreier, 2011). Derived from the preceding findings, the following hypothesis will be investigated in the course of the research:

H7: Non-participants tend to have more favorable behavioral intentions towards crowdsourcing organizations than towards non-crowdsourcing organizations.

3.1.7 The Mediating Role of Brand Familiarity

The term brand familiarity is often used interchangeably with other ones such as brand knowledge or brand experience. It can be considered as an umbrella term encompassing prior knowledge of the brand such as strength of belief and consumer expertise (Perera & Chaminda, 2013). The concept of brand familiarity is stored in customers' minds and consists of all evaluative as well as descriptive brand information (Keller, 2003). This implies that not merely physical attributes are meant to be dealt with but also more abstract and intangible ones. Based on this premise, Fournier (1998) established her widely accepted metaphor of interpersonal relationships within the field of branding to capture people's relationship with brands. In general, brand knowledge or familiarity can encompass several dimensions, e.g. customers' thoughts, feelings or experiences with the brand in question. Hence, a higher likelihood has been detected for familiar brands to be purchased compared to newly-introduced ones as they are strongly linked to customers' prior experiences and beliefs (Perera & Chaminda, 2013).

In the context of the research project, brand familiarity is chosen as the mediating variable between the established linkage of crowdsourcing and brand equity. According to Perera and Chaminda (2013), higher levels of brand familiarity result in higher

levels of brand trust as well as satisfaction, both elements discussed within the CBBE framework. Moreover, the researchers believe that familiar brands stimulate customers' purchase intentions to a stronger extent, which is also included by the aforementioned discussed dimensions of behavioral intentions. "By creating differential consumer responses and affecting the success of brand-building marketing programs [such as crowdsourcing campaigns], brand knowledge is the source of brand equity" (Keller, 2003, p. 596) and thus, has been decided to be included as the mediating variable. To put more precisely, the researchers suppose that a company's implementation of crowdsourcing for marketing purposes does not only affect the dimensions of CBBE as well as customers' behavioral intentions in a direct way, but also depends on the customers' familiarity with the brand. Hence, the following hypothesis was deduced:

H8: The more familiar non-participants are with a brand, the more favorable will be their resulting brand perceptions and behavioral intentions.

3.2 Conceptual Research Model

Based on the preceding theoretical findings concerning crowdsourcing as a strategic marketing tool and brand equity, a conceptual model has been created, which is supposed to serve as the basis for an empirical research in order to either confirm or reject the claimed hypotheses.

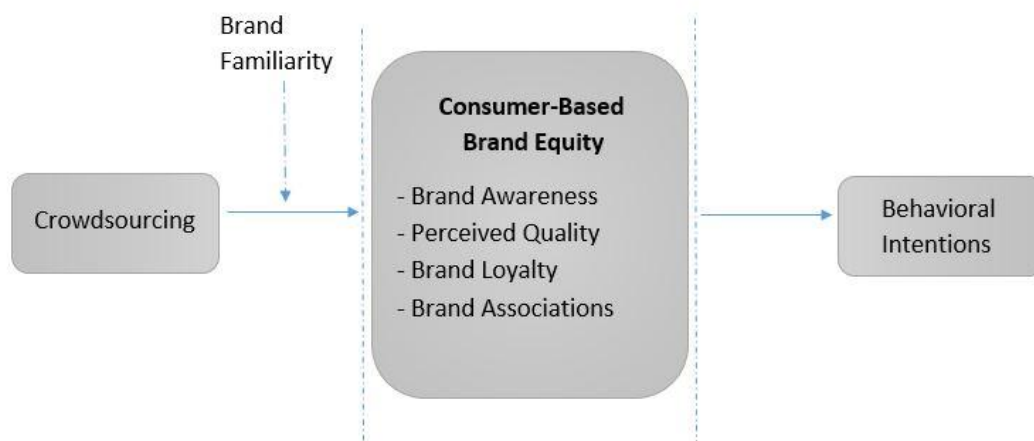


Figure 3.1: Conceptual Research Model

The companies' usage of crowdsourcing as a strategic marketing tool represents the model's starting point. The tool is supposed to be implemented by firms in order to stimulate customers' brand perceptions first, encompassing its four major dimensions of *brand awareness*, *perceived quality*, *brand loyalty* and *brand associations*, in order to then also affect non-participants' behavioral intentions towards the crowdsourcing company. Concerning the chosen order, the four CBBE dimensions are considered to be prerequisites for customers to be willing to (re)purchase the brand, recommend it to others or pay a premium price for it.

To put it more precisely, it is assumed that crowdsourcing brands lead to stronger brand awareness (**H1**), a higher perception of brand quality (**H2**), along with stronger brand loyalty (**H3**) compared to non-crowdsourcing brands among those customers who do not actively take part in the crowdsourcing process, the non-participants. Highlighting customer engagement in form of crowdsourcing campaigns to the public, companies can also achieve more positive brand associations from customers. Accordingly, non-participants are believed to have a more favorable brand personality (**H4**), value perception (**H5**) as well as organizational associations (**H6**) in mind relatively to non-crowdsourcing brands.

With regard to all four dimensions of the CBBE framework (see fig. 3.1), emphasis needs to be placed on the fact that the created linkage between the two concepts of crowdsourcing and CBBE is mediated by the customers' familiarity with the brand in

question. The more the customers know about the specific brand and are familiar with it, the stronger and more positive are the brand perceptions and behavioral intentions (**H8**). In reverse, companies are believed to not be able to establish strong brands, if customers do not show any brand familiarity.

In case crowdsourcing firms manage to create positive CBBE for their brands, more favorable behavioral intentions of non-respondents are expected (**H7**). Indications might be for example customers' given recommendations to peers, positive word of mouth, (repetitive) purchase intentions or their willingness to pay a premium price for the specific product or service. If all these prerequisites are given, positively stimulated brand equity as well as favorable behavioral intentions contribute to the firms' financial performance, also known as financial brand equity. Thus, firms might profit from their explicit usage of customer engagement in form of crowdsourcing by achieving higher profits and a better market share. However, as this very last step exceeds the focus of this thesis, though, the linkage to financial based brand equity will not be dealt with in this study.

4. Methodology

The following chapter will elaborate the study's methodology by first pointing out the guiding research philosophy based on which the study's research strategy, approach, design and method was chosen. Also an outline will be given concerning the case selection and description. Next, the applied sampling method will be discussed, followed by the process of operationalization which defines the measurements of the intangible concepts of brand perceptions and behavioral intentions. The chapter will finish with the applied data collection method, along with the data analysis.

4.1 Research Philosophy

In order to be able to identify the most suitable data collection method for the planned empirical research it was of importance to first determine the research's methodological philosophy which served as a guidance for all other methodological decisions. In this regard, an internal realist ontology and a positivist epistemology was chosen.

Referring to the researcher's perception of reality, an internal realist position assumes the existence of one single reality. Being of obscure nature, the truth as well as all gathered facts can never be directly accessed in total (Easterby-Smith, Thorpe & Jackson, 2012). Thus, the researchers needed to be aware of the limitations of collecting purely objective information. Considering the research's context, customers' prior experiences with the brand in question could, for instance, reasonably influence their brand perceptions in a subjective way. Putnam (1987) considers internal realism being a so-called middle road: the understanding of the world is co-determined by the external world, but always within the framework of the peoples' conceptual schemes, encompassing their cultural frameworks, beliefs, and so on. Hence, Putnam (1981) considers the position as an "objectivity-for-us" (cited in Vlerick, 2014, p. 271).

Having taken the research object's intangibility into account, namely brand perceptions and behavioral intentions of non-participants, it was essential to identify "indirect evidence" (Easterby-Smith et al., 2012, p. 19) when holding an internal realist position. The applied operationalization (see section 4.6) highlights the process of

having gathered evidence for the research object in form of indicators gauging the abstractness of brand perceptions and behavioral intentions.

Epistemology deals with the question of what acceptable knowledge is and whether the social world can be studied in the same way as natural sciences (Bryman & Bell, 2011). In this regard, the chosen positivist view believes in the existence of an external social world which should be measured rather objectively (Easterby-Smith et al., 2012). Hereby, the research's role is to test existing theory in order to then be able to develop certain patterns that possibly arise (Bryman & Bell, 2011). By having followed a positivist epistemological position, the researchers attempted to reveal causal linkages with the stated RQ (Easterby-Smith et al., 2012), in this case the relationship between crowdsourcing for marketing purposes and non-participants' brand perceptions as well as their behavioral intentions.

As Bryman and Bell (2011) point out, different epistemological characteristics are often combined in research projects. One major limitation of the chosen positivist position is the fact that it is not considered being useful for providing decision-makers with recommendations for future actions (Easterby-Smith et al., 2012). Still, the presented research project was planned to overcome the limitation by presenting useful managerial implications after data analysis and interpretation. Marketing as well as innovation managers are supposed to be given insights whether crowdsourcing can be used as a valuable strategic tool to attract non-participants. Consequently, it was not strictly relied on the characteristics of just one philosophy. Furthermore, a positivist epistemology is often considered as a rather artificial as well as inflexible approach that hardly enables theory to be generated (Easterby-Smith et al., 2012). This pitfall was counteracted by a deductive research approach which focuses on theory testing (see section 4.2 for deductive research approach). By having claimed several hypotheses deduced from theoretical frameworks, the research's overall aim was to corroborate or reject these by analyzing empirical data.

4.2 Research Strategy and Approach

Being in line with the above-discussed philosophical orientation, a quantitative research strategy was applied. According to Easterby-Smith et al. (2012), the correlation of an internal realist ontology with a positivist epistemological position requires

an exposure of the studied phenomena, mainly by theory testing. By the means of a quantitative strategy the object of study, non-participants' brand perceptions and behavioral intentions, could be attempted to be measured mainly objectively. This in turn supports the aforementioned choice of the epistemological position which requires findings to be drawn from objective methods (Easterby-Smith et al., 2012). Consequently, empirical data in form of quantification of customers' brand perceptions and behavioral intentions was needed for the study to be conducted.

As already indicated, corresponding to the positivist epistemological position as well as the quantitative strategy, the research's major role was to test theory and identify patterns (Bryman & Bell, 2011). For that reason, the project predominantly followed a deductive research approach. This implies that existing theory is used in order to conduct empirical research which in turn is supposed to either corroborate or reject the prior stated hypotheses. Based on a critical discussion of the concepts of crowdsourcing and CBBE, 8 major hypotheses were claimed highlighting the relationship between the two concepts, and also the research instrument, the online survey (see section 3.3.), was designed. As Bryman and Bell (2011) point out, though, a clear distinction between the two research approaches of deduction and induction barely exists. Accordingly, the analysis and interpretation of the obtained empirical data might result in the generation of additional theory. The influence of induction is especially of likelihood in the discussion of crowdsourcing which represents a rather new phenomenon in academia and thus, has not been scientifically discussed to a very large extent. Similar limitations applied to the process of formulating hypotheses which might not have been completely deductive from discussed literature either. The researchers' subjective beliefs as well as opinions regarding the covered topic could possibly have influenced the process to some extent.

The researchers are mindful that a quantitative study might hold some weaknesses. Bryman and Bell (2011), for example, are of the opinion that following a quantitative strategy often bears the risk of displaying the phenomenon being analyzed in a rather static way, hardly in relation to the life of the respondents. Referring to the project's context, this implies that merely the relationship between crowdsourcing and non-participants' brand perceptions and behavioral intentions is highlighted. However, the underlying reasons behind the linkage are missed out as the researchers were not

able to gauge a deeper understanding of the measured perceptions of crowdsourced brands only through quantification. This is also the reason why Bryman and Bell (2011) assume quantitative measures to have “an artificial and spurious sense of precision and accuracy” (p. 168).

4.3 Case Selection and Description

The case on which the hypotheses were tested is the ‘Mein Burger’ (My Burger) campaign by McDonald’s Germany in 2012. During this campaign customers were invited to create their own burger online (Razorfish, 2012). Therefore, McDonald’s set up an online platform with a ‘Burger Configurator’ tool. With this tool, people could choose from various ingredients to create their dream burger and give it a personalized name. McDonald’s also provided the participants with do-it-yourself tools to create their own marketing campaign to promote their burger online for example by making personalized banners, videos or posters. People could then vote for their favorite burgers on the ‘Mein Burger’ campaign website. The ten burgers with the most votes were prepared by the contestants in a test kitchen and a jury chose the five finalists. Those five finalist burgers were then produced and sold for one week each at McDonald’s restaurants in Germany. Additionally, the five finalist burgers and their creators also got their own TV commercials. During these five weeks, the public could vote again to determine the ‘taste’ winner of the competition. In the end, one burger was chosen as the winner of the McDonald’s ‘Mein Burger’ competition. The winner in 2012, was the ‘McPanther’, whose promotional material was used in the questionnaire of the present survey.

The McDonald’s ‘Mein Burger’ campaign was chosen for several reasons. First, the campaign fulfills all criteria for a crowdsourcing project as stated in chapter 2.1. The campaign used the internet as a medium and the co-creation process, the creation of the burger and marketing campaign, took place online as well. Furthermore, McDonald’s issued a true open call and thereby defined the crowd as everyone who is willing to participate and has access to the internet. The task given to the crowd was clearly defined with the goal to create a burger which would be able to get the highest amount of votes. Hence, the task was truly participative because participants contributed with their ideas and creativity while McDonald’s provided them with the

tools they needed to create the burger and their marketing campaign and produced the burgers in the end. Concerning the compensation, McDonald's obtained value was threefold (Bhasin, 2012). First off, McDonald's acquired new product ideas and saved costs for research and development. Secondly, they obtained a lot of publicity, especially in the form of buzz on the internet through all the individual marketing campaigns which were created and shared. Lastly, they found a very effective way to increase their customer engagement. The recompense for the consumers consisted mainly of the opportunity to have their own burger creation being sold in all McDonald's restaurants nationwide. The winning burger is also sold for one day at the McDonald's which is closest to the winner's hometown.

Moreover, the McDonald's 'Mein Burger' campaign was chosen because it was highly successful and is now recognized as an exemplary case of crowdsourcing use (Razorfish, 2012). The first edition of the campaign in 2011 was awarded the AME silver medallion in the category 'use of medium, social media' (AME Awards, 2012). In 2012 over 300,000 burgers and 22,000 marketing campaigns were created (Razorfish, 2012). The campaign is particularly interesting regarding research concerned with brand perceptions of crowdsourcing non-participants, due to its wide reach. Because people shared their own marketing campaigns on their social media sites and the broadcast of television commercials, the campaign was also widely noticed by non-participants. In the end in 2011, the online buzz was converted into the best sales numbers of any promotional campaign of McDonald's ever, especially considering the low media budget (AME Awards, 2012). The responsible advertising agency, Razorfish (2012), stated that the results of 2012 even surpassed the ones of the first year.

4.4 Research Design and Method

The research design "provides a framework for the collection and analysis of data" (Bryman & Bell, 2011, p. 40) and therefore connects the research question to the research method, which is defined as "the technique for collecting data" (Bryman & Bell, 2011, p. 41). The choice of the right research design and method assures that the purpose of the study is aligned with the actual findings of the survey.

This study draws on an experimental research design which is considered being one of the most powerful methods in science when trying to identify connections between the discussed concepts (Kirk, 2013). According to Easterby-Smith et al. (2012), the choice is in line with the applied positivist and internal realist research philosophy which implies the researchers' work with hypotheses covering the phenomenon being studied. In this regard, experimental methods are considered to be an ideal way of collecting the needed data for selecting the correct hypotheses. Kirk (2013) characterizes experimental designs by the researchers' manipulation of the independent variable, their control of the environment for extraneous variables for example by the random assignment of participants to the independent variable as well as the detailed measurement of the dependent variables. In this regard, experimental designs attempt to reveal possible connections between the independent and dependent variable by extracting "the maximum amount of information with the minimum expenditure of resources" (Kirk, 2013, p. 24).

More specifically, the study was carried out according to a posttest-only control group design. One major characteristic of this design, which as aforementioned applies to all experimental designs, is the ability to manipulate an independent variable so that one may observe its possible influence on the dependent variables (Bryman & Bell, 2011). The independent variable in this study is the crowdsourcing activity of a company and the dependent variables are the different measures for brand perceptions and behavioral intentions. In the specific case of a posttest-only control group design, only the experimental group is exposed to the treatment, the crowdsourcing activity of a company, and both the control group and the experimental group are only tested after the treatment (Malhotra, 2010). This procedure is especially advantageous because it eliminates pretesting and as a result prevents an interaction effect, in which participants are influenced by their previous answers (Malhotra, 2010). Other benefits resulting from this procedure are cost and time savings.

An experimental design "encourage[s] clarity about what is to be investigated, and should eliminate as many alternative explanations" (Easterby-Smith et al., 2012, p. 41). The elimination of alternatives is achieved through the best possible control of extraneous variables. Therefore, the researchers controlled the sample from the beginning considering age, gender, nationality and federal state which increased the

internal validity of the study on the one hand. The external validity on the other hand, is relatively low because the applied design is an artificial set up which does not replicate the reality. Hence, the study did not measure the development of perceptions and behavioral intentions in their natural environment. Time and budget restrictions, however, inhibited longitudinal studies in a natural environment where customers could have formed brand perceptions while being confronted with a real life crowdsourcing project. These limitations have to be taken into consideration while evaluating the validity of the study.

The research design was realized through a web-based, self-completion questionnaire which could be created, distributed and completed online. Easterby-Smith et al. (2012) point out that survey methodologies are particularly linked to a positivist position as they attempt to reveal causal relations and patterns which cannot be accessed directly. The chosen type of questionnaire yields several advantages in relation to the study. Firstly, it is an inexpensive and fast method to conduct a survey, because data can be for example automatically downloaded and participants can fill out the survey according to their own time schedule (Bryman & Bell, 2011; Easterby-Smith et al., 2012). Furthermore, as crowdsourcing is an online phenomenon, non-participants affected by crowdsourcing activities need to have access to the internet in order to notice the project. Hence, a web-based survey is especially appropriate for the purpose of this research study. Still, also several disadvantages need to be taken into consideration when choosing this method. As Bryman and Bell (2011) point out, self-completion questionnaires do not necessarily lead to the desired response rate based on which a sampling-related error might occur. There is also a higher likelihood of missing data as well as limitations when it comes to the survey design (Bryman & Bell, 2011). However, by having sent out a reminder to all participants a relatively high response rate could be achieved. Also the occurrence of missing data was prevented by designing the questionnaire in such a way to make respondents answer all questions before moving on.

4.5 Sampling Method

Due to the experimental character of the survey and in order to be able to compare the brand perceptions and behavioral intentions between the control group and the experimental group, two different sample groups had to be obtained.

Therefore, the sampling process was divided into two main steps. First, a sample of 60 people was obtained from the targeted population and afterwards, in a second step, the sample was divided into one control and one experimental group. The first sample was obtained by recruitment through the researcher personal networks due to reasons of accessibility. Non-participants of the McDonald's crowdsourcing campaign could not be chosen as an initial population because potential respondents could not be asked beforehand about their participation in order not to bias the study (Bryman & Bell, 2011). Otherwise this could have led to demand artifacts, where the respondent tries to answer according to the suspected purpose of the study (Malhotra, 2010). Due to this circumstance, an initial population was chosen which was readily accessible to the researchers: German students at the age of 21 to 28, which constitute a small part of the non-participants of the McDonald's crowdsourcing campaign. As general characteristics, such as the composition of the campaign's non-participants, were not known by the researchers, it was not possible to generate a representative sample of the population. The choice to limit the population to German students at the age of 21 to 28 was therefore also taken in order to increase the sample's representativeness of the population. The age groups were chosen for reasons of accessibility to ensure an equal spread among the two sample groups. The respondents of the survey were then recruited from the researchers' personal networks.

The experimental posttest-only control group design of the survey requires that sampling units are randomly assigned to a treatment group and that the composition of the control and experimental group are as equal as possible (Malhotra, 2010; Easterby-Smith et al., 2012). These procedures are supposed to ameliorate the internal validity of the survey and thus, make the survey replicable (Bryman & Bell, 2011). They ensure that the differences observed in the levels of the dependent variables are actually attributable to the manipulation of the independent variable and not influenced by extraneous variables (Malhotra, 2010). The two sample groups were

controlled for the following characteristics before the survey: age (divided into two groups: 21-24 years and 25-28 years), gender, educational status (student), nationality and federal state. The study only contained students to avoid differences in product and brand perceptions due to different educational background (Mityko, 2012). Lastly, the control for the nationality and federal state is supposed to mitigate influences resulting from different cultural environments (Jandt, 2009).

The equal distribution of participants with the same characteristics to the treatment groups was executed through matching, a procedure which Malhotra (2010) describes as “comparing test units on a set of key background variables before assigning them to treatment conditions” (p. 257). This was done to the best possible extent. However, it was not possible to find exactly the same amount of people for both sample groups who come from the same federal states. In some instances, therefore, participants were matched who originally come from neighboring federal states. Afterwards, one of the participants from a matching pair was randomly assigned to one of the treatment groups. Thereby, each sample unit had the same possibility to be included in the experimental group, which corresponds to the probability sampling method of simple random sampling (Bryman & Bell, 2011). By randomly assigning the participants to one treatment group, the effect of other extraneous variables, which were not previously controlled for, are equally distributed between the two sample groups (Malhotra, 2010). Through this the internal validity was further strengthened. These procedures resulted in two sample groups, which are almost equal in their composition.

As already mentioned, the sample also needed to be controlled for non-participants and participants of crowdsourcing, which could not be done prior to the survey distribution. Therefore, the survey contained one question whether the respondent has ever participated in the McDonald’s crowdsourcing campaign. In the data clearance process those respondents were filtered out and replaced by respondents with the same demographic characteristics.

The chosen sample size was 60 participants, which equaled 30 participants per sample group. This rather small sample was chosen due to the resource restrictions of the research project especially in terms of time and budget (Bryman & Bell, 2011) and is also typical for an experimental research design to be chosen (Diamantopoulos,

Smith & Grime, 2005; Hoch & Ha, 1986). Furthermore, the sample size needed to remain manageable in regards to the complexity of the process to control for the extraneous demographic variables and their equal distribution among the sample groups, especially because this process had to take place prior to the start of the survey. Hence, the gain in precision through a large sample size was weighed against the relative costs of the survey. While taking the occurrence of a sampling error into account, which is more likely to occur in a small sample (Bryman & Bell, 2011), the decision was taken in line with Easterby-Smith et al. (2012) who state that a sample which is representative of the population is preferable to a precise sample. Especially in this particular case, considering the purpose of the research to detect differences in perceptions between two groups, the main priority was to assure the two sample groups are equal in their composition.

4.6 Operationalization

As already mentioned, the research object's abstractness and intangibly required indirect evidence to be collected. This was done through the process of operationalization which is in line with the proposed positivist epistemological orientation (Easterby-Smith et al., 2012). It implies indicators to be determined which are able to gauge the discussed concepts of the research object in order to make them measurable (Bryman & Bell, 2011). Thus, in order to measure the effect of crowdsourcing on brand perceptions as well as behavioral intentions, it was indispensable to identify variables and constructs which operationalized the latter. Therefore, the study relied on existing scales in academia measuring CBBE and behavioral intentions. One major advantage hereby was the fact that scale items could be used which have already been tested for validity and reliability by other researchers in their previous work. Care needed to be taken, though, as most chosen scale items were modified by the researchers in order to fit the context of online crowdsourcing as well as the investigated brand of McDonald's. Thus, most items were reworded to a certain extent resulting in the risk that changes could possibly affect the research instrument's validity and reliability. Still, as the items remained the same with regard to content, no reasonable threat was assumed by the researchers.

All items covering CBBE as well as the respondents' behavioral intentions were measured on a 7-point-Likert-scale that is considered being a suitable measurement scale for concepts such as attitude (Anselmsson & Johansson, 2007; Easterby-Smith et al., 2012). The applied Likert scale captured the respondents' level of agreement with the presented statements with (1) strongly disagree, (7) strongly agree and (4) indicating neutrality. Having already been pre-coded, one major advantage of Likert scales is the fact that they are easy and quick to apply. Moreover, Malhotra (2010) assumes that this form of measurement can easily be understood by all respondents which is an essential prerequisite for self-completion questionnaires to be used.

The development of the scales for the different CBBE dimensions was inspired by the CBBE framework of Buil et al. (2008), who, in turn, accumulated the items of their scale from various authors. This CBBE scale is particularly suitable for the case of the empirical study of McDonald's, because it was developed to measure the brand equity of FMCG brands. In the following, the original authors of the single scales are referenced (see table 4.1).

Referring to the concept of CBBE, the first dimension of *brand awareness* was measured by having modified the existing scale items of Yoo et al. (2000) and Netemeyer et al. (2004). These four items refer to Aaker's (1996a) defined elements of brand awareness, namely top-of-mind (AW1), brand knowledge (AW2), brand recognition (AW3) as well as brand opinion (AW4). Concerning the latter, the value of responsibility was chosen as this is explicitly advertised as one of the crowdsourcing company's core values (McDonald's, 2015). The second dimension, *perceived quality of the brand*, was measured by the modified items derived from Lehman, Keller and Farlay (2008) and Netemeyer et al. (2004). While the first two items referred to product quality (PQ1) and variety (PQ2), the specific quality dimensions mentioned in PQ3 as well as PQ4, customer service and store atmosphere, were based on the brand's advertised core values (McDonald's, 2015) and touched upon the items of ambiance and service mentioned in Lehmann et al. (2008).

Three items were used to measure the respondents' *brand loyalty* (BL1), encompassing first choice (BL2) and brand preference (BL3) (Yoo et al., 2000).

The first sub dimension capturing brand associations, namely *perceived value* (PV1-2), was measured following the existing items proposed by Lassar et al. (1995),

Aaker (1996a) and Netemeyer et al. (2004). The second sub dimension, *brand personality*, was based on the items capturing the traits of innovation (BP1-3) and caring/customer-orientation (BP4-6), both suggested in Lehman et al. (2008). Moreover, Aaker's (1997) characteristics of youth, uniqueness, sincerity as well as excitement (BP7-10) were chosen in correspondence with the findings in the crowdsourcing literature (see section 3.1.5). The third sub dimension of brand associations, *organizational associations*, was retrieved from Aaker (1996a) and Pappu et al. (2005, 2006) and referred to trust (OA1), likability (OA2) as well as credibility (OA3).

Lastly, the items covering the respondents' behavioral intentions touched upon the definition of Zeithaml, Berry and Parasuraman (1996) who point out that customers' favorable behavioral intentions are mainly shaped by their willingness to recommend the company or service to others (IN1), to pay a price premium for it (IN3) as well as to stay loyal to the company by continuing their purchases at the given company (IN2). The choice of the three items was then supported by the theoretical findings (see section 3.1.6) which explicitly list those in the context of crowdsourcing.

Table 4.1: Compilation of Scaling Items

Scale Items of Applied Research Instrument		
AW1	When I think of fast food restaurants, McDonald's is one of the first brands that comes to my mind.	Yoo et al., (2000) & Netemeyer et al. (2004), in Buil et al., (2008); Aaker (1996a)
AW2	I am familiar with the standard menu at McDonald's.	
AW3	I recognize a TV commercial of McDonald's without seeing the company's name or logo.	
AW4	One of McDonald's core values is responsibility	McDonald's (2015); Aaker (1996a)
PQ1	McDonald's constantly satisfies its customers with quality products.	Ambler (2003), in Lehman et al. (2008)
PQ2	Compared to other fast food brands, McDonald's offers a high variety of product offerings.	Netemeyer et al., 2004)
PQ3	McDonald's is known for its good customer service.	McDonald's (2015); Lehman et al. (2008)

PQ4	McDonald's provides its customers with a clean and welcoming environment.	
BL1	I consider myself to be loyal to McDonald's.	Yoo et al. (2000), in Buil et al. (2008)
BL2	McDonald's would usually be my first choice when considering different fast food restaurants.	
BL3	I would not go to another fast food restaurant if a McDonald's restaurant is close by.	
PV1	McDonald's is good value for money.	Lassar et al. (1995); Aaker (1996a); Netemeyer et al. (2004), in Buil et al. (2008)
PV2	Even with a low budget, I can choose from a variety of products to buy.	
BP1	McDonald's is a leader in the field of fast food.	Lehman et al. (2008)
BP2	McDonald's is innovative.	
BP3	McDonald's constantly improves its product offering.	
BP4	McDonald's cares about its customers.	
BP5	McDonald's has the interests of its customers at heart.	
BP6	McDonald's is committed to me as a customer.	
BP7	I consider McDonald's to be a youthful brand.	Aaker (1997)
BP8	The brand McDonald's is unique.	
BP9	The brand McDonald's is sincere.	
BP10	The brand McDonald's is exciting.	
OA1	I trust McDonald's as a company.	Aaker (1996a); Pappu et al. (2005, 2006), in Buil et al. (2008)
OA2	I like McDonald's as a company.	
OA3	McDonald's as a company is credible.	
IN1	I would recommend McDonald's to my friends.	Zeithaml et al. (1996)
IN2	The next time I am going to eat at a fast food restaurant, I intend to eat at McDonald's.	
IN3	I am willing to pay more for a burger at McDonald's than at other fast food restaurants.	

4.7 Data Collection Method

The chapter describes the applied sampling procedure, the creation of the research instrument, including its outline and pre-test, as well as the final data collection process.

The Sampling Procedure

Based on the given controls in terms of the participants' demographics, potential respondents were contacted by the researchers within their personal network. At the first point of contact, consisting of an email on Facebook, the study was presented and the students were kindly asked for their willingness to participate. In this regard, respondents were informed about issues of data privacy and security and that by participating they would agree to the use of their data for the stated purpose. In case the contacted people were willing to take part in the study, they were asked to state their demographics in the response mail in order to assign them to one of the two sample groups. All demographics of the volunteering participants were then listed in an Excel file based on which the composition of the two groups was controlled. Having ensured that all participants were currently enrolled as students and from Germany, two randomly created groups could be created based on age, gender and federal state.

The Survey Outline

The survey consisted of two questionnaires with treatments for the two sample groups (see appendix I). The applied outline looked as follows: First, a short introduction formulated by the researchers indicated the assumed duration of filling out the survey and provided a brief instruction of how to do so. The instruction placed emphasis on the applied 7-point Likert-scale (see section 4.5) and the meaning of each response option. The researchers also highlighted the fact that all gathered data was treated confidentially and used for the purpose of this Master's thesis only. The participants were also told that the study purpose would be revealed at a later point of the study in order to keep the responses as uninfluenced as possible. Hence, the researchers attempted to minimize any potential bias.

After the given introduction, both surveys started off with the mediating variable of brand familiarity (see section 3.1.7) by having asked the respondents whether they are frequent customers at the analyzed crowdsourcing company McDonald's.

The surveys' only difference laid in the following presentation of McDonald's products. The first sample group was shown the company's logo together with an image of an ordinary burger. The visualization was described by pointing out that McDonald's newest burger creation is displayed on the image. Being part of an especially created promotional edition at McDonald's, it was said that the burger is only sold at McDonald's restaurants in Germany for one week. Contrary, the second sample group was shown an image of a crowdsourced burger as well some main facts of McDonald's crowdsourcing campaign 'Mein Burger' (see section 4.3), including its last year's voted winner. The below-displayed text then explained the entire process and meaning of the campaign to the respondents.

After the two different visualizations and descriptions, the surveys' ensuing scale items were identical again. The respondents' brand perceptions and behavioral intentions were checked and it was controlled for participants and non-participants of crowdsourcing. This was done by having provided a brief description of the concept of crowdsourcing for marketing purposes based upon which the participants were asked whether they have ever actively taken part in McDonald's crowdsourcing campaign or in any other one. The respondents who indicated their past participation in McDonald's campaign 'Mein Burger' were then filtered out by the researchers.

Lastly, the respondents' demographics were asked including gender, age, educational status as well as origins. This was done to check whether the prior established composition of the sample groups could be kept but also to be able to conduct statistical analyses based on demographics at a later point in time. Again, participants were filtered out who indicated to not be a student as well as those who did not originally come from Germany (see section 4.5).

The Creation of the Survey

The two research instruments were created with the means of an online survey software called 'SurveyMonkey' (2015). The tool allowed the researchers to simultaneously send out the survey links to the two sample groups as well as to constantly check for the given responses in form of a summary or by a detailed presentation of each response separately. Next to the possibility of including images in the survey template, the software was chosen because of several other features. For example, a progress indicating bar enabled participants to constantly check for the percentage of

the study which still needed to be completed. By having applied a certain pattern in the question order, participants could not turn to the next page without having answered all questions. Moreover, they were automatically led to the end of the study when having indicated demographics not being part of the initial sample (e.g. no student, not of German nationality).

The Conducted Pilot Study

After having created the surveys with the described online tool, preliminary versions of the research instruments were sent out to get pre-tested. The pre-testers were previously contacted per email and taught about their assigned role. In total, six people were chosen, three for each version of the survey, who corresponded with the intended research sample in terms of the given demographics. Based on the individual feedback given by each pre-tester, several adjustments could be made, mainly in terms of wording and grammar.

Sending out the Survey to Participants

Based on the prior-established group division resulting from the participants' given demographics, the survey links were electronically sent to each participant individually with the request to complete it within the given time period. During that time, gathered data was continuously stored in SPSS. When the researchers realized certain demographics to be missing which were initially listed in one of the two sample groups, a friendly reminder was sent out to all participants with the attempt to raise the response rate. Still, during data storage the researchers realized that the group composition did not turn out as initially planned. For that reason, it was necessary to find additional participants having the same demographics in order to restore the required equality between the two sample groups. In this regard, the same steps were applied as aforementioned in the sampling procedure in order to randomly assign them to one of the two groups.

4.8 Data Analysis

The following section will elaborate on the data processing, outline the final respondents of this study as well as the required statistical tests for capturing differences in brand perceptions and behavioral intentions. Lastly, the researcher will pre-

sent the outcome of their conducted reliability testing.

Data Preparation

Based on the final data stored in SPSS, the process of data clearance was applied. This implied that all datasets from respondents were deleted which were either incomplete or indicated that the respondent had already participated in the McDonald's crowdsourcing campaign 'Mein Burger' in previous years.

In course of the research, the researchers decided to work with two separate data sets, one encompassing all the remaining responses after the data clearance and one without respondents who could be identified as holding a very strong negative attitude towards McDonald's as a company. Those respondents evaluated both questions, how they like the brand McDonald's and if they are a frequent customer, with *strongly disagree*. This was based on the reason that those extreme critics could have possibly distorted the overall findings by having generally answered all questions with the lowest response options.

Furthermore, composite variables for brand equity itself, its different dimensions and the behavioral intentions were created. The composite variables were generated by adding the single items belonging to one dimension. In order to be able to compare the means of the composite variables with each other, indexes were calculated to balance out different numbers of items in one dimension. The indexes display the means on a scale from 0 to 100. A detailed table on how to interpret the indexed means in comparison to the Likert scale can be found in appendix III.

Respondents

Referring to the complete dataset encompassing all valid responses, subjects were 60 Germans, currently enrolled as students. Each respondent was randomly assigned to one of the two sample groups which were equal in size (N=30 per group). Out of all respondents, 33 were female and 27 were male, balanced in age (30 each for the age of 21-24 and 25-28). Excluding the McDonald's campaign 'Mein Burger', 12 of those already made experiences with crowdsourcing before by having actively taken part in a campaign. Taking a closer look at all respondents of the control group (N=30), 17 female and 13 male, equally distributed among the two age groups, 8 of those have already taken part in a crowdsourcing campaign. The experimental group

(N=30) consisted of 16 female and 14 male respondents, again equally spread among the two age groups, out of which only 4 have already been an active part in a previous crowdsourcing campaign.

Table 4.2: Composition of Sample Groups

		Control Group	Experimental Group
Sample Size	N	30	30
Gender	Female	17	16
	Male	13	14
Age Group	21-24	15	15
	25-28	15	15
Crowdsourcing Participants		8	4

The control as well the experimental group indicated a mainly similar distribution in terms of their federal states (see appendix IV).

The subsample, without the extreme critics of McDonald's, consisted of 53 subjects, out of which 29 were female and 24 male. Four strong critics were removed from the control group and three from the experimental group. In this case 27 respondents belonged to the younger age group of 21-24 and 26 respondents to the one including the age of 25-28. 11 out of the 53 people in the subsample have already actively taken part in a crowdsourcing campaign.

Testing of Differences in Brand Perceptions and Behavioral Intentions

The major analyses, which were supposed to capture differences between the respondents' brand perceptions and behavioral intentions towards a crowdsourcing - as well as non-crowdsourcing brand, were conducted by using the One-way ANOVA. The test is used when attempting to identify differences in means between groups to discover a possible influence of an independent variable (Malhotra, 2010). In a One-way ANOVA the independent variable equals the factor representing the experimental treatment. Referring to the study's context, the experimental treatment was represented by McDonald's crowdsourcing campaign. The ANOVA tests the null

hypothesis if all means of the different groups are equal and thus, verifies if the experimental treatment has an effect (Field, 2009). In this regard, a significance value of $\leq .1$ was chosen to indicate significant differences between the two samples and to reject the null hypothesis. Even though, a value of $\leq .05$ is often chosen in statistics (Field, 2009), the researchers decided for a higher value in order to also capture indications and tendencies for brand perceptions and behavioral intentions, which otherwise would have been missed out with a lower significance value. The One-way ANOVA test was run by using SPSS (see chapter 5 for results).

An ANOVA analysis normally requires metric data - interval or ratio scaled (Malhotra, 2010). The use of a 7-point-Likert-scale in this study results in ordinal data, which would have been more accurate to analyze with a test for non-parametric data like the Mann-Whitney U test. However, the researchers discovered that the mediating variable of the respondents' familiarity with the brand of McDonald's was reasonably influencing their answers. Because the mediating variable was not equally distributed between the two sample groups beforehand, weights were applied to the data in order to reduce the influence of the effect (see appendix V for exact values of the weights). In SPSS those weights are rounded off to the nearest integer in non-parametric tests and thus, do not precisely reflect the assigned weights, which would have led to a distortion of the data. To counteract this circumstance, the One-way ANOVA was chosen to analyze the data which does not round of the applied weighting. Even though ANOVA normally requires metric data, its usage is appropriate with data resulting from a Likert scale. In a marketing context, data from Likert scales is often treated as being interval scaled in order to enable the application of ANOVA (Malhotra, 2010). This was for instance also done by van Dijk et al. (2014), who examined the influence of co-creation of brand perceptions through the use of Likert scales.

Reliability Testing

Before having run the required statistical analyses in SPSS to identify a potential difference of non-participating customers' response to a crowdsourced as well as non-crowdsourced brand, it was essential to test for scale reliability (see appendix VI, A). By having used Cronbach's Alpha as a measurement tool for internal consistency, it could be identified how well the chosen scale items are related within one

dimension (Field, 2009). This is especially common when making use of multiple Likert scales that in turn form a measurement scale. According to Malhotra (2010), a value of .6 and higher is an acceptable value for Cronbach's Alpha, thus indicating a reliable scale. Weighed variables were used as the basis for the analysis.

A reliability analysis was run for each composite variable, representing one dimension of the survey with the following outcomes (see table 4.4): The dimension of *perceived quality of the brand* appeared to have good internal consistency, $\alpha = .777$. The same applied to *brand loyalty*, $\alpha = .792$, *organizational associations*, $\alpha = .905$ as well as *brand personality*, $\alpha = .844$. Also *behavioral intentions* turned out to have acceptable internal consistency, $\alpha = .651$. Merely the dimensions of *brand awareness*, $\alpha = .456$, and *perceived value of the brand*, $\alpha = .517$, resulted in a value less than .6. Still, deleting one of the items measuring brand awareness or perceived value would not have resulted in any improvement of the dimension's Cronbach's Alpha level. Thus, all items contribute to the scale's overall reliability. The relatively low internal consistency of the dimension of *perceived value* can be explained by the small number of items, two in this case.

Table 4.3: Cronbach's Alpha - Composite Variables

Dimension	No. of Items	Cronbach's Alpha
Brand Awareness	4	0.456
Perceived Quality	4	0.777
Brand Loyalty	3	0.792
Perceived Value	2	0.517
Organizational Associations	3	0.905
Brand Personality	10	0.844
Behavioral Intentions	3	0.651

One of the major disadvantages of Cronbach's Alpha as a measurement tool is the fact that its overall value depends on the number of items. Hence, if the number of items on a scale increases, the value of Cronbach's Alpha will do as well (Field, 2009). A larger value could be achieved by simply adding additional items, not even

closely related to the specific dimension of *perceived value*. Based on this test characteristic, it can be assumed that the corresponding Cronbach's Alpha level could be enhanced by increasing the number of items. However, as the items and dimensions were derived from prior academic studies, which were already tested for reliability, the composition of items was remained. It needs to be admitted, though, that the given items do not correlate as much as expected.

5. Results

This chapter will analyze and present the results of the conducted survey. First, the effect of the mediating variable and its implications for the subsequent analysis will be discussed. Afterwards, differences in brand perceptions and behavioral intentions of the two treatment groups will be investigated, once on the complete data set and once on the subsample excluding the strong critics of McDonald's. Then, additional findings will be presented.

5.1 Mediating Effect of Brand Familiarity

As stated in the theoretical framework, brand familiarity may have an effect on brand perceptions and behavioral intentions (see section 3.1.7). It was assumed in Hypothesis 8 that the more familiar respondents are with the brand, the more favorable will be their answers in the survey. To examine this mediating effect, a correlation analysis was conducted between the mediating variable *frequent customer of McDonald's* and the overall evaluations of all items, accumulated in the composite variables *brand equity* and *behavioral intentions* (see appendix IV, C). The composite variables were calculated by adding the corresponding items. The Pearson correlation coefficient, r , was used in the analysis, which ranges from -1.0 to 1.0 and determines the extent to which the two variables are correlated (Field, 2009; Malhotra, 2010). A value of $\pm .1$ signifies a small effect, $\pm .3$ a medium and $\pm .5$ a large effect of the mediating variable on the overall evaluations (Field, 2009).

The analysis showed that brand familiarity was strongly correlated with the overall evaluations of brand equity ($r = 0.589$, $p \leq 0.05$) and behavioral intentions ($r = 0.637$, $p \leq 0.05$). The higher the brand familiarity, the more favorable were the ratings of the respondents. Additionally, a cross tabulation of the sample groups and the mediating variable showed that the mediating variable was unequally distributed between the experimental and the control group (see table 5.1). The control group contained a larger proportion of respondents who are not frequent customers of McDonald's.

Table 5.1: Distribution of Mediating Variable

		Sample Group		Total
		Control Group/Non-crowdsourced	Experimental Group/Crowd-sourced	
I am a frequent customer at McDonald's.	Strongly Disagree	13	8	21
	Disagree	11	8	19
	Slightly Disagree	3	6	9
	Neutral	1	1	2
	Slightly Agree	1	5	6
	Agree	1	2	3
Total		30	30	60

The unequal distribution of the mediating variable between the two sample groups and its strong positive correlation with the overall evaluations of brand perceptions and behavioral intentions had some consequences. Hence, it could be inferred that any possible findings of differences between the two sample groups would be largely influenced and distorted by the mediating variable and not exclusively by the crowdsourcing activity as an independent variable. To counteract this effect and balance the unequal distribution, weights were applied to the data as described in section 4.8.3. From this point on, all analyses of the data were conducted with the weighed data set.

H8 (SUPPORTED): *The more familiar non-participants are with a brand, the more favorable will be their resulting brand perceptions and behavioral intentions.*

5.2 Participants' Differences in Brand Perceptions and Behavioral Intentions – Complete Data Set

In the following section, the researchers will outline the findings of the analysis using the original data set and connect those with the claimed hypotheses.

5.2.1 Composite Variables

The respondents' differences in their brand perceptions and behavioral intentions were revealed by taking the complete data set into account including the strong critics of McDonald's (see appendix VI, D). In this regard, the One-way ANOVA was first conducted with the composite variables. This implies that all items belonging to one dimension were simultaneously taken into account by having merely analyzed the overall dimension. In order to be able to also detect more detailed differences between the two sample groups, the same test was run for each scale item individually in the second step (see section 5.2.2). The ANOVA F, reported in the following, identifies whether the means of the two groups significantly differed from each other in terms of the dependent variables. In the case of this study, the ANOVA F shows if the crowdsourcing activity (independent variable) had a significant influence on brand perceptions and behavioral intentions (dependent variables). Whether the control group or the experimental group was more affected by the crowdsourcing activity, was determined by a comparison of means (see appendix VI F). Also a measure of strength is reported by the used ω^2 , omega squared, to show how strongly the independent as well as the dependent variables are linked with each other. The effect size can be considered as a measurement of practical significance and reveals the degree to which the phenomenon being studied exists. With regard to the interpretation of the given effect sizes, the researchers followed the proposed guidelines of Field (2009) and Malhotra (2010) by having determined .01 as a small, .06 as a medium and .14 as a large effect.

All significant values are reported at a significance level of $p \leq .1$. There was a significant effect of crowdsourcing on the respondents' *brand awareness* [$F(1, 58) = 3.943, p = .052, \omega^2 = .047$]. This indicates that the company's activity in crowdsourcing accounted for approximately 4.7% of the total variance in the non-participating customers' *brand awareness*. The One-way ANOVA also revealed a statistically

significant main effect of crowdsourcing on non-participants' *brand loyalty* [$F(1, 58) = .3.801, p = .056, \omega^2 = .045$], implying that the independent variable accounted for approximately 4.5% of the total variance in the dependent variable. As shown in table 5.2, no significant effects (ns) could be determined for the remaining dimensions of CBBE, namely *perceived quality of the brand*, *perceived value*, *organizational associations*, *brand personality*, and lastly *behavioral intentions*.

Even though, the differences in means of most dimensions were not significant according to the One-way ANOVA, a qualitative comparison of the means indicated that the crowdsourcing activity had a larger effect on the experimental group than on the control group. It could be observed that the means of all dimensions, except *perceived quality*, were higher for the experimental group than for the control group (see appendix VI, F), although just two dimensions showed significant differences in the One-way ANOVA test.

Table 5.2: ANOVA Results - Composite Variables

Dimension	F-Ratio	Significance Value	Effect Size
Brand Awareness	3.943	.052	.047
Perceived Quality	1.079	.303	ns
Brand Loyalty	3.801	.056	.045
Perceived Value	.666	.418	ns
Brand Personality	2.645	.109	ns
Organizational Associations	1.348	.250	ns
Behavioral Intentions	1.127	.203	ns

5.2.2 Single Items

After having detected the significant effects of crowdsourcing on the overall CBBE dimensions as well as on behavioral intentions, all scale items were also tested individually in order to be able to make more detailed statements. The following findings can be reported in this regard:

Brand Awareness

The overall dimension of *brand awareness* turned out to be significantly affected by the independent variable. Taking a closer look at the single items, it can be reported that the company's usage of crowdsourcing had a statistically significant effect on non-participants' ability to name the brand from *top-of-mind* (AW1) [$F(1, 58) = 4.599$, $p = .036$, $\omega^2 = .057$] as well as on their *brand knowledge* (AW2) [$F(1, 58) = 4.735$, $p = .034$, $\omega^2 = .059$]. Hence, respondents were more likely to state McDonald's as the first fast food brand which comes to their mind and are more certain about their knowledge of the brand. To be more precise, the implementation of crowdsourcing accounted for approximately 5.7% of the total variance in *top-of-mind* and 5.9% of the variance in *brand knowledge*, indicating a small effect. No significant effects could be determined for the remaining dimensions of brand awareness, namely *brand recognition* (AW3) and *brand opinion* (AW4) (see table 5.3).

H1 (SUPPORTED): *Non-participants tend to have a higher awareness for crowdsourcing brands than for non-crowdsourcing brands.*

Table 5.3: ANOVA Results - Brand Awareness

Brand Awareness	F-Ratio	Significance Value	Effect Size
AW1	4.599	.036	.057
AW2	4.735	.034	.059
AW3	.587	.447	ns
AW4	.018	.894	ns
Brand Awareness (Composite)	3.943	.052	.047

Perceived Quality of the Brand

With the overall dimension of *perceived quality of the brand* not having been significantly affected by the crowdsourcing activity, also three out of the four single items did not indicate to be significantly stimulated by the independent variable. Non-participants' knowledge about the crowdsourcing campaign did not significantly affect their evaluations of the *product quality* (PQ1), *product variety* (PQ2) or *cus-*

tomor service (PQ3) (see table 5.4). There was merely a significant effect of crowdsourcing on the respondents' perception of *store ambience* (PQ4), [F(1, 58) = 3.682, p = .060, $\omega^2 = .043$], which was not large enough to compensate the insignificance of the other three items, though.

H2 (REJECTED): *Non-participants tend to perceive crowdsourcing brands being of higher quality than non-crowdsourcing brands.*

Table 5.4: ANOVA Results - Perceived Quality

Perceived Quality	F-Ratio	Significance Value	Effect Size
PQ1	.101	.752	ns
PQ2	.294	.590	ns
PQ3	.860	.358	ns
PQ4	3.682	.060	.043
Perceived Quality (Composite)	1.079	.303	ns

Brand Loyalty

The third overall CBBE dimension of *brand loyalty* was again significantly affected by the company's implementation of crowdsourcing as a strategic marketing tool. Having taken the individual scale items into account, the following findings can be reported: The One-way ANOVA revealed a statically significant main effect of crowdsourcing on non-participants' consideration of *being a loyal customer* (BL1), [F(1, 58) = 3.376, p = .071, $\omega^2 = .038$]. This indicates that the company's activity in crowdsourcing accounted for approximately 3.8% of the total variance in the respondent's evaluation of brand perceptions and behavioral intentions. A small significant effect of crowdsourcing could also be detected for the customers' *first choice of the brand* in question (BL2), [F(1, 58) = 3.184, p = .080, $\omega^2 = .035$]. With the customers' *brand preference* (BL3) being the only insignificant item out of three, Hypothesis 3 could be confirmed.

H3 (SUPPORTED): *Non-participants tend to be more loyal towards crowdsourcing brands than towards non-crowdsourcing brands.*

Table 5.5: ANOVA Results - Brand Loyalty

Brand Loyalty	F-Ratio	Significance Value	Effect Size
BL1	3.376	.071	.038
BL2	3.184	.080	.035
BL3	1.578	.214	ns
Brand Loyalty (Composite)	3.801	.056	.045

Perceived Value

The CBBE dimension of *perceived value*, the first dimension belonging to the overall dimension of brand associations apart from *brand personality* and *organizational associations*, turned out to be not significantly affected by the brand's engagement in crowdsourcing. All scale items of the dimension, capturing non-participants' perception of having *good value for money* (PV1) as well as their perception of being able to *choose from a variety of products to buy with a low budget* (PV2), showed no significant differences in their means for the two treatment groups, leading to a rejection of Hypothesis 4.

H4 (REJECTED): *Non-participants tend to perceive crowdsourcing brands being of higher value than non-crowdsourcing brands.*

Table 5.6: ANOVA Results - Perceived Value

Perceived Value	F-Ratio	Significance Value	Effect Size
PV1	1.078	.303	ns
PV2	.060	.807	ns
Perceived Value (Composite)	.666	.418	ns

Brand Personality

The second sub dimension of the overall dimension of brand associations, *brand personality*, consisted of 10 scale items out of which only one was significantly affected by the usage of crowdsourcing. Hence, Hypothesis 8 could not be supported. The scale item which was significantly affected was the brand's attribute of being *exciting* (BP10), [F(1, 58) = 8.431, $p = .050$, $\omega^2 = .110$]. In this regard, the independent variable accounted for approximately 11.0% of the total variance in the dependent variable. This signifies that the crowdsourcing activity has a large influence on whether or not respondents perceive the brand as exciting. No significant main effect could be identified for all remaining brand traits such as being *innovative* (BP1-3), *customer-oriented* (BP4-6), *youthful* (BP7), *unique* (BP8) or *sincere* (BP9) (compare table 5.7).

H5 (REJECTED): *Non-participants tend to perceive a crowdsourcing brand's personality as more favorable than a non-crowdsourcing one's.*

Table 5.7: ANOVA Results - Brand Personality

Brand Personality	F-Ratio	Significance Value	Effect Size
BP1	1.623	.208	ns
BP2	.318	.575	ns
BP3	2.051	.157	ns
BP4	.661	.420	ns
BP5	.009	.924	ns
BP6	1.155	.287	ns
BP7	.626	.432	ns
BP8	2.254	.139	ns
BP9	2.175	.146	ns
BP10	8.431	.050	.110
Brand Personality (Composite)	2.645	.109	ns

Organizational Associations

Also all three items of the last sub dimension of brand associations, *organizational associations*, did not turn out to be significantly stimulated by the independent variable. In more concrete, as shown in table 5.8, no significant effects could be determined for customers' *trust in the company* (OA1), their *likability towards the company* (OA2) as well as for the *company's credibility* (OA3). Accordingly, the crowdsourcing activity had no significant, favorable influence on the respondents' organizational associations.

H6 (REJECTED): *Non-participants tend to perceive a crowdsourcing organization as more favorable than a non-crowdsourcing organization.*

Table 5.8: ANOVA Results - Organizational Associations

Organizational Associations	F-Ratio	Significance Value	Effect Size
OA1	1.111	.296	ns
OA2	1.027	.315	ns
OA3	1.278	.263	ns
Organizational Associations (Composite)	1.348	.250	ns

Behavioral Intentions

Lastly, the overall dimension of *behavioral intentions* did not indicate to be significantly affected by the company's usage of a crowdsourcing campaign. Consequently, no effect could be determined for the first two scale items, namely the customers' *willingness to recommend the company to friends* (IN1) as well as their *future purchase intentions* (IN2). However, the One-way ANOVA revealed a statistically significant main effect of crowdsourcing on the respondents' *willingness to pay a premium price* (IN3), [F(1, 58) = 3.146, p = .081, $\omega^2 = .035$]. The independent variable accounted for around 3.5% of the total variance in the variable of *willingness to pay a premium price*, indicating a small effect.

H7 (REJECTED): *Non-participants tend to have more favorable behavioral intentions towards crowdsourcing organizations than towards non-crowdsourcing organizations.*

Table 5.9: ANOVA Results - Behavioral Intentions

Behavioral Intentions	F-Ratio	Significance Value	Effect Size
IN1	.000	.984	ns
IN2	1.387	.244	ns
IN3	3.146	.081	.035
Behavioral Intentions (Composite)	1.127	.203	ns

5.3 Participants' Differences in Brand Perceptions and Behavioral Intentions – Subsample without Strong Critics of McDonald's

After having analyzed the complete data set, the researchers also ran the One-way ANOVA test for the subsample, without the strong critics of McDonald's (see appendix VI, E). Those critics answered the questions about the mediating variable ("I am a frequent customer at McDonald's") and OA2 ("I like McDonald's as a company") with strongly disagree. Both data sets will be summarized and compared at the end of Chapter 5.

5.3.1 Composite Variables

As aforementioned, the strong critics were removed from the data set in the clearance process as they could have possibly distorted the overall findings capturing non-participants' brand perceptions and behavioral intentions. The following findings could be revealed by having run the One-way ANOVA:

All significant values are reported at a significance level of $p \leq .1$. Out of the seven overall dimensions, five turned out to be significantly stimulated by the independent

variable, the company's activity in crowdsourcing campaigns, compared to just two in the complete data set. There was a significant effect of crowdsourcing on non-participants' *brand awareness* [$F(1, 50) = 8.629, p = .005, \omega^2 = .128$], *brand loyalty* [$F(1, 50) = 9.491, p = .003, \omega^2 = .140$] as well as on the respondents' *perceived brand personality* [$F(1, 50) = 6.926, p = .011, \omega^2 = .102$]. On these three variables the crowdsourcing activity had a large effect, accounting for approximately 12.8% of the total variance of dependent variable of *brand awareness*, 14.0% of the total variance of *brand loyalty* and 10.2% of the variance in the dimension *brand personality*. The One-way ANOVA also revealed that crowdsourcing had a statistically significant main effect on respondents' *organizational associations* [$F(1, 50) = 5.983, p = .018, \omega^2 = .087$] and on their *behavioral intentions* [$F(1, 50) = 4.313, p = .043, \omega^2 = .060$]. Again, it can be reported that the independent variable roughly accounted for 8.7% of the total variance in the dependent variable of *organizational associations* and for around 6% of the total variance in the dependent variable of customers' *behavioral intentions*. No significant effects could be determined for the remaining CBBE dimensions, *perceived quality of the brand* and *perceived value*.

Looking at the means qualitatively, it can also be stated for the subsample that the means of the experimental group were all higher than the means of the control group, except for *perceived quality*. In contrast to the complete data set, only one item of the dimension *perceived quality* (PQ3), showed a larger value for the control group (compare appendix VI, F).

Table 5.10: ANOVA Results Subsample - Composite Variables

Dimension	F-Ratio	Significance Value	Effect Size
Brand Awareness	8.629	.005	.128
Perceived Quality	.019	.890	ns
Brand Loyalty	9.491	.003	.140
Perceived Value	1.612	.210	ns
Brand Personality	6.926	.011	.102
Organizational Associations	5.983	.018	.087
Behavioral Intentions	4.313	.043	.060

5.3.2 Single Items

As before, the second step lied in taking a closer look at the individual scale items in order to identify more detailed differences within the overall CBBE dimensions. The following was found out:

Brand Awareness

Referring to the first CBBE dimension of brand awareness which was significantly affected by the independent variable, three out of four scale items supported this overall finding. The One-way ANOVA revealed a statistically significant effect of the company's activity in crowdsourcing on non-participating customers' ability to remember the brand from *top-of-mind* (AW1) [$F(1, 50) = 6.382, p = .015, \omega^2 = .094$], on their *knowledge of the brand* (AW2) [$F(1, 50) = 7.562, p = .008, \omega^2 = .112$] as well as their ability to *recognize the brand quickly* (AW3) [$F(1, 50) = 3.897, p = .054, \omega^2 = .453$]. In this regard, crowdsourcing accounted for 9.4% of the variation in *top-of-mind*, 11.2% of the variation in *brand knowledge* and 45.3% of the variation of *brand recognition*, the largest effect of all single items. No significant effect could be determined for the fourth scale item of brand awareness, *brand opinion* (AW4).

H1 (SUPPORTED): *Non-participants tend to have a higher awareness for crowdsourcing brands than for non-crowdsourcing brands.*

Table 5.11: ANOVA Results Subsample - Brand Awareness

Brand Awareness	F-Ratio	Significance Value	Effect Size
AW1	6.382	.015	.094
AW2	7.562	.008	.112
AW3	3.897	.054	.453
AW4	.095	.759	ns
Brand Awareness (Composite)	8.629	.005	.128

Perceived Quality of the Brand

The second CBBE dimension, *perceived quality of the brand*, did not indicate to be significantly affected by the independent variable. Hence, Hypothesis 2 needed to be rejected for the subsample. As shown in detail in table 5.12, all four scale items, *product quality* (PQ1), *product variety* (PQ2), *customer service* (PQ3) and *store ambience* (PQ4), were not significantly stimulated by the implementation of crowdsourcing.

H2 (REJECTED): *Non-participants tend to perceive crowdsourcing brands being of higher quality than non-crowdsourcing brands.*

Table 5.12: ANOVA Results Subsample - Perceived Quality

Perceived Quality	F-Ratio	Significance Value	Effect Size
PQ1	.544	.464	ns
PQ2	.039	.843	ns
PQ3	.034	.854	ns
PQ4	.113	.297	ns
Perceived Quality (Composite)	.019	.890	ns

Brand Loyalty

The conducted One-way ANOVA revealed a significant effect of crowdsourcing on non-respondents' overall *brand loyalty*. The same held true for all three single items of the dimension so that Hypothesis 3 could be supported. In detail, a statistically significant main effect of crowdsourcing was determined on the respondents' consideration of *being a loyal customer* (BL1) [$F(1, 50) = 6.852, p = .012, \omega^2 = .101$], their *brand choice* (BL2) [$F(1, 50) = 10.300, p = .002, \omega^2 = .152$] as well as their *brand preference* (BL3) [$F(1, 50) = 2.991, p = .090, \omega^2 = .037$]. This indicates that the company's activity in crowdsourcing accounted for approximately 10.1% of the total variance in the dependent variable of *BL1*, 15.2% of *BL2* and lastly, around 3.7% in the total variance of *BL3*.

H3 (SUPPORTED): *Non-participants tend to be more loyal towards crowdsourcing brands than towards non-crowdsourcing brands.*

Table 5.13: ANOVA Results Subsample - Brand Loyalty

Brand Loyalty	F-Ratio	Significance Value	Effect Size
BL1	6.852	.012	.101
BL2	10.300	.002	.152
BL3	2.991	.090	.037
Brand Loyalty (Composite)	9.491	.003	.140

Perceived Value

Perceived value represents the first sub dimension of the CBBE dimension of brand associations, which was not significantly affected by the company's activity in crowdsourcing. The One-way ANOVA did also not reveal a statistically main effect of crowdsourcing on the single items of the dimension, the respondents' perception of having *good value for money* when buying the brand (PV1) and their perception of being able to *choose from a variety of products to buy with a low budget* (PV2) (compare table 5.14).

H4 (REJECTED): *Non-participants tend to perceive crowdsourcing brands being of higher value than non-crowdsourcing brands.*

Table 5.14: ANOVA Results Subsample - Perceived Value

Perceived Value	F-Ratio	Significance Value	Effect Size
PV1	2.069	.157	ns
PV2	.235	.630	ns
Perceived Value (Composite)	1.612	.210	ns

Brand Personality

Out of the 10 scale items capturing *brand personality*, the last sub dimension of brand associations, five turned out to be significantly affected by the company's crowdsourcing activity. Even though only half of the single items were significantly affected, Hypothesis 5 could still be supported. The One-way ANOVA revealed a statistically significant effect of the independent variable on the respondents' perception of dealing with an *innovative brand*. In this case two out of three items were significantly affected, namely the respondents' perception of the company *being a leader in its field* (BP1) [F(1, 50) = 4.769, p = .034, $\omega^2 = .068$] as well as their perception of the company *constantly improving its product offerings* (BP3) [F(1, 50) = 3.281, p = .076, $\omega^2 = .042$]. Three more single brand traits were determined to be significantly stimulated by the company's activity in crowdsourcing, encompassing *being unique* (BP8) [F(1, 50) = 5.994, p = .018, $\omega^2 = .088$], *sincere* (BP9) [F(1, 50) = 4.952, p = .031, $\omega^2 = .071$] as well as *exciting* (BP10) [F(1, 50) = 12.875, p = .001, $\omega^2 = .186$]. The brand personality trait of being exciting was the only single item out of the brand personality dimension which showed a large effect, with 18.6% of its variance being explained by the experimental treatment. The remaining brand traits, being *customer-oriented* (BP4-6) as well as *youthful* (BP7), did not turn out to be significantly affected by the implementation of crowdsourcing campaigns.

H5 (SUPPORTED): *Non-participants tend to perceive a crowdsourcing brand's personality as more favorable than a non-crowdsourcing one's.*

Table 5.15: ANOVA Results Subsample - Brand Personality

Brand Personality	F-Ratio	Significance Value	Effect Size
BP1	4.769	.034	.068
BP2	.095	.759	ns
BP3	3.281	.076	.042
BP4	2.313	.135	ns
BP5	.071	.791	ns
BP6	.813	.372	ns

BP7	1.714	.196	ns
BP8	5.994	.018	.088
BP9	4.952	.031	.071
BP10	12.875	.001	.186
Brand Personality (Composite)	6.926	.011	.102

Organizational Associations

The statistical analysis detected a significant effect of crowdsourcing on the overall CBBE dimension of *organizational associations*, the second sub dimension of brand associations. Thus, in contrast to the complete data set, Hypothesis 6 could be confirmed. The same can be reported for all three single scale items: the One-way ANOVA revealed a significant effect of the independent variable on the respondents' *trust in the company* (OA1) [$F(1, 50) = 3.927, p = .053, \omega^2 = .053$], their *likability towards the company* (OA2) [$F(1, 50) = 5.265, p = .026, \omega^2 = .076$] as well as their perception of the *company's credibility* (OA3) [$F(1, 50) = 4.266, p = .044, \omega^2 = .059$]. In other words, the company's activity in crowdsourcing accounted for 5.3% of the total variance in *trust in the company*, 7.6% of the variance in *likability towards the company* and lastly, approximately 5.9% of the total variance in the dependent variable of *the company's credibility*.

H6 (SUPPORTED): *Non-participants tend to perceive a crowdsourcing organization as more favorable than a non-crowdsourcing organization.*

Table 5.16: ANOVA Results Subsample - Organizational Associations

Organizational Associations	F-Ratio	Significance Value	Effect Size
OA1	3.927	.053	.053
OA2	5.265	.026	.076
OA3	4.266	.044	.059
Organizational Associations (Composite)	5.983	.018	.087

Behavioral Intentions

Finally, a more detailed look was taken at the single scale items of the dimension of *behavioral intentions*. The indicated overall significant effect on the dimension revealed that the knowledge of McDonald's crowdsourcing campaign indeed stimulated non-participants' brand perceptions. The One-way ANOVA showed that crowdsourcing did not significantly affected the respondents' *willingness to recommend the company to friends* (IN1). Still, a statistically significant main effect of the independent variable was identified on the customers' *future purchase intentions* (IN2) [$F(1, 50) = 3.647, p = .062, \omega^2 = .048$] as well as their *willingness to pay a premium price* (IN3) [$F(1, 50) = 7.842, p = .007, \omega^2 = .116$]. Concerning the effect size, the company's activity in crowdsourcing accounted for around 4.8% of the total variance of the dependent variable of purchase intentions and 11.6% of the willingness to pay a premium price.

H7 (SUPPORTED): *Non-participants tend to have more favorable behavioral intentions towards crowdsourcing organizations than towards non-crowdsourcing organizations.*

Table 5.17: ANOVA Results - Behavioral Intentions

Behavioral Intentions	F-Ratio	Significance Value	Effect Size
IN1	.401	.530	ns
IN2	3.647	.062	.048
IN3	7.842	.007	.116
Behavioral Intentions (Composite)	4.313	.043	.060

5.4 Interaction Effects of Demographic Variables

In the following section, it was analyzed if respondents with different demographic characteristics differ on how the crowdsourcing activity affected their brand perceptions and behavioral intentions (see appendix VI, G).

First of all, it was determined whether the respondents' gender influenced their brand perceptions. A significant effect of gender on the level of brand equity was found [$F(1, 58) = 2.86, p = .096, \omega^2 = .03$]. Thus, differences in gender accounted for 3% of the variation in brand equity. Female respondents generally showed more positive brand perceptions ($M = 51.48$), conceptualized in brand equity, than male respondents ($M = 45.82$). This does not represent a possible threat of distortion of the survey results, because the two sample groups were controlled beforehand for an equal distribution of male and female respondents. Gender had no significant effect on the level of behavioral intentions (see table 5.18).

Moreover, it was tested whether the different age groups affected the overall level of the respondents' answers. There was no significant interaction effect found for the different age groups and brand equity as well as for the age groups and behavioral intentions (for detailed values see table 5.18). This means that in the study's case of 21 to 28 year old students, age did not influence their overall brand perceptions and behavioral intentions.

Lastly, it was tested whether the fact that respondents have previously taken part in any crowdsourcing activity (apart from the McDonald's 'Mein Burger' campaign) had an influence on the level of their brand perceptions and behavioral intentions. No significant effect could be identified for the interaction between previous participation in crowdsourcing campaigns and brand equity as well as behavioral intentions.

Table 5.18: ANOVA Results - Interaction Effect of Demographic Variables

		F-Ratio	Significance Value	Effect Size
Gender	Brand Equity	2.86	0.096	0.03
	Behavioral Intentions	0.138	0.711	ns
Age	Brand Equity	0.474	0.494	ns
	Behavioral Intentions	0.202	0.655	ns
Previous Crowdsourcing Participation	Brand Equity	2.283	0.613	ns
	Behavioral Intentions	2.734	0.104	ns

5.5 Summary of Results

As summarized in table 5.19, brand equity was stimulated to a small extent by the company's activity in crowdsourcing in the complete data set. The two CBBE dimensions of *brand awareness* and *brand loyalty* were significantly affected by the implementation of crowdsourcing as a strategic marketing tool. However, the analysis showed that behavioral intentions are unlikely to change when non-participants are confronted with a crowdsourcing campaign.

Stronger effects of crowdsourcing on non-participating customers' brand perceptions and behavioral intentions were detected in the subsample, without the strong critics of McDonald's. In this regard, all dimensions turned out to be significantly affected, except *perceived quality of the brand* and *perceived value*. The mediating variable of *brand familiarity* seemed to be of particular importance for both samples, the original one as well as the subsample. Having resulted in strong effects, the mediating effects indicated that the more the respondents are familiar with the investigated brand, the more likely it is that the crowdsourcing brand leads to positive changes in their brand perceptions as well as behavioral intentions.

Table 5.19: Summary of Hypothesis Confirmation/ Rejection

Hypothesis	Dimension	Complete Data Set	Subsample Without Strong Critics
H1	Brand Awareness	Supported	Supported
H2	Perceived Quality of the Brand	Rejected	Rejected
H3	Brand Loyalty	Supported	Supported
H4	Perceived Value	Rejected	Rejected
H5	Brand Personality	Rejected	Supported
H6	Organizational Associations	Rejected	Supported
H7	Behavioral Intentions	Rejected	Supported
H8	Brand Familiarity/ Mediating	Supported	Supported

6. Conclusion

Implications for management and theoretical contributions will be illustrated in this chapter, preceded by a discussion of the preceding findings. Finally, the limitations of the study along with suggestions for future research will be presented.

6.1 Discussion

This thesis showed that online crowdsourcing campaigns can, to some extent, be used as a strategic marketing tool in order to change non-participating customers' brand perceptions and their behavioral intentions. Referring to the prior-established RQ, it was questioned **(RQ1)** to what extent a company's usage of online crowdsourcing as a strategic marketing tool for advertisement and promotion impacts non-participants' *brand perceptions*. Based on the preceding summary of results and referring to the complete data set, it can be concluded that a company's crowdsourcing activity affects non-participants' brand equity to a small extent, depending on their familiarity with that specific brand. Second, the researchers asked **(RQ2)** to what extent a company's usage of online crowdsourcing as a strategic marketing tool for advertisement and promotion impacts non-participants' *behavioral intentions* towards the brand. In this regard, no significant effect of crowdsourcing could be determined on the respondents.

Concerning the complete data set, two connections made by the researchers in the conceptual model could be confirmed (see section 3.2). First, the study's findings strengthened the claimed connection between the implementation of crowdsourcing and changes in brand equity. In line with the findings of Djelassi and Decoopman (2013) as well as Füller et al. (2013), *brand awareness* and *brand loyalty* proved to be the dimensions which were significantly linked to crowdsourcing. The study verified that non-participants tend to have a higher awareness for crowdsourcing brands and tend to be more loyal towards them compared to non-crowdsourcing brands. The researchers were surprised that particularly these two CBBE dimensions turned out to be significantly affected by the company's activity in crowdsourcing. This is because they supposed that especially *brand awareness* and *brand loyalty* require a

longer period of time in order to get stimulated compared to the remaining dimensions, considering in particular the artificial set up of the study.

Referring to the second linkage in the model, which could also be confirmed, the created connection between the company's implementation of crowdsourcing and CBBE is mediated by the factor of brand familiarity. The retrieved results supported the preliminary assumption that the more customers are familiar with the brand in question, the more will their CBBE be stimulated in a positive way. This finding reinforced the argument by Keller (2003), who stated that brand knowledge should be considered as the source of brand equity. The link was also identified by Perera and Chaminda (2013) in previous academic work. Consequently, it can be inferred that non-participants' brand perceptions and behavioral intentions could be more easily changed and improved if they do not generally hold a negative attitude towards the brand. According to theory, the surprisingly strong effect of brand familiarity does not only influence the extent to which brand perceptions and behavioral intentions are stimulated, it can also result in higher levels of trust and satisfaction with the crowdsourcing brand in the long run (Perera & Chaminda, 2013).

The third connection in the conceptual research model between positively stimulated CBBE and favorable behavioral intentions could not be supported for the complete data set. The study's findings were therefore not consistent with past research (Fuchs & Schreier, 2011). The lack of connection is especially surprising considering the fact that the dimension of *brand loyalty* turned out to be significantly affected. This contradicts the findings of researchers such as Aaker (1996a) and Yoo and Donthu (2001) who claim brand loyalty to be one of the major prerequisites leading to favorable behavioral intentions. Even though, the connection between brand loyalty and behavioral intentions could not be captured in this thesis, it can still be expected to exist based on prior studies.

Some of the study's insignificant dimensions still contained significant single items. One of these is the brand personality trait of being *exciting*, which showed a strongly significant effect and thus, reinforced the in chapter 3.1.5 stated findings of Djelassi and Decoopman (2013). The results let assume that crowdsourcing campaigns are still not expected by the majority of customers nowadays, which makes the campaigns appear as an exciting and new tool for differentiation. Furthermore the

crowdsourcing activity significantly influenced the *willingness to pay a premium price* of respondents. This corresponds with the argument of Aaker (1996a, b) and Netemeyer et al. (2004), who state that certain CBBE dimensions can lead to the customers' willingness to pay a price premium. The researchers were very surprised that this scale item turned out to be significant, even though the CBBE dimension of *perceived quality of the brand* did not. This is because of the aforementioned argument of Netemeyer et al. (2004), who associated the brand's quality with the customers' willingness to pay more for a brand. The fact that those two single items, excitement and the willingness to pay, were significantly stimulated by crowdsourcing can be considered as a first indication of crowdsourcing campaigns being an engagement tool that can possibly stimulate the brand personality and behavioral intentions, if applied correctly. Those items represent the initial stage based upon which firms could enhance the effect of crowdsourcing on brand perceptions and behavioral intentions.

All in all, it was rather foreseeable for the researchers that the study's findings were not congruent with those dealing with participants of engagement methods (Dijk et al., 2014; Fuchs & Schreier, 2011). When having derived the claimed hypotheses from existing findings concerning participants (see chapter 3.1), the direct and active engagement of participants with the crowdsourcing company played an essential role in stimulating brand perceptions and behavioral intentions (e.g. Dijk et al., 2014; Hollebeek, 2011; Füller, 2010). As the engagement of non-participants is considerably lower due to their passive role, brand perceptions as well as behavioral intentions can therefore only be stimulated to a smaller extent.

In contrast to those expected findings, it was surprising that female customers seemed to be more stimulated in their brand perceptions by the means of crowdsourcing than male customers. This is in line with Dijk et al. (2014), who examined an effect of co-creation on the brand personality perceptions of women. They explained the outcome by referring to Kempf, Laczniak and Smith (2006), who in turn assume that women tend to be more sensitive towards brand cognitions in advertisement than men during product trial. Thus, the results let assume that female non-participants' are more sensitive to the information presented in crowdsourcing campaigns than their male counterparts.

Subsample

Considering the subsample, the researchers could identify clear differences in the findings. The conceptual model (see section 3.2) could be supported to a higher extent compared to the original data set. Not only the created linkage between the company's activity in crowdsourcing and CBBE, mediated by the customers' brand familiarity, proved to be right, also the assumption that positively stimulated CBBE is linked to favorable behavioral intentions was strengthened. Accordingly, the arguments of Aaker (1996a, b), Netemeyer et al. (2004) as well as Fuchs and Schreier (2011), who all created a connection between brand equity and the stimulation of behavioral intentions, could be strengthened and referred to the context of crowdsourcing.

The trend which was already qualitatively indicated by the means in the complete data set was reinforced in the subsample: brand perceptions of the experimental group were stimulated to a stronger extent than those of the control group. Hence, a stronger connection between the crowdsourcing activity and CBBE could be identified, as now, in addition to *brand awareness* and *brand loyalty*, also the dimensions of *brand personality* and *organizational associations* were significantly affected. Accordingly, the connections made by Fuchs and Schreier (2011) could be supported and the findings of Füller (2010, 2013) and Djelassi and Decoopman (2013) could be extended to non-participants. It left *perceived quality of the brand*, contradicting the supporting theory of Sloane (2011), and *perceived value* as the only insignificant dimensions. As the effect of crowdsourcing on the item of *willingness to pay a premium price* was even larger in the subsample, it was all the more surprising and controversial that the dimension of *perceived quality of the brand* was still insignificant. If the willingness to pay a price premium is not based on the quality of the product, there will have to be another cause. One might be the improved image of the brand through the crowdsourcing campaign, which will be further illustrated in the subsequent paragraph.

Referring to the effect sizes of the significant dimensions, it is of interest to highlight that *brand awareness*, *brand loyalty* as well as *brand personality* accounted each for more than 10% of the total variance in the dependent variables and thus, indicated a

very high effect relative to the remaining ones. As the two dimensions of *brand awareness* and *brand loyalty* were already identified as being significantly affected in the complete data set, stronger emphasis should be placed on *brand personality*, which only resulted in significant effects when having taken out the strong critics of McDonald's. In this regard, the crowdsourcing brand was perceived as more *innovative*, *unique*, *sincere* as well as *exciting*, as all for brand traits showed a significant effect. Therefore, it can be confirmed that the findings of Dijk et al. (2014), that co-creation makes non-participants perceive the brand as more sincere, also hold true for crowdsourcing. One possible reason why especially those four character traits were stimulated in this study may be the fact that they represent the general image of crowdsourcing in the public's mind. This image might then be transferred to the crowdsourcing brand itself. Since it is still a new marketing tool, crowdsourcing can appear innovative, exciting and unique to customers compared to traditional marketing tools. The companies' attempt to engage customers in value creation activities might let the companies appear as more sincere. Those potential consequences are of paramount importance for companies as they could convey a highly favorable brand image by the means of crowdsourcing and thus, could possibly also stimulate other personality traits if the image of crowdsourcing evolves. However, this also implies that if crowdsourcing is perceived as more negative in the future, so will be the brand image.

6.2 Managerial Implications and Theoretical Contribution

Essential managerial implications can be derived from the fact that non-participants' brand perceptions and behavioral intentions were considerably mediated by the factor of brand familiarity. Companies that decide to implement crowdsourcing as a tool for advertisement and promotion need to take the impact of brand familiarity strongly into account. Crowdsourcing as a strategic marketing tool seems to have a greater impact on those who do not have a strictly negative attitude towards the brand. In this case, companies can achieve highly satisfying results in terms of positive changes in brand perceptions and behavioral intentions. Nevertheless, if companies market a brand which appears to be controversial in public, they need to carefully consider the implementation of crowdsourcing campaigns. It might either result in hardly any

effects or could even turn into an unsuccessful campaign including negative feedback and press. The effect of the mediating variable clearly indicates that customers' brand attitudes and perceptions cannot be fundamentally changed by the mere implementation of crowdsourcing, but stimulated and improved to a reasonable extent.

In general, the results showed that crowdsourcing can serve as a suitable strategic marketing tool for advertisement and promotion, which can change brand perceptions and behavioral intentions, although not to the same extent for all non-participating customers. The empirical study indicated that online crowdsourcing can partly strengthen the company's brand equity. Even though this effect turned out to be rather small, it is still worthwhile to consider crowdsourcing as an additional tool in marketing and branding. This is because of two main reasons. First, the changes in brand perceptions and behavioral intentions might only amount to small benefits. However, considered in its totality, encompassing the actual value creation and the engagement of participants, crowdsourcing can be seen as worthwhile investment to not only attract participants, but non-participants alongside. Especially the financial aspect plays a convincing role in this regard: positive effects can be achieved at relatively low costs. Second, crowdsourcing is still a rather new phenomenon in the field of marketing and branding. Thus, implementing it as a tool for advertisement and promotion can make the company gain a competitive advantage over other firms.

Concerning the theoretical contribution, this study was able to add to the very small body of research concerning non-participants of crowdsourcing by examining the change in their brand perceptions and behavioral intentions. The essential contribution consisted of two developments: on the one hand, the creation of the conceptual research model highlighting the connections between crowdsourcing, CBBE and behavioral intentions and on the other hand, the compilation of survey items measuring CBBE as well as behavioral intentions, adapted to products and services of the FMCG industry. The results of the conducted survey, thereby, contributed to the literature of brand equity by having extended the theoretical concept in terms of the influence of online crowdsourcing. Along with that, also the research body about crowdsourcing in the field of marketing and branding could be extended. The study gave particular insights into the marketing effects of the engagement tool instead of merely placing emphasis on its usage to generate ideas and material for marketing

activities. The thesis proposed an approach to combine the phenomenon of crowdsourcing with the theoretical concept of brand equity as an integral model and did not only take one of its single dimensions into account.

Apart from the main contributions, the researchers considered the determined importance of brand familiarity as highly valuable and interesting. Prior research did not clearly identify the strength of its effect on brand perceptions and behavioral intentions. For that reason, brand familiarity should be taken into account for the development of future studies and the successful implementation of crowdsourcing campaigns in practice.

6.3 Limitations and Future Research

Although the survey was successfully conducted and the research questions could be answered, the research project faced some limitations, which should be taken into consideration and could possibly constitute a point of departure for future research.

First of all, due to the limited time and resources of the research project the sample was rather small, limited to German students, and the two sample groups did not turn out to be totally equal, as initially planned. Additionally, the initial sampling had to be done by recruitment from personal networks and thus, was not totally randomized. Therefore, this study can be seen as an explorative first attempt to quantify the changes in brand perception and behavioral intentions through crowdsourcing. Further research should attempt to make the results more generalizable by increasing the sample size, choosing all non-participants as the initial population and using true random sampling. As the chosen target population was young and familiar with the internet, it could also be of interest to investigate a population which is not as familiar with the internet. The awareness of a crowdsourcing campaign could have a greater influence on them, as they do not expect crowdsourcing campaigns and are not accustomed to them. Future research should also investigate if customers of different cultural backgrounds perceive crowdsourcing differently, as the present study was merely limited to German citizens.

Due to the nature of the study method being a self-completion questionnaire, the researchers could only reproduce an artificial account of the crowdsourcing activity. This might distort the findings of the study as the respondents did not experience the

crowdsourcing activity in a natural setting, where for instance non-participants are made aware of the campaign by a third party such as their friends. The lack of a social setting and longer time frame to form behavioral intentions and brand perceptions might have influenced the effect of the crowdsourcing activity on non-participants to a reasonable extent. Consequently, the researchers strongly recommend to conduct longitudinal studies on non-participants in a natural setting, which accompany a real crowdsourcing campaign of a company.

Moreover, future studies aiming to investigate how crowdsourcing influences brand equity should do further tests to improve the internal reliability of the proposed survey items and dimensions. The Cronbach's alpha value for the dimensions *awareness* and *perceived value* did not prove to be significant, even though they are, according to theory, appropriate items to measure the respective dimensions and have been tested for reliability beforehand. Hence, further tests are needed to identify items which better represent the discussed dimensions.

Another limitation of the study is the choice of the case. Prior to the survey, the researchers were not aware how many people have a very strong, often negative, opinion about McDonald's. This was mirrored in monotonous disagreeing answers to the survey questions, where respondents did not seem to differentiate between the single statements but were guided by their overall opinion about McDonald's. This largely influenced the study, as the effect of the mediating variable had to be artificially balanced between the two sample groups, because time constraints and a lack of access to more respondents prevented a renewed subsampling. Hence, one major recommendation for future studies is to control for a mediating variable like brand familiarity beforehand or choose a less controversial brand to obtain more objective results. Furthermore, the McDonald's campaign 'Mein Burger' represents a crowdsourcing campaign which got mainly positive feedback. The researchers propose to extend the research on non-participants by examining the change in perceptions of a crowdsourcing campaign which got negative feedback and publicity. It could be of interest to explore if those failed campaigns trigger a change in other dimensions of brand equity than campaigns with positive feedback and if the extent of the change is larger or smaller. As McDonald's represents a company of the FMCG sector, in which crowdsourcing is common, future research should include campaigns from

industry sectors where crowdsourcing is not as common or the activities are not widely known to public. Such sectors might for instance be durable goods like cars, which might evoke a stronger response to the knowledge of the crowdsourcing activity due to the factor of surprise.

As already stated in the introduction, more and more brands start to use crowdsourcing whether it is to create real value or to use it as a strategic marketing and promotional tool. This development of crowdsourcing becoming mainstream could also be a threat to a company's attempt to differentiate itself through initiating a crowdsourcing campaign. Therefore, it is of interest to track future developments of the phenomenon and how perceptions and behavioral intentions of non-participants might change in its course. All in all, crowdsourcing represents a phenomenon which should be closely investigated by research in the future, not only because of its current popularity, but also because new technological developments might further increase the extent and intensity of crowdsourcing campaigns.

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Appendix

I. Survey Outline

Thank you for taking the time and participating in the survey for our Master's thesis! The survey will take approximately 10 to 15 minutes to complete.

Please closely read the given information and look at the pictures first, then fill out the survey questions. Each statement can be evaluated on a scale from **strongly disagree (1)** to **strongly agree (7)**, please choose the option which seems the most appropriate to you. The middle category **(4) represents a neutral position**.

Your identity will remain anonymous and all collected data will be treated confidentially and used for the purpose of this Master's thesis only. The purpose of the study will be revealed at a later point of the study, in order to keep the responses as uninfluenced as possible.

Thank you for your help,
Sarah & Tatjana

1. Please indicate your level of agreement by choosing the response which seems the most appropriate to you (7-Point-Likert Scale):

- I am a frequent customer at McDonald's.

[Below-shown image and corresponding text for control group; non-crowdsourced]



On the above image you can see McDonald's newest burger creation - the 'McPanther'. The 'McPanther', with its unique ingredients, is part of an especially created promotional edition at McDonald's. It will only be sold at McDonald's restaurants in Germany for one week.

[Below-shown image and corresponding text for experimental group; crowdsourced]



The McDonald's burger you see in the picture is the 'Mc Panther' and has been created by the customer Duanne M., during McDonald's 'Mein Burger' campaign. During this campaign, customers were invited to create their own burger online. People could use the 'Burger Configurator' tool to choose from various ingredients to create their dream burger and give it a personalized name. McDonald's also provided the participants with do-it-yourself tools to create personalized banners, videos and posters to promote their burger online. On the 'Mein Burger' campaign website, people could vote for their favorite burgers. The ten burgers with the most votes were prepared in a test kitchen by the contestants and a jury chose the five finalists, among them the 'McPanther'. The five finalist burgers were then produced and sold for one week each at McDonald's in Germany. The five finalist burgers and their creator also got their own TV commercials. During these five weeks, the public could vote again to determine the winner of the competition. In the end, the 'McPanther' was the winner of the McDonald's 'Mein Burger' competition.

2. Please indicate your level of agreement by choosing the response which seems the most appropriate to you (7-Point-Likert Scale):

- When I think of fast food restaurants, McDonald's is one of the first brands that comes to my mind.
- I am familiar with the standard menu at McDonald's.
- I recognize a TV commercial of McDonald's without seeing the company's name or logo.
- One of McDonald's core values is responsibility.

3. Please indicate your level of agreement by choosing the response which seems the most appropriate to you (7-Point-Likert Scale):

- McDonald's constantly satisfies its customers with quality products.
- Compared to other fast food brands*, McDonald's offers a high variety of product offerings.
- McDonald's is known for its good customer service.
- McDonald's provides its customers with a clean and welcoming environment.

* meant are similar fast food brands like Burger King, KFC or Subway etc.

4. Please indicate your level of agreement by choosing the response which seems the most appropriate to you (7-Point-Likert Scale):

- I consider myself to be loyal to McDonald's.
- McDonald's would usually be my first choice when considering different fast food restaurants.
- I would not go to another fast food restaurant if a McDonald's restaurant is close by.

5. Please indicate your level of agreement by choosing the response which seems the most appropriate to you (7-Point-Likert Scale):

- McDonald's is good value for money.
- Even with a low budget, I can choose from a variety of products to buy.
- I trust McDonald's as a company.
- I like McDonald's as a company.
- McDonald's as a company is credible.

6. Please indicate your level of agreement by choosing the response which seems the most appropriate to you (7-Point-Likert Scale):

- McDonald's is a leader in the field of fast food.
- McDonald's is innovative
- McDonald's constantly improves its product offering
- McDonald's cares about its customers
- McDonald's has the interests of its customers at heart
- McDonald's is committed to me as a customer

7. How well do the following adjectives describe the brand McDonald's? (7-Point-Likert Scale)

-
- youthful
 - unique.
 - sincere
 - exciting

8. Please indicate your level of agreement by choosing the response which seems the most appropriate to you (7-Point-Likert Scale):

- I would recommend McDonald's to my friends..
- The next time I am going to eat at a fast food restaurant, I intend to eat at McDonald's.
- I am willing to pay more for a burger at McDonald's than at other fast food restaurants.

Purpose of the Study

The aforementioned questions aim at capturing the effects of online crowdsourcing in the field of marketing. The term crowdsourcing describes an activity in which companies engage and work together with customers to create value. Examples could be the design of new products, ideas for advertising campaigns or even solutions to scientific problems. The McDonald's campaign 'Mein Burger' is a well-known example of crowdsourcing and has enjoyed increasing popularity for several years by now: the company outsources its marketing activities (in this case the generation of new product ideas) to the public in form of an open call. Customers can then engage with the company by actively participating in form of suggesting new product ideas or simply by rating and voting for other customers' ideas.

9. Have you ever actively taken part (including voting & rating) in McDonald's crowdsourcing campaign 'Mein Burger'?

- Yes No

10. Have you ever actively taken part (including voting & rating) in any online crowdsourcing campaign?

- Yes No

Your identity will remain anonymous and all collected data will be treated confidentially and used for the purpose of this Master's thesis only.

11. Please indicate your gender:

- Female Male

12. Please indicate which age group you belong to:

- 21 - 24 years 25 - 28 years

13. Are you currently enrolled as a student?

- Yes No

14. Are you of German nationality?

- Yes No

15. Which state (Bundesland) are you from?

- drop down menu

Thank you very much for participating!

II) Letter Sent Out to Potential Research Participants

[translated version; original letter message was sent in German]

Dear XY,

In the context of our Master's Thesis at Lund University School of Management & Economics, we would kindly ask you to participate in our online survey as your profile matches our target group requirements. The survey only takes about 10-15 minutes to complete and as a matter of fact, your identity will remain anonymously and all collected data will be treated confidentially and used for the purpose of this Master's thesis only.

In order to keep your responses as uninfluenced as possible, we do not want reveal the purpose of the study at this time. However, you will be informed during the course of filling out the survey.

In case you are willing to participate, please get back to us with your age as well as the federal state that you originally come from until *[date]* the latest. Based on the provided information, we can assign you to a specific group and thus, can send you the link to our survey. The survey should then be filled out by *[date]* the latest.

Your participation would be highly appreciated.

Tatjana & Sarah

III) Interpretation of Indexed Means

Points on Likert Scale	Indexed Means
1	0
2	16.7
3	33.3
4	50
5	66.7
6	83.3
7	100

IV) Sample Group Composition, Federal State

Federal State	Control Group	Experimental Group
Baden-Württemberg	1	1
Bavaria	1	1
Berlin	5	5
Brandenburg	1	1
Hessen	3	3
Lower Saxony	6	6
Northrhine-Westphalia	7	7
Rhineland Palatinate	2	1
Saxony	2	2
Saxony-Anhalt	1	-
Schleswig Holstein	1	2
Saarland	-	1
Total	30	30

V) Applied Weights

		Sample Group	
		Control Group/Non-crowdsourced	Experimental Group/Crowd-sourced
I am a frequent customer at McDonald's.	Strongly Disagree	0.81	1.31
	Disagree	0.86	1.19
	Slightly Disagree	1.5	0.75
	Neutral	1.0	1.0
	Slightly Agree	3.03	0.6
	Agree	1.51	0.75

VI) SPSS Output

A. Reliability Testing

Brand Awareness

Reliability Statistics

Cronbach's Alpha	N of Items
,456	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
When I think of fast food restaurants, McDonald's is one of the first brands that comes to my mind.	13,89	7,796	,236	,413
I am familiar with the standard menu at McDonald's.	15,17	6,458	,219	,432
I could recognize a TV commercial of McDonald's without seeing the company's name or logo.	14,88	6,072	,397	,250
One of McDonald's core values is responsibility.	16,86	6,268	,217	,438

Perceived Quality

Reliability Statistics

Cronbach's Alpha	N of Items
,777	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
McDonald's constantly satisfies its customers with quality products.	11,88	10,956	,607	,712
Compared to other fast food brands, McDonald's offers a wide range of products.	10,59	11,885	,414	,806
McDonald's is known for its good customer service.	11,49	9,847	,789	,619
McDonald's provides a clean and welcoming environment for its customers.	11,03	9,961	,559	,741

Brand Loyalty

Reliability Statistics

Cronbach's Alpha	N of Items
,792	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I consider myself to be loyal to McDonald's.	6,18	10,398	,593	,759
McDonald's would usually be my first choice when considering different fast food restaurants.	5,52	7,928	,763	,563
I would not go to another fast food restaurant if a McDonald's restaurant is close by.	6,10	10,258	,559	,793

Perceived Value

Reliability Statistics

Cronbach's Alpha	N of Items
,517	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
McDonald's is good value for money.	4,16	1,542	,353	.
Even with a low budget, I can choose from a variety of products to buy.	3,02	2,125	,353	.

Organizational Associations

Reliability Statistics

Cronbach's Alpha	N of Items
,905	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I trust McDonald's as a company.	7,23	7,405	,840	,841
I like McDonald's as a company.	7,21	8,104	,791	,881
McDonald's as a company is credible.	7,01	8,593	,810	,868

*Brand Personality***Reliability Statistics**

Cronbach's Alpha	N of Items
,844	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
McDonald's is a leader in the field of fast food.	34,28	59,155	,422	,839
McDonald's is innovative.	35,28	53,662	,597	,824
McDonald's constantly improves its product offering.	35,37	55,253	,665	,819
McDonald's cares about its customers.	36,01	54,658	,697	,817
McDonald's has the interests of its customers at heart .	36,63	54,210	,628	,821
McDonald's is committed to me as a customer.	36,68	56,417	,583	,826
I consider McDonald's to be a youthful brand.	35,76	55,915	,444	,840
The brand McDonald's is unique.	36,85	54,905	,433	,843
The brand McDonald's is sincere.	36,89	55,518	,625	,822
The brand McDonald's is exciting.	37,10	56,520	,428	,841

*Behavioral Intentions***Reliability Statistics**

Cronbach's Alpha	N of Items
,651	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I would recommend McDonald's to my friends.	4,86	4,946	,471	,571
The next time I am going to eat at a fast food restaurant, I intend to eat at McDonald's.	5,18	4,929	,613	,320
I am willing to pay more for a burger at McDonald's than at other fast food restaurants.	6,24	8,611	,376	,679

B. Composition of Sample Group*Control Group/ Non-crowdsourced***Have you ever actively taken part (including voting & rating) in McDonald's crowdsourcing campaign 'Mein Burger'?^a**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No	30	100,0	100,0	100,0

a. Sample Group = Control Group/Non-crowdsourced

Have you ever actively taken part (including voting & rating) in any crowdsourcing campaign?^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	8	26,7	26,7	26,7
No	22	73,3	73,3	100,0
Total	30	100,0	100,0	

a. Sample Group = Control Group/Non-crowdsourced

Please indicate your gender^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Female	17	56,7	56,7	56,7
Male	13	43,3	43,3	100,0
Total	30	100,0	100,0	

a. Sample Group = Control Group/Non-crowdsourced

Please choose the age group you belong to^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 21-24	15	50,0	50,0	50,0
25-28	15	50,0	50,0	100,0
Total	30	100,0	100,0	

a. Sample Group = Control Group/Non-crowdsourced

If yes, which state (Bundesland) are you from?^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Baden-Württemberg	1	3,3	3,3	3,3
Bayern	1	3,3	3,3	6,7
Berlin	5	16,7	16,7	23,3
Brandenburg	1	3,3	3,3	26,7
Hessen	3	10,0	10,0	36,7
Niedersachsen	6	20,0	20,0	56,7
Nordrhein Westfalen	7	23,3	23,3	80,0
Rheinland-Pfalz	2	6,7	6,7	86,7
Sachsen	2	6,7	6,7	93,3
Sachsen-Anhalt	1	3,3	3,3	96,7
Schleswig-Holstein	1	3,3	3,3	100,0
Total	30	100,0	100,0	

a. Sample Group = Control Group/Non-crowdsourced

*Experimental Group/Crowdsourcing*Have you ever actively taken part (including voting & rating) in McDonald's crowdsourcing campaign 'Mein Burger'?^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No	30	100,0	100,0	100,0

a. Sample Group = Experimental Group/Crowdsourced

Have you ever actively taken part (including voting & rating) in any crowdsourcing campaign?^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	4	13,3	13,3	13,3
No	26	86,7	86,7	100,0
Total	30	100,0	100,0	

a. Sample Group = Experimental Group/Crowdsourced

Please indicate your gender^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	16	53,3	53,3	53,3
	Male	14	46,7	46,7	100,0
	Total	30	100,0	100,0	

a. Sample Group = Experimental Group/Crowdsourced

Please choose the age group you belong to^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-24	15	50,0	50,0	50,0
	25-28	15	50,0	50,0	100,0
	Total	30	100,0	100,0	

a. Sample Group = Experimental Group/Crowdsourced

If yes, which state (Bundesland) are you from?^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Baden-Württemberg	1	3,3	3,3	3,3
	Bayern	1	3,3	3,3	6,7
	Berlin	5	16,7	16,7	23,3
	Brandenburg	1	3,3	3,3	26,7
	Hessen	3	10,0	10,0	36,7
	Niedersachsen	6	20,0	20,0	56,7
	Nordrhein Westfalen	7	23,3	23,3	80,0
	Rheinland-Pfalz	1	3,3	3,3	83,3
	Saarland	1	3,3	3,3	86,7
	Sachsen	2	6,7	6,7	93,3
	Schleswig-Holstein	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

C. Mediating Effect

Correlation Mediating Variable and Brand Equity (Composite)

Correlations

		I am a frequent customer at McDonald's.	Brand_Equity
I am a frequent customer at McDonald's.	Pearson Correlation	1	,589**
	Sig. (2-tailed)		,000
	N	60	60
Brand_Equity	Pearson Correlation	,589**	1
	Sig. (2-tailed)	,000	
	N	60	60

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation Mediating Variable and Behavioral Intentions (Composite)

Correlations

		I am a frequent customer at McDonald's.	Behavioral_Intentions
I am a frequent customer at McDonald's.	Pearson Correlation	1	,637**
	Sig. (2-tailed)		,000
	N	60	60
Behavioral_Intentions	Pearson Correlation	,637**	1
	Sig. (2-tailed)	,000	
	N	60	60

** . Correlation is significant at the 0.01 level (2-tailed).

D. ANOVA Complete Data Set, Weighed

Composite Variables

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
BrandAwareness2	Between Groups	652,744	1	652,744	3,943	,052
	Within Groups	9601,667	58	165,546		
	Total	10254,412	59			
Perceived_Quality2	Between Groups	330,206	1	330,206	1,079	,303
	Within Groups	17753,647	58	306,097		
	Total	18083,853	59			
Brand_Loyalty2	Between Groups	2175,409	1	2175,409	3,801	,056
	Within Groups	33194,969	58	572,327		
	Total	35370,378	59			
Perceived_Value2	Between Groups	230,163	1	230,163	,666	,418
	Within Groups	20033,318	58	345,402		
	Total	20263,480	59			
Organizational_Associations2	Between Groups	714,247	1	714,247	1,348	,250
	Within Groups	30728,725	58	529,806		
	Total	31442,972	59			
Personality2	Between Groups	482,775	1	482,775	2,645	,109
	Within Groups	10584,597	58	182,493		
	Total	11067,372	59			
Behavioral_Intentions2	Between Groups	409,865	1	409,865	1,127	,293
	Within Groups	21100,477	58	363,801		
	Total	21510,342	59			

Single Items

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
AW1 When I think of fast food restaurants, McDonald's is one of the first brands that comes to my mind.	Between Groups	4,055	1	4,055	4,599	,036
	Within Groups	51,135	58	,882		
	Total	55,189	59			
AW2 I am familiar with the standard menu at McDonald's.	Between Groups	8,830	1	8,830	4,735	,034
	Within Groups	108,150	58	1,865		
	Total	116,980	59			
AW3 I could recognize a TV commercial of McDonald's without seeing the company's name or logo.	Between Groups	,900	1	,900	,587	,447
	Within Groups	88,898	58	1,533		
	Total	89,798	59			
AW4 One of McDonald's core values is responsibility.	Between Groups	,039	1	,039	,018	,894
	Within Groups	126,516	58	2,181		
	Total	126,555	59			
PQ1 McDonald's constantly satisfies its customers with quality products.	Between Groups	,165	1	,165	,101	,752
	Within Groups	94,459	58	1,629		
	Total	94,624	59			
PQ2 Compared to other fast food brands, McDonald's offers a wide range of products.	Between Groups	,554	1	,554	,294	,590
	Within Groups	109,347	58	1,885		
	Total	109,901	59			
PQ3 McDonald's is known for its good customer service.	Between Groups	1,360	1	1,360	,860	,358
	Within Groups	91,742	58	1,582		
	Total	93,102	59			
PQ4 McDonald's provides a clean and welcoming environment for its customers.	Between Groups	8,159	1	8,159	3,682	,060
	Within Groups	128,525	58	2,216		
	Total	136,684	59			
BL1 I consider myself to be loyal to McDonald's.	Between Groups	8,821	1	8,821	3,376	,071
	Within Groups	151,528	58	2,613		
	Total	160,350	59			
BL2 McDonald's would usually be my first choice when considering different fast food restaurants.	Between Groups	10,672	1	10,672	3,184	,080
	Within Groups	194,393	58	3,352		
	Total	205,065	59			
BL3 I would not go to another fast food restaurant if a McDonald's restaurant is close by.	Between Groups	4,659	1	4,659	1,578	,214
	Within Groups	171,216	58	2,952		
	Total	175,875	59			
PV1 McDonald's is good value for money.	Between Groups	2,288	1	2,288	1,078	,303
	Within Groups	123,132	58	2,123		
	Total	125,421	59			
PV2 Even with a low budget, I can choose from a variety of products to buy.	Between Groups	,095	1	,095	,060	,807
	Within Groups	90,903	58	1,567		
	Total	90,998	59			

OA1 I trust McDonald's as a company.	Between Groups	2,830	1	2,830	1,111	,296
	Within Groups	147,795	58	2,548		
	Total	150,625	59			
OA2 I like McDonald's as a company.	Between Groups	2,373	1	2,373	1,027	,315
	Within Groups	134,003	58	2,310		
	Total	136,376	59			
OA3 McDonald's as a company is credible.	Between Groups	2,521	1	2,521	1,278	,263
	Within Groups	114,451	58	1,973		
	Total	116,972	59			
BP1 McDonald's is a leader in the field of fast food.	Between Groups	1,941	1	1,941	1,623	,208
	Within Groups	69,384	58	1,196		
	Total	71,325	59			
BP2 McDonald's is innovative.	Between Groups	,601	1	,601	,318	,575
	Within Groups	109,685	58	1,891		
	Total	110,285	59			
BP3 McDonald's constantly improves its product offering.	Between Groups	2,496	1	2,496	2,051	,157
	Within Groups	70,595	58	1,217		
	Total	73,091	59			
BP4 McDonald's cares about its customers.	Between Groups	,838	1	,838	,661	,420
	Within Groups	73,581	58	1,269		
	Total	74,419	59			
BP5 McDonald's has the interests of its customers at heart .	Between Groups	,015	1	,015	,009	,924
	Within Groups	94,386	58	1,627		
	Total	94,401	59			
BP6 McDonald's is committed to me as a customer.	Between Groups	1,448	1	1,448	1,155	,287
	Within Groups	72,696	58	1,253		
	Total	74,144	59			
BP7 I consider McDonald's to be a youthful brand.	Between Groups	1,299	1	1,299	,626	,432
	Within Groups	120,251	58	2,073		
	Total	121,550	59			
BP8 The brand McDonald's is unique.	Between Groups	5,486	1	5,486	2,254	,139
	Within Groups	141,195	58	2,434		
	Total	146,681	59			
BP9 The brand McDonald's is sincere.	Between Groups	2,801	1	2,801	2,175	,146
	Within Groups	74,693	58	1,288		
	Total	77,494	59			
BP10 The brand McDonald's is exciting.	Between Groups	14,694	1	14,694	8,431	,005
	Within Groups	101,083	58	1,743		
	Total	115,777	59			
IN1 I would recommend McDonald's to my friends.	Between Groups	,001	1	,001	,000	,985
	Within Groups	185,660	58	3,201		
	Total	185,661	59			
IN2 The next time I am going to eat at a fast food restaurant, I intend to eat at McDonald's.	Between Groups	3,502	1	3,502	1,387	,244
	Within Groups	146,467	58	2,525		
	Total	149,969	59			
IN3 I am willing to pay more for a burger at McDonald's than at other fast food restaurants.	Between Groups	3,021	1	3,021	3,146	,081
	Within Groups	55,691	58	,960		
	Total	58,712	59			

E. ANOVA Subsample Without Haters, Weighed

Composite Variables

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
BrandAwareness2	Between Groups	1317,657	1	1317,657	8,629	,005
	Within Groups	7635,151	50	152,703		
	Total	8952,808	51			
Perceived_Quality2	Between Groups	5,780	1	5,780	,019	,890
	Within Groups	14905,910	50	298,118		
	Total	14911,690	51			
Brand_Loyalty2	Between Groups	4712,272	1	4712,272	9,491	,003
	Within Groups	24826,041	50	496,521		
	Total	29538,313	51			
Perceived_Value2	Between Groups	471,696	1	471,696	1,612	,210
	Within Groups	14630,736	50	292,615		
	Total	15102,432	51			
Organizational_Associations2	Between Groups	1950,833	1	1950,833	5,983	,018
	Within Groups	16303,666	50	326,073		
	Total	18254,499	51			
Personality2	Between Groups	1080,710	1	1080,710	6,926	,011
	Within Groups	7801,918	50	156,038		
	Total	8882,628	51			
Behavioral_Intentions2	Between Groups	1338,311	1	1338,311	4,313	,043
	Within Groups	15513,063	50	310,261		
	Total	16851,374	51			

Single Items

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
AW1 When I think of fast food restaurants, McDonald's is one of the first brands that comes to my mind.	Between Groups	6,017	1	6,017	6,382	,015
	Within Groups	47,141	50	,943		
	Total	53,159	51			
AW2 I am familiar with the standard menu at McDonald's.	Between Groups	13,995	1	13,995	7,562	,008
	Within Groups	92,531	50	1,851		
	Total	106,526	51			
AW3 I could recognize a TV commercial of McDonald's without seeing the company's name or logo.	Between Groups	4,239	1	4,239	3,897	,054
	Within Groups	54,383	50	1,088		
	Total	58,622	51			
AW4 One of McDonald's core values is responsibility.	Between Groups	,211	1	,211	,095	,759
	Within Groups	110,352	50	2,207		
	Total	110,563	51			

PQ1 McDonald's constantly satisfies its customers with quality products.	Between Groups	,872	1	,872	,544	,464
	Within Groups	80,168	50	1,603		
	Total	81,040	51			
PQ2 Compared to other fast food brands, McDonald's offers a wide range of products.	Between Groups	,076	1	,076	,039	,843
	Within Groups	96,314	50	1,926		
	Total	96,389	51			
PQ3 McDonald's is known for its good customer service.	Between Groups	,056	1	,056	,034	,854
	Within Groups	82,411	50	1,648		
	Total	82,468	51			
PQ4 McDonald's provides a clean and welcoming environment for its customers.	Between Groups	2,398	1	2,398	1,113	,297
	Within Groups	107,775	50	2,156		
	Total	110,173	51			
BL1 I consider myself to be loyal to McDonald's.	Between Groups	16,476	1	16,476	6,852	,012
	Within Groups	120,218	50	2,404		
	Total	136,693	51			
BL2 McDonald's would usually be my first choice when considering different fast food restaurants.	Between Groups	28,397	1	28,397	10,300	,002
	Within Groups	137,855	50	2,757		
	Total	166,252	51			
BL3 I would not go to another fast food restaurant if a McDonald's restaurant is close by.	Between Groups	8,811	1	8,811	2,991	,090
	Within Groups	147,315	50	2,946		
	Total	156,127	51			
PV1 McDonald's is good value for money.	Between Groups	4,226	1	4,226	2,069	,157
	Within Groups	102,148	50	2,043		
	Total	106,375	51			
PV2 Even with a low budget, I can choose from a variety of products to buy.	Between Groups	,303	1	,303	,235	,630
	Within Groups	64,361	50	1,287		
	Total	64,664	51			
OA1 I trust McDonald's as a company.	Between Groups	7,434	1	7,434	3,927	,053
	Within Groups	94,641	50	1,893		
	Total	102,074	51			
OA2 I like McDonald's as a company.	Between Groups	7,697	1	7,697	5,265	,026
	Within Groups	73,098	50	1,462		
	Total	80,795	51			
OA3 McDonald's as a company is credible.	Between Groups	6,000	1	6,000	4,266	,044
	Within Groups	70,321	50	1,406		
	Total	76,320	51			
BP1 McDonald's is a leader in the field of fast food.	Between Groups	5,194	1	5,194	4,769	,034
	Within Groups	54,466	50	1,089		
	Total	59,661	51			
BP2 McDonald's is innovative.	Between Groups	,179	1	,179	,095	,759
	Within Groups	93,503	50	1,870		
	Total	93,682	51			
BP3 McDonald's constantly improves its product offering.	Between Groups	3,737	1	3,737	3,281	,076
	Within Groups	56,946	50	1,139		
	Total	60,683	51			
BP4 McDonald's cares about its customers.	Between Groups	2,468	1	2,468	2,313	,135
	Within Groups	53,349	50	1,067		
	Total	55,817	51			
BP5 McDonald's has the interests of its customers at heart.	Between Groups	,097	1	,097	,071	,791
	Within Groups	68,267	50	1,365		
	Total	68,364	51			

BP6 McDonald's is committed to me as a customer.	Between Groups	,895	1	,895	,813	,372
	Within Groups	55,021	50	1,100		
	Total	55,916	51			
BP7 I consider McDonald's to be a youthful brand.	Between Groups	3,003	1	3,003	1,714	,196
	Within Groups	87,581	50	1,752		
	Total	90,585	51			
BP8 The brand McDonald's is unique.	Between Groups	13,100	1	13,100	5,994	,018
	Within Groups	109,276	50	2,186		
	Total	122,376	51			
BP9 The brand McDonald's is sincere.	Between Groups	5,446	1	5,446	4,952	,031
	Within Groups	54,985	50	1,100		
	Total	60,431	51			
BP10 The brand McDonald's is exciting.	Between Groups	20,928	1	20,928	12,875	,001
	Within Groups	81,275	50	1,626		
	Total	102,204	51			
IN1 I would recommend McDonald's to my friends.	Between Groups	1,113	1	1,113	,401	,530
	Within Groups	138,868	50	2,777		
	Total	139,981	51			
IN2 The next time I am going to eat at a fast food restaurant, I intend to eat at McDonald's.	Between Groups	8,685	1	8,685	3,647	,062
	Within Groups	119,080	50	2,382		
	Total	127,765	51			
IN3 I am willing to pay more for a burger at McDonald's than at other fast food restaurants.	Between Groups	6,672	1	6,672	7,842	,007
	Within Groups	42,544	50	,851		
	Total	49,216	51			

F. Means

Complete Data Set – Composite Variables

Report

Mean

	Group Sample Group		
	1	2	Total
BrandAwareness2	64,4841	71,0792	67,7800
Perceived_Quality2	48,1824	43,4917	45,8382
Brand_Loyalty2	26,7566	38,7963	32,7734
Perceived_Value2	41,1866	45,1028	43,1437
Organizational_Associations2	39,4846	46,3833	42,9322
Personality2	47,3216	52,9933	50,1560
Behavioral_Intentions2	25,9629	31,1889	28,5746

Complete Data Set – Single Items

Report

Mean

	Group Sample Group		
	1	2	Total
AW1 When I think of fast food restaurants, McDonald's is one of the first brands that comes to my mind.	6,11	6,63	6,37
AW2 I am familiar with the standard menu at McDonald's.	4,72	5,49	5,10
AW3 I could recognize a TV commercial of McDonald's without seeing the company's name or logo.	5,26	5,51	5,38
AW4 One of McDonald's core values is responsibility.	3,38	3,44	3,41
PQ1 McDonald's constantly satisfies its customers with quality products.	3,06	3,17	3,12
PQ2 Compared to other fast food brands, McDonald's offers a wide range of products.	4,50	4,31	4,41
PQ3 McDonald's is known for its good customer service.	3,66	3,36	3,51
PQ4 McDonald's provides a clean and welcoming environment for its customers.	4,34	3,60	3,97
BL1 I consider myself to be loyal to McDonald's.	2,34	3,10	2,72

BL2 McDonald's would usually be my first choice when considering different fast food restaurants.	2,96	3,80	3,38
BL3 I would not go to another fast food restaurant if a McDonald's restaurant is close by.	2,52	3,08	2,80
PV1 McDonald's is good value for money.	2,82	3,21	3,02
PV2 Even with a low budget, I can choose from a variety of products to buy.	4,12	4,20	4,16
OA1 I trust McDonald's as a company.	3,28	3,71	3,49
OA2 I like McDonald's as a company.	3,32	3,71	3,51
OA3 McDonald's as a company is credible.	3,51	3,92	3,72
BP1 McDonald's is a leader in the field of fast food.	5,63	5,99	5,81
BP2 McDonald's is innovative.	4,91	4,71	4,81
BP3 McDonald's constantly improves its product offering.	4,52	4,93	4,73
BP4 McDonald's cares about its customers.	3,96	4,20	4,08
BP5 McDonald's has the interests of its customers at heart .	3,48	3,45	3,47
BP6 McDonald's is committed to me as a customer.	3,26	3,57	3,42
BP7 I consider McDonald's to be a youthful brand.	4,19	4,48	4,33
BP8 The brand McDonald's is unique.	2,94	3,55	3,25

BP9 The brand McDonald's is sincere.	2,99	3,42	3,21
BP10 The brand McDonald's is exciting.	2,50	3,49	2,99
IN1 I would recommend McDonald's to my friends.	3,27	3,28	3,28
IN2 The next time I am going to eat at a fast food restaurant, I intend to eat at McDonald's.	2,72	3,21	2,97
IN3 I am willing to pay more for a burger at McDonald's than at other fast food restaurants.	1,67	2,12	1,90

Subsample Without Strong Critics – Composite Variables

Report

Mean

	Group Sample Group		
	1	2	Total
BrandAwareness2	64,1697	74,2175	68,9211
Perceived_Quality2	48,5115	47,8460	48,1968
Brand_Loyalty2	26,8297	45,8311	35,8151
Perceived_Value2	43,3454	49,3572	46,1882
Organizational_Associations2	42,7979	55,0238	48,5793
Personality2	47,9662	57,0658	52,2692
Behavioral_Intentions2	26,7814	36,9076	31,5699

Subsample Without Strong Critics – Single Items

Report

Mean

	Group Sample Group		
	1	2	Total
AW1 When I think of fast food restaurants, McDonald's is one of the first brands that comes to my mind.	6,04	6,71	6,36
AW2 I am familiar with the standard menu at McDonald's.	4,61	5,64	5,10
AW3 I could recognize a TV commercial of McDonald's without seeing the company's name or logo.	5,25	5,82	5,52
AW4 One of McDonald's core values is responsibility.	3,51	3,63	3,57
PQ1 McDonald's constantly satisfies its customers with quality products.	3,16	3,42	3,28
PQ2 Compared to other fast food brands, McDonald's offers a wide range of products.	4,46	4,54	4,50
PQ3 McDonald's is known for its good customer service.	3,66	3,59	3,63
PQ4 McDonald's provides a clean and welcoming environment for its customers.	4,36	3,94	4,16
BL1 I consider myself to be loyal to McDonald's.	2,43	3,55	2,96

BL2 McDonald's would usually be my first choice when considering different fast food restaurants.	2,87	4,34	3,56
BL3 I would not go to another fast food restaurant if a McDonald's restaurant is close by.	2,54	3,36	2,93
PV1 McDonald's is good value for money.	2,95	3,52	3,22
PV2 Even with a low budget, I can choose from a variety of products to buy.	4,25	4,40	4,32
OA1 I trust McDonald's as a company.	3,48	4,23	3,83
OA2 I like McDonald's as a company.	3,52	4,29	3,88
OA3 McDonald's as a company is credible.	3,71	4,38	4,03
BP1 McDonald's is a leader in the field of fast food.	5,57	6,20	5,87
BP2 McDonald's is innovative.	4,90	5,02	4,96
BP3 McDonald's constantly improves its product offering.	4,54	5,07	4,79
BP4 McDonald's cares about its customers.	4,02	4,46	4,23
BP5 McDonald's has the interests of its customers at heart .	3,67	3,76	3,71
BP6 McDonald's is committed to me as a customer.	3,43	3,69	3,55
BP7 I consider McDonald's to be a youthful brand.	4,26	4,74	4,49
BP8 The brand McDonald's is unique.	2,82	3,82	3,30

BP9 The brand McDonald's is sincere.	3,08	3,72	3,38
BP10 The brand McDonald's is exciting.	2,48	3,75	3,08
IN1 I would recommend McDonald's to my friends.	3,47	3,77	3,61
IN2 The next time I am going to eat at a fast food restaurant, I intend to eat at McDonald's.	2,70	3,52	3,09
IN3 I am willing to pay more for a burger at McDonald's than at other fast food restaurants.	1,65	2,36	1,98

G. Interaction Effects of Demographic Variables

Gender and Brand Equity

Descriptives

Brand_Equity2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Female	32	51,4827	12,98932	2,30161	46,7876	56,1778	29,49	84,62
Male	28	45,8201	12,91516	2,43293	40,8297	50,8105	25,00	73,08
Total	60	48,8245	13,15679	1,69811	45,4266	52,2224	25,00	84,62

ANOVA

Brand_Equity2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	479,413	1	479,413	2,855	,096
Within Groups	9738,750	58	167,909		
Total	10218,163	59			

Gender and Behavioral Intentions

Descriptives

Brand_Equity2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Female	32	51,4827	12,98932	2,30161	46,7876	56,1778	29,49	84,62
Male	28	45,8201	12,91516	2,43293	40,8297	50,8105	25,00	73,08
Total	60	48,8245	13,15679	1,69811	45,4266	52,2224	25,00	84,62

ANOVA

Behavioral_Intentions2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	51,233	1	51,233	,138	,711
Within Groups	21459,109	58	369,985		
Total	21510,342	59			

General Crowdsourcing Participation Brand Equity

Descriptives

Brand_Equity2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Yes	12	43,7288	9,55045	2,76390	37,6414	49,8162	27,56	55,13
No	48	50,0897	13,69610	1,97501	46,1167	54,0627	25,00	84,62
Total	60	48,8245	13,15679	1,69811	45,4266	52,2224	25,00	84,62

ANOVA

Brand_Equity2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	387,017	1	387,017	2,283	,136
Within Groups	9831,146	58	169,503		
Total	10218,163	59			

General Crowdsourcing Participation Behavioral Intentions

Descriptives

Brand_Equity2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Female	32	51,4827	12,98932	2,30161	46,7876	56,1778	29,49	84,62
Male	28	45,8201	12,91516	2,43293	40,8297	50,8105	25,00	73,08
Total	60	48,8245	13,15679	1,69811	45,4266	52,2224	25,00	84,62

ANOVA

Behavioral_Intentions2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	968,249	1	968,249	2,734	,104
Within Groups	20542,093	58	354,174		
Total	21510,342	59			