



Norwegian University of  
Science and Technology

# **Master's degree thesis**

**AM521413 Mastergradsavhandling - disiplinorientert**

**Brand architecture strategy, does it matter in  
business-to-business contexts?**

A study of the Norwegian office coffee industry

Auriane Schwanen

Number of pages including this page: 143

Aalesund, 03.06.2016

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# Norwegian University of Science and Technology

*Master of international business and marketing*

## BRAND ARCHITECTURE STRATEGY, DOES IT MATTER IN BUSINESS-TO-BUSINESS CONTEXTS?

**A study of the Norwegian office coffee industry**

Auriane Schwanen

Aalesund, June 2016

## **ACKNOWLEDGEMENTS**

First of all, I would first like to thank my thesis supervisor, Mark Pasquine, for his availability and helpful guidance. His office door was always open whenever I ran into a trouble spot or had a question about my research. I am very grateful as he consistently allowed this paper to be my own work, but steered me in the right the direction whenever he thought I needed it.

Also, I would like to thank all participants, individuals and companies, of my three surveys, who have willingly shared their precious time during the data gathering process.

A very special thank to my great colleagues who have been very supporting and always available to cheer me up and motivate me during the late after work hours spent writing this thesis.

This thesis also brings the end of two amazing years spent in an incredible place. Therefore, I would like to take this occasion to thank all the people who helped me achieving success during the two past years which leaded me to be able to write and finally deliver this paper.

Last, but not least, I would like to thank you for reading this thesis. I hope this will bring you additional knowledge on branding and the field of brand architecture strategy; and wish you a good reading.

## **ABSTRACT**

The amount of researches conducted on branding in the business-to-business field across all industries is significantly less numerous than the amount of researches aiming at understanding the concept of branding in the business-to-consumer field. In addition, very few studies, if not none, have intended to get a better understanding and to quantify the Norwegian coffee market. For these two reasons, this study focuses on the Norwegian office coffee industry, and is therefore aiming at getting a better understanding of the business-to-business branding field in the Norwegian coffee industry.

Firms exhibit or implement two main types of brand architecture strategies: branded-house and house-of-brands. These two strategies differ in their essential structure and their potential costs and benefits to the corporation. Prior research has failed to understand how these branding strategies are related and interacts with the three brand equity measures; brand assets, brand strength and brand value. The main goal of this study is therefore to investigate the relationship between brand architecture strategy and brand equity as an indicator of firm performance.

To investigate this link, a focus market has been selected: the Norwegian office coffee market. In addition, a two-taxonomy brand architecture strategy has been carefully selected: branded-house and house-of-brands. And finally, the following firm performance measurement system has been chosen: brand equity, which is composed and therefore measured through brand assets, brand strength and brand value. Using these three measures of brand equity as firm performance indicators in a study focusing on brand architecture strategy is an innovative way to look at the relationship between brand structure and brand equity as this measurement system has so far never been implemented in this context.

In this multi-method study, the link between brand architecture strategy and brand performance is investigated by using two distinct surveys. The two distinct questionnaires that have been implemented and conducted have been organised as follows. The first questionnaire conducted was directed to the companies active in the Norwegian office coffee industry, while the second questionnaire was aiming at getting a better understanding of the customer preferences in this particular industry. In total, 4 firms and 138 individuals have accepted to participate in this study. In addition to these two main surveys, a third “fast-track” survey has been conducted at the end of the project in order to clarify some results observed in the two previous surveys.

The results of this research showed that in general, the house-of-brands architecture strategy seems to be associated with higher brand assets, brand strength and brand value than the branded-house architecture strategy. Therefore, on the Norwegian office coffee industry, higher brand equity levels are found in firms implementing a house-of-brands architecture strategy compared to firms implementing a branded-house architecture strategy. In addition, the average house-of-brands architecture usually is significantly older, but also requires almost ten times more employees than the average branded-house architecture. In addition, the importance of leveraging the corporate brand is also debated. Furthermore, I would like to highlight the fact that this study represents a good starting point for future research on brand architecture strategy. Finally, limitations as well as managerial implications are also discussed as part of this paper.

**Key words** – Brand architecture strategy, brand structure, branding, brand equity, business-to-business, corporate brand



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## **1. INTRODUCTION**

### ***1.1. Importance of the study***

Solid and well-known brands are powerful strategic tools and sources of sustainable competitive advantages that should be applied to improve firm performance as well as to develop durable and trusting relations with customers (Coyne, 1986; De Chernatony & McDonald, 2005; Ellwood, 2002; Ind & Bjerke, 2007; De Chernatony, 2010).

Brands play an important role in products and services differentiation; which in turn can lead to enhanced firm performance (Schmalensee, 1982; Sharp & Dawes, 2001). This differentiation can be achieved through the creation of various unique brand features; also called the intangible assets (De Chernatony & McDonald, 2005; Ellwood, 2002; Ind & Bjerke, 2007).

The value of firms was usually measured in terms of the buildings and land it owns, and later on, in terms of its tangible assets. However, academics and practitioners have realised that the real value of firms lies in the intangible assets it owns (Gu & Lev, 2001; Kaplan & Norton, 2004; Kapferer, 2008). In other words, the value lies in the minds of potential customers. For 35 years, companies have been aware that brands constitutes valuable assets and that they should consequently continuously be reinforced and nurtured by tangible innovation and intangible added values (Barwise, Higson, Likiernan & Marsh, 1990; De Chernatony & McWilliam, 1989, 1990). The pillar of a great brand rests on the straightforward principle that a brand can only begin and rest on a great product or service (Kapferer, 2008).

Over the past two decades, there has been a significant interest in branding (Keller & Lehmann, 2006), with a predominance of branding in business-to-consumer markets. As a result, branding in business-to-business markets has received little attention from academics and researchers (Beverland, Napoli & Lindgreen, 2007; Lynch & De Chernatony, 2007; Van Riel, de Mortanges, & Streukens, 2005; Leek & Christodoulides, 2011). However, it is worth mentioning that, in increasingly competitive markets, branding is of growing interest to business-to-business firms as well (Lynch & De Chernatony, 2004). The low interest for branding in business-to-business industries rests partly on the belief that brands are irrational, and that they therefore have little significance when it comes to dealing with a corporate entity that takes decisions on rational grounds (Rosenbroijer, 2001).

Most discussions on business-to-business marketing focus on the performance characteristics of the product, or on the needs of buyers addressed by the product or service's tangible features (Shaw, Giglierano & Kallis, 1989). However, studies do point out cases where, similarly to business-to-consumer markets, price and tangible features do not entirely explain the purchase decision. Intangible assets such as overall supplier reputation matter even in rational decision making, as it is in business-to-business (Mudambi, Doyle, & Wong, 1997). According to Gordon, Calantone, and di Benedetto (1993), business-to-business firms stand to gain sustainable competitive advantages through the development and strategic use of brand equity, particularly when competing in today's global economy. Furthermore, business-to-business firms tend to neglect their brand structure in favour of investments in the sales force, when in fact brands may be the best support platform their sales force could possibly hope for (Muylle et al., 2004).

Previous researches (Bahadir et al., 2008; Bharadwaj et al., 2011; Morgan & Rego, 2009; Rego et al., 2009; Petromilli et al., 2002; Wiles et al., 2012) have explored the impact that selected characteristics of brand structures can have on firm value, including, for example, the number of brands in the portfolio, the number of segments in which brands are marketed, as well as the degree to which brands compete with one another. However, only a few studies have looked into the concept of brand structure itself, and tried to understand its influence on firms, its impact on firm's organisation as well as its contribution to firm performance (Rao & Agarwal, 2004; Hsu et al., 2010; Muylle et al., 2012; Hsu et al., 2015). In addition, most of the existing studies on brand architecture strategies have focused on business-to-consumer industries (Rao & Agarwal, 2004; Hsu et al., 2010; Hsu et al., 2015). Therefore, there is still a significant lack of understanding of the influence of the different brand structures on firm performance in business-to-business industries.

In addition, this study is, to the best of my knowledge, the very first one to present brand equity as the performance measure when it comes to evaluating the different brand architecture strategies. Researchers of previous studies focusing on the performance of the various existing brand structures have opted for using measures like risks, abnormal returns (Hsu et al., 2010; Hsu et al., 2015), and Tobin's q (Rao & Agarwal, 2004) as their brand structure performance measures, or dependent variables.

Additionally, this study is also, according to my researches, the first one to look at three different measures of brand equity simultaneously: (1) brand assets (consumer-based), (2)

brand strength (market-based), and (3) brand value (financial-based), as performance measures. This way, instead of measuring only one performance indicator, this study offer a wider range of performance measures. Therefore, the risk of being narrow-minded is highly reduced by looking at separate areas of firm performance independently, as well as at the existing links between these different performance measures. Analysing the effects that the different brand structures have on the three chosen measures of brand equity could also help understand whether certain brand structures have a bigger impact on brand assets, brand strength or on brand value. This study approach the understanding of brand structure effects on business-to-business firm performance with a whole new perspective. Looking at the three indicators simultaneously helps getting a deep understanding of the present situation of a firm, pinpoint the origin of high or low performance, and therefore helps identifying strategic solutions to increase total firm performance.

Even though various researchers have investigated the effects of brand architecture strategies on firm performance (Rao & Agarwal, 2004; Hsu et al., 2010; Muylle et al., 2012; Hsu et al., 2015), never before a study has been aimed at understanding this relationship in the office coffee market.

## ***1.2. The research study***

This thesis intends to cultivate theory on the field of strategic brand management with a focus on the business-to-business Norwegian office coffee market. The main goal of this paper is to analyse and understand the benefits and limitations of the two main brand structures (Laforet & Saunders, 1994): the house-of-brands strategy, and the branded-house strategy. In this research, firms will be classified into these two brand structures from a customer point-of-view. This implies that to be able to allocate each firm in the right brand structure, the firm's offer has been looked at from everything that can be observed by the consumers (e.g. website, packaging, logo, brand names, tagline, and so on) (Laforet & Saunders, 1994, 1999, 2007; Rao et al., 2004; Hsu et al., 2010).

A focus on managerial perspectives has been chosen when writing this thesis. In addition, it aims at finding the answer to one central question: “how to best manage brands to maximise profit?” Profit is the reason why firms create brands; and customer equity is the preamble of financial equity (Kapferer, 2008). In this research, this complex causal relationship is illustrated through the analysis of three measures of brand equity in order to underline the effects that brand structures have on firm performance. These three measures include:

customer equity or brand assets, market equity or brand strength and financial equity or brand value. These 3 measures reflect three different focuses, (1) a customer-focus, (2) a market-focus, and (3) a financial focus. Until now, most researchers have chosen to focus on a single one of these variables. This study is the first one, to the best of my knowledge, to evaluate and compare the three variables simultaneously, as brand equity performance measures. In addition to analysing the effects of brand architecture on each one of these three independent variables, the links between them will also be carefully investigated and evaluated.

Brand architecture strategy is the hierarchical specification describing:

1. how many levels of brands are used,
2. whether, how, and how strongly individual brands within the company's portfolio are grouped and relate to each other, and
3. the visibility and role of the corporate master brand (Kapferer 2012; Hsu et al., 2014).

In this research, the different brand structures will be evaluated by examining:

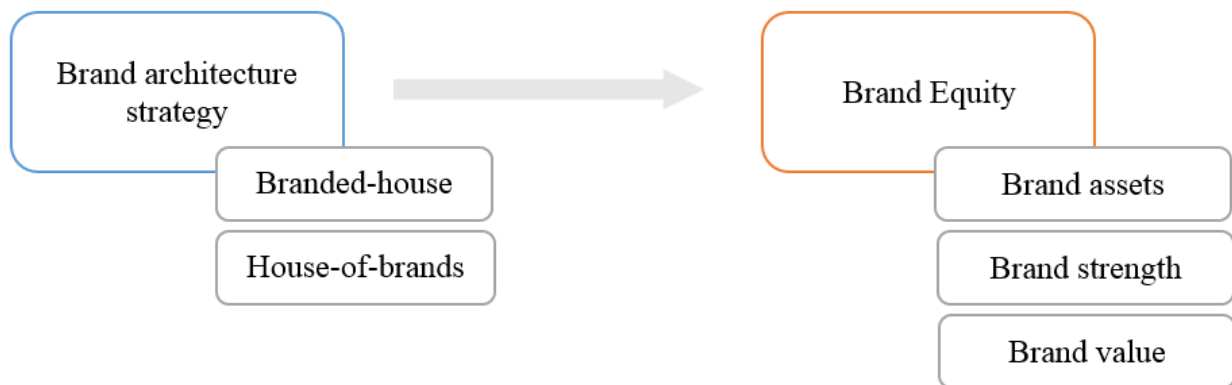
- The direct effects of the different brand structures on consumer brand equity; including brand assets, brand strength and brand value.
- The indirect effects of brand structures on consumer brand equity through multiple components such as: number of employees, age of the branch, product diversity level, marketing investment level as well as the brand reputation, and customer satisfaction.

Due to the variety of information required, the research is conducted in the form of two distinct surveys; survey 1 and survey 2. In order to understand the underlying relationships between the independent variables (brand structure), the secondary variables (number of employees, age of the branch, and so on) and the dependent variable (brand equity), the first survey is addressed directly to the studied office coffee supplier brands, while the second questionnaire is sent to the target customers of these office coffee supplier brands.

The goal of this study is to establish a relationship between the different brand architecture and the different brand equity measurement categories. Brand architecture strategies are divided in two distinct groups; house-of-brands, branded-house strategies. Brand equity will be measured through three different indicators: brand assets (customer-based), brand

strength (market-based) and finally brand value (financial-based). Measuring brand equity through three different measures reduce the risk of being narrow-minded and producing misleading results, as further debated in the methods section.

In the hypothesis section (see section 4) are detailed the direct and indirect links I am expecting to find between the two concepts of brand architecture and brand equity. Below is presented the conceptual framework on which this research is based. This model represent a guideline to this study and is further described in section 3: theoretical framework.



**Figure 1: model**

The separate brand equity construct shows how individual dimensions are related to brand equity. Setting a separate brand equity construct will help understand how each one of the three dimensions contribute to brand equity.

To measure brand equity, a three-dimension measurement system is used, as suggested by the above model. These three dimensions are: brand assets (customer-based), brand strength (market-based) and brand value (financial-based).

It is important to note that this study concerns only the business-to-business firms that are currently active on the Norwegian office coffee market, as well as their consumers. Therefore, two distinct samples are needed in this study: one composed by all firms selling coffee to other firms (business-to-business); and another one composed by the target consumers of these office coffee suppliers.

The chosen level of analysis, which is the Norwegian office coffee market, is supported by the theory. Indeed, to estimate a brand value, its profit should be identifiable, yet a brand can span many markets governed by a number of different economic mechanisms. For any given brand in any given channel, the degree to which this brand impact the customer's purchasing decision will differ depending on, for example, whether the product is on a business-to-

consumer or a business-to-business market. Suggesting that analysis should be conducted individually at the relevant level, not collectively at the overall level. This leads to one main question: “Do we have the appropriate reporting data that such an analysis requires?” (Kapferer, 2008). This question will be answered in the limitation section.

The next section sets the contexts in which this thesis has been implemented, including the story of a Norwegian coffee roastery and the current state of the Norwegian office coffee market as a whole.



## **2. CONTEXT**

### **2.1. *Jacu Coffee Roastery AS***

All businesses are sooner or later confronted to the same questions: “How should our brand evolve?”, “How to protect and leverage our brand name and brand equity?”, and “How should we structure our brand?” These are the questions the managers of Jacu Coffee Roastery were recently confronted to. These big questions constitute therefore the starting point of this thesis. It is important to highlight that the goal of this thesis is not to tell Jacu what strategy they should implement, but to give information on the current situation of the market, and on the performance levels of competitors classified by the brand architecture strategy they are currently implementing. Concrete decisions should be taken on the basis of the information given in this paper, and according to the firms’ characteristics, mission, vision, and objectives. Branding strategy is not a one-size-fits-all concept, but should be adapted to each situation.

Jacu Coffee Roastery is a dynamic start-up located in Aalesund, Norway. This fairly small company has been created in 2011 and is roasting, packing and selling specialty coffee. They are active in business-to-consumer as well as business-to-business industries. Their business-to-business activities are sub-segmented into two categories: (1) the restaurants and coffee-shops, (2) and the offices. This office segment will be the focus of attention of this study and will be, for practical purposes, called the office coffee market.

When the firm started to grow at a more rapid pace, the managers of this small Norwegian roastery started to face big branding challenges. Indeed, they have a reputation for selling very high quality coffee. However, when entering the office coffee market, the quantities supplied being much higher and the profit margin being much lower than in the business-to-consumer segment, they had no other choice but to reduce their quality in order to stay profitable. Consumers have rapidly started to feel the difference of quality and have started complaining about this change. Jacu's managers being aware of the problems linked to this quality reduction were then facing a big dilemma. They had to either (1) continue being profitable in the office coffee segment by selling lower-quality coffee and ultimately damage their brand equity; or (2) exit the office coffee segment with the risk of becoming unprofitable while preserving their brand equity.

By exposing the current theory on the topic, and looking at the current state of the industry, as well as at the competitors' best practices, I hope to give some beginning of answers to the managers of Jacu Coffee Roastery, on their branding issues.

## ***2.2. The Norwegian office coffee market***

According to Ipsos MMI for Norsk Kaffeinformasjon, in Norway, an impressive nine out of ten adults drink coffee. On average, each coffee-drinker consumes 3,7 cups of coffee every day and 3,2 cups of coffee per day during the weekends. This is equivalent to approximately 1200 cups of coffee per person per year. All in all, Norwegians drink 11 million cup of coffee every day.

This thesis aims at analysing the present situation of brands active in the office coffee market with different brand structures in order to understand the advantages and disadvantages, risks and opportunities linked to each brand structures in order to give some guidelines for companies who are facing branding issues, just as Jacu Coffee Roastery does.

The office coffee industry often represent a small sub-business of a company. Kraft Heinz Company for example own many Fast Moving Consumer Goods brands and is present in many countries around the World. The office coffee segment only represents a very small part of its total revenues. The firms offering office coffee are often subdivided in business-to-consumers and business-to-business activities also called wholesale; and then this wholesale segment is further sub-divided in the foodservice and restaurant segment, the grocery and retail segment and the office coffee distribution segment. Therefore, having access to the relevant data on this precise industry can be a real challenge, as discussed in the limitation section. In general, getting information from firms can prove to be difficult and time consuming. In addition, if the requested data is hard to find, or even unavailable, the chances of accessing the information are getting even smaller.

In total, the Norwegian office coffee market is composed by approximately fourteen companies. Of course, in addition to the fourteen most significant companies, some small local roasteries are offering coffee solutions to offices, as Jacu Coffee Roastery does, but these represents a very small part of the total Norwegian office coffee market.

When taking a closer look at these fourteen companies, one can observe that according to the classification that was chosen for this study (see section 5.2.), only three companies are currently implementing house-of-brands architecture strategies while eleven firms are implementing branded-house architecture strategies.

Four of these fourteen firms were willing to participate in this study. This paper is therefore presenting the statistics given by 30 percent of the total number of companies active on the Norwegian office coffee market. In addition, these 30 percent of companies together share approximately 57 percent of the total Norwegian office coffee market. This means that the results presented in this study concern 57 percent of the Norwegian office coffee market.

### **3. THEORETICAL FRAMEWORK**

#### **3.1. *The importance of branding***

Gardner and Levy (1955), wrote one of the earliest paper on branding; in which they suggest that brands are created when clusters of values represented by a brand match the rational and emotional needs of customers, thus enabling them to reinforce and communicate aspects of their personality.

The management of brands should be a higher level function than what existed in many companies at the end of the 1990s (Wood, 1995; Uncles et al., 1995). However, there is a risk of being too narrow-minded that is created by brand management. Brands are not everything; brands are created to give intangible benefits to a tangible product. When facing a choice, customers select an offer for its tangible as well as its intangible benefits (Kapferer, 2008). Branding alone is not enough as without a valuable product or service firms cannot achieve profit. In addition, effective organisational capabilities are also a prerequisite to achieve profit. Therefore, the brand is not enough for a firm to be profitable; it is the savant mix of valuable tangible benefits, effective organisational capabilities and powerful intangible benefits that can ultimately lead to profit. For example, if the marketing expenses required to achieve the profitable market share threshold are too high, the brand will not be able to achieve profit; and thus the brand does not constitute a sufficient asset to achieve profitability.

A brand is “*a set of mental associations, held by the consumer, which add to the perceived value of a product or service*” (Keller, 1998). These associations should of course be unique, strong and positive. In other words, a brand is basically a name that have the power to influence all present and potential future stakeholders. This can include customers, suppliers, investors, but also governments, and so on. Brands are created when there is a perceived risk and are therefore created in order to reduce perceived risk. As soon as the perceived risk disappear, the brand has no more value. This is also the reason why financial analysts prefer companies with strong brands; they are less risky. In addition, if the brand is strong, customers are more loyal, and this leads to a stability of future sales. Finally, brands protect innovators, granting them momentary exclusiveness and rewarding them for their risk-taking attitudes. This momentary exclusivity allows brands to gain market shares and this ultimately can lead to profitability (Kapferer, 2008).

The brand is all that makes a product more than just a product. It is in this that the brand differentiates and makes itself incomparable: it renders the competition uncompetitive (Kapferer, 2008). This is why the major brands are all brands that have a vision, and that are based on intimate and personal big beliefs (Edwards & Day, 2005), or intangible assets; which they render real through their tangible assets (products, marketing communications, ...). Nowadays, to differentiate itself and grow, companies must focus on brands leading to more than just “preference” but instead reach the level of “passion”.

Strong brands help the firm establish an identity in the marketplace and develop a solid customer franchise (Aaker 1996; Kapferer 1997; Keller 1998). An important managerial implication of brand management is that products change, but brands stay. After investing a lot in advertising for a new product, this same product will sooner or later become obsolete. However, the brand of this product will stay. Therefore, when advertising for the upgraded version of this product, the brand will transfer its reputation to this upgraded version of the product. It is no longer advertising that will sell the product, but the brand itself.

### ***3.2. Branding in business-to-business industries***

The vast majority of organisations competing in business-to-business markets seem to believe that building brands only makes sense in business-to-consumer markets. In business-to-consumer markets, smaller numbers of customers with more specialised knowledge and complex needs are to be served. Therefore, managers of organisations active in business-to-business markets tend to believe that personal selling outcompetes brand building (Muylle et al., 2012). As a result, they often invest a lot in their salesforce while completely neglecting brand building. However, as previously stated, the brand enhances consumer brand equity, consumer loyalty and therefore, firm profitability. Without a good brand, the work of the sales team is made quite difficult.

Leek and Christodoulides (2011) also argue that branding in business-to-business environments have largely been overlooked by brand managers. They further argue that branding in a business-to-business context is a long-term commitment, and is consequently considered to be at the expense of short-term market yields. This also explains why marketing practitioners, in general, have neglected branding.

However, while it should manifest itself differently, brand management is as important in a business-to-business as it is in a business-to-consumer context. Strong brands can yield price premium, as well as act as a stimulant to relationship building and maintenance (Kapferer,

2012). Morrison (2001), argues that many business-to-business firms misunderstand what a brand is but also the kind of value and competitive advantage it can provide. He also argue that branding continues to be considered as business-to-consumer tool, and that even those interested in branding are limited in their thinking and only consider a brand a name, logo, and tag line. Therefore, huge amounts of money and time are thrown away redesigning logos and creating new collateral materials without any understanding of what the brand truly is.

In addition to the importance of branding in business-to-business markets, Muylle, Dawar and Rangarajan (2012), also discussed the ability that strong brands have concerning the creation and upholding of trust with customers. This adds to the interest and value of exploring the unique capabilities that brands hold in these settings.

Although past research in business-to-business branding is somewhat fragmented, various studies have identified numerous benefits to firms. For suppliers, the benefits of branding include improved perceptions of quality (Cretu & Brodie, 2007), uniqueness (Michell, King, & Reast, 2001), enabling a premium price to be charged (Low & Blois, 2002; Ohnemus, 2009) and raising barriers to entry. Business-to-business branding increases buyers' confidence in as well as satisfaction with their purchase decision (Low & Blois, 2002; Michell et al., 2001) but also reduces perceived risk and uncertainty levels (Bengtsson & Servais, 2005; Mudambi, 2002; Ohnemus, 2009).

There is a lack of academic research performed in the area of business-to-business branding. This adds to the lack of branding as a practice in organisations operating in business-to-business markets. Such theoretical lack also prevents practitioners from having theoretical information in which to seek advice, guidance as well as frameworks to help them taking the appropriate decisions (Leek & Christodoulides, 2011). Despite obvious benefits, branding is not widely used across business-to-business companies possibly due to this lack of cohesive academic theory. Business-to-business branding is still in its infancy and there is a clear need for further research (Christodoulides & Leek, 2011).

The chosen area of focus in this study, is the business-to-business segment of the firm. The firms will not be studied in their globality. Instead, the emphasis is put on the business-to-business activities of Norwegian coffee suppliers. Business-to-business coffee suppliers can target many different customer segments, including the warehouses, the coffee shops, the restaurants, the offices, and so on. The segment that has been selected as the focus of this study is the one called the office coffee segment. Therefore, the sample contains exclusively the coffee suppliers who are active in the office coffee market, in Norway.

### **3.3. Brand architecture strategies**

The terms brand structure and brand architecture will be used interchangeably in this paper. The chosen brand architecture strategy specifies the structure of the brand portfolio. Most importantly, the brand architecture strategy defines the scope, roles and interrelationships of the brands included in the portfolio. The main objectives of brand architecture strategy is to create synergy, leverage and clarity within the portfolio of brands owned by a firm; but also to render these brands relevant, differentiated and energised (Aaker, 2009).

While corporate and product brands have been recognized as different concepts, they may sometimes be considered as equivalent because they are context independent (de Chernatony, 2002) and share the same objective of creating differentiation and preference (Knox and Bickerton, 2003). Corporate branding goes beyond product branding by ignoring product features and focusing on a well-defined set of values (Aaker and Joachimsthaler, 2000; Hatch and Schultz, 2001). Balmer (2001) suggests that corporate brands differ from product brands in higher strategic focus, internal as well as external targets, and incorporation of corporate strategy

What often appear as slight dissimilitude in brand architecture strategy matter in a practical sense. Indeed, the strengths and weaknesses of the various brand architectures manifest themselves in distinctly different risk/return profiles (Hsu et al., 2014). This suggests the importance of understanding and analysing the various dissimilarities between the different ways of structuring a portfolio of brands in order to maximise firm performance.

Brand extensions are an important part of the development of the firm's brand architecture strategy and can be implemented in two different ways. The first option is an upward stretch. It occurs when the firm has a strong product brand and decide to use this product brand name as its corporate brand name. This first option is well illustrated by what Mars did. At the beginning, Mars was only a chocolate bar, and it extended its range in keeping the same name (ex.: Mars ice cream). The second option exists in the case of a downward stretch, when the corporate brand is strong and the company decides to use the corporate brand name on different products in different markets. When implementing both upward and downward stretches, companies are facing opportunities, but also risks of image transfer (Martinez & Pina, 2003). Indeed, when a high-end brand is extended to low-end markets, existing customers of the brand can feel frustrated or even fooled. They bought an expensive and therefore exclusive product from this high-end brand but this same brand is now offering

low-end products as well. The brand image, reputation and equity can suffer from this type of downward stretches. When the brand extension aims at targeting different customers on various market with a different offer, the company wants to develop itself in new categories that may become dominant in the future; these extensions can be called diversification. The challenge that occurs then is whether it is better to use the corporate brand name (branded-house), one of the product-brand name (branded-house) or to create a whole new brand (house-of-brands). This is what brand architecture strategy is all about.

Through these brand extensions, companies aim at extensive growth, wider target market and thus enhanced profitability. In satisfying more customers with a wider offer or product range, the company is attempting to achieve growth. Therefore, brand management can be considered as a strategic function.

A brand architecture or structure is an organised structure of the brand portfolio that specifies brand roles and the nature of relationships between brands. A coherent brand architecture or structure can lead to impact, clarity, synergy, and leverage rather than market weakness, confusion, waste, and missed opportunities (Aaker & Joachimsthaler, 2000b). Brand architecture or structure is a strategy; it may be ideal or it may lead to losses of efficiency, or even to paralysis.

Companies usually never stop changing, improving and modifying their brand architectures. Brand architecture strategies have to evolve through time and follow consumer needs, market trends, but also the firm's organisational structure. Clearly, brand architecture is a strategic matter. Nonetheless, the choice of one structure leads to a commitment that can last several years, and it may become a source of cost cutting or of expensive inefficiencies. Brand architecture is synonymous to construction of turnover, growth and a source of competitive advantages. Brand growth implies increased complexity, and therefore, the risk of loss of image coherence, and of dilution of the brand capital (Kapferer, 2008).

Not only products are branded, another level of branding exists; corporate branding. The corporate brand does not have to be everything to everybody. Many times, the only audience for the corporate brand seems to be the employees and investors. Failure to realise the internal implications and develop internal brand-building programs causes confusion and failure (Muylle et al., 2012).



No matter which brand structure an organisation chooses, there is a need for keeping a certain level of consistency between the various units (Muyllé et al., 2012). This is the reason why the issue of brand management is so important: the corporate and the product brands have to be aligned on their values in order to show honesty, transparency, consistency and thus provide a basis of a trusting relationship with all stakeholders. This also shed a light on the importance of corporate branding.

It is not clear at which level business-to-business companies should be branding. Indeed, it is thought in business-to-business that corporate brands are more important than product brands (Aspara & Tikanen, 2008). Research is needed to determine when companies should be branding products, product lines, or product ranges rather than taking a corporate branding approach (Leek & Christodoulides, 2011).

As early as in 2000, Kapferer already argued that revealing “the brand behind the brand” and start building a corporate brand would be highly beneficial for firms. Since 1990, many firms that previously had based their success on product brands have started creating and leveraging corporate brands in an attempt to make company actions, values and missions more pertinent and to diffuse specific added value. In other words, some companies that were pure house-of-brands strategies are now slowly modifying their brand structures in an attempt to get closer to a mix between the branded-house and the house-of-brands strategies; mostly through an enhanced visibility of their corporate brand. This is part of a basic consumer trend, which is the demand for more corporate responsibility and transparency. The consumers want to know who the actors behind the products and the brands are. Take the example of Unilever; this company is well known for following a house-of-brands strategy. Unilever has always made its corporate logo as small as possible across its whole portfolio of brands, never advertised the corporate brand and kept a distinct separation between each of its product brands. In the past few years, Unilever seems to have slightly modified its previously well-established strategy. Unilever now gives more visibility to its corporate brand in, for example, positioning its corporate logo (highly distinguishable and recognisable “U”) on the upper-right corner of each one of its numerous product brands’ television commercials. The logo was also made more visible on the back-of-packs of all Unilever's products. In giving more visibility to the corporate brand, Unilever is willing to gain transparency and gain trust from the consumers. Indeed, the current trend of need of transparency and honesty seems to be pushing brand towards a savant mix between the branded-house and the house-of-brands structures.

Following the evolution of the choice of brand structure, the corporate brand already is and will continue to be increasingly present and visible through foundations, charities, but also advertising. The corporate brand speaks on behalf of the company, and signals the company's presence. Consumers do not make a complete distinction between corporate brands and product brands. What the corporation does impacts the evaluation of its various brands.

In addition, previous studies also suggest that while not being a new phenomenon (Gamble, 1967; Kapferer, 2008), brand extension is currently on the increase. Previously, when a company wished to enter a new market, it almost automatically created a whole new brand. More recently, we have seen that quite the opposite strategy is now preferred. More and more companies, when trying to enter new markets, use one of their existing product brands or even use their corporate brand name, rather than using a new brand name created for that sole purpose.

According to many practitioners, a brand should correspond to one and only one product in one market. In addition, some academics still claim that brand extensions should be avoided (Trout and Ries, 1981, 2000). However, as described above, the present situation leads to a complete reassessment. Many firms, like Unilever, have now decided to render their corporate brands more visible, while trying to simplify and reduce total amount of product brands in their portfolios. This new perspective opens new sources of growth for brands. Instead of looking at themselves only as product brands, they become concept brands, defined by a set of values and not by a single instance (Rijkenberg, 2001).

Academics have developed many different ways of categorising brand structures. According to Kapferer (2008), three big questions constitute the basis for brand structure choices: (1) "How many brand levels should be used?", (2) "What linkages exists between these brand levels?", and (3) "What visibility and role should the corporate brand have?".

What has been referred to as the brand relationship spectrum that help firms structure and organise their branded offerings in a way that best meets market conditions and company goals includes four variations of brand architecture strategy (Aaker, 2009; Aaker, 2004; Aaker & Joachimsthaler, 2000a,b; Franzen, 2009; Laforet and Saunders, 1999): (1) branded-house, (2) sub-branding, (3) endorsed branding, and (4) house-of-brands strategies. In addition, Hsu et al. (2010) added one extra variation to it, a hybrid mix of the above strategies to the spectrum which is called mixed-branding or hybrid structure.

Muylle, Dawar and Rangarajan (2012) show how business-to-business brand architecture strategy is a function of two important dimensions:

- the organisational structure and the extent to which a firm is centralised or decentralised;
- the extent to which the firm's market offerings are standardised versus customised.

They therefore suggest a totally different brand structure classification than previous researchers did. They propose a four-variation classification of brand architecture strategies including the brand stack, the brand park, the brand tower, and the brand silos, as follows:

- Brand stack: design fitting centralised organisations that market standardised offerings.
- Brand park: design fitting companies that market standardised offerings, while operating a decentralised branding approach.
- Brand tower: design fitting firms that market an offering that falls along a continuum of possibilities that is often tailored to specific customer requirements, in a centralised manner.
- Brand silos: design fitting firms that market a variety of unique and distinct customised offerings to different customer segments, in a decentralised manner (Muylle et al., 2012).

Another approach to brand structures categorisation is the one adopted by many American researchers. Their approach only includes two big categories: the house-of-brands and the branded-house (Kapferer, 2008).

Kapferer (2008) developed a brand structure categorisation based on the offer itself, comprising six distinct brand structures: (1) the product-brand strategy (and its variants: line and range brands), (2) the flexible umbrella strategy, (3) the master-brand strategy, (4) the maker's mark strategy, (5) the endorsing brand strategy, and (6) the source strategy.

The six-category approach developed by Kapferer (2008) can be simplified in grouping some of the categories together, from a customer perspective, under either a house-of-brands or a branded-house structure. The product/line/range strategy, the flexible umbrella strategy, the maker's mark strategy, and the endorsing brand strategy can be grouped under the "house-of-brands" strategy. The source strategy and the master-brand strategy can be grouped under the "branded-house" strategy. This is the approach used in this study. Two major patterns are analysed in this study:

- House-of-brands: relates to a situation of extreme freedom of management for the brands, subsidiaries, activities and divisions; where products, line or ranges bear a brand name that is different from the corporate brand name. Also, the company makes it relatively difficult for the consumer to understand the links between the different subsidiaries' brands and between the subsidiaries' brands and the corporate brand. The brands of the portfolio acts very independently. This way, companies makes it obvious for consumers to know which product is commercialised by them (Kapferer, 2008). It operates through famous brands while remaining itself discreet, if not hidden. The most famous examples of companies using this structure are Procter&Gamble and Unilever.
- Branded-house: expresses the desire to give coherence to the whole under the auspices of a brand with central values that find embodiment at the market and product level. Products, lines or ranges bear the corporate brand name. Here, the company itself is the one-single brand; the corporate brand is the source of reputation and is acting as a federating force for all product and service offerings in the portfolio (Aaker & Joachimsthaler, 2000a, b).

Branded-house strategies tends to be most used among firms having a rather narrow range of products or having a clearly defined target market, such as Lavazza in the office coffee market. Quite the opposite, house-of-brands architecture strategies, are typically found among firms such as Kraft Heinz Company or Nestlé that have multiple national or local brands. Nonetheless, these two different brand structures are continuously evolving. As previously described, both the branded-house and the house-of-brands architecture strategies seem to have a tendency to develop towards a mixed-branding structure, which as its name indicates, constitutes a mix of the two polar strategies. (Douglas, Craig & Nijssen, 2001).

Obviously the different brand structures have a substantial impact on the functioning of the firm. Indeed, different brand structures could lead to different company structures, from centralised to decentralised; from high interdependence to high independence, and so on (Muylle et al., 2012). This constitutes one additional reason why brand management truly constitutes a highly strategic function.

As part of this study, and as previously stated, I chose to follow the two-taxonomy classification of the concept of brand architecture strategy for multiple reasons, both theoretical and practical. First, on theoretical grounds, as argued by Kapferer (2008), an

interesting classification of brand architectures is that of branded-house versus house-of-brands, simply because they are two opposite strategies. The main reason that justifies my choice however, is linked to the chosen sample; which is made of the Norwegian office coffee suppliers. The number of players on this business-to-business industry being very limited, and in order to produce significant data, the best option in this situation was to group the most similar brand structure strategies into two opposite structures; the house-of-brands and the branded-house strategies.

### **3.4. Brand Equity**

Many attempts to defining brand equity have been made by academics and researchers from various domains and backgrounds. However, a lack of common terminology and philosophy within and between disciplines persists and may hinder communication (Wood, 2000). Feldwick (1996) simplifies the variety of approaches, by providing a classification of the different meanings of brand equity as:

- the total value of a brand as a separable asset approximately when it is sold, or included on a balance sheet;
- a measure of the strength of consumers' attachment to a brand;
- and a description of the associations and beliefs the consumer has about the brand.

An easier definition has been developed by Keller (1993), and is based on the idea of how value is added by the things that are linked to the brand. To him, brand equity is *“the differential effect that brand knowledge has on consumer response to the marketing of that brand”*.

Brand equity facilitates in the effectiveness of brand extensions and brand introductions. This is explained by the fact that consumers who are trusting and loyal toward a brand are willing to try to adopt brand extensions more easily (Lassar, Mittal & Sharma, 1995).

Yoo, Donthu and Lee (2000) argued that there are strong links between marketing mix elements and the dimensions of brand equity. According to them, these dimensions of brand equity are (1) perceived quality, (2) brand loyalty, as well as (3) brand associations combined with brand awareness.

In other words, brand equity is the value added to a product by its brand name, such as Dove, Apple, Nescafé, or IBM (Farquhar, Han, and Ijiri, 1991; Kamakura and Russell, 1993; Park and Srinivasan, 1994; Rangaswamy, Burke, and Oliva, 1993). Researchers have suggested

that brand equity can be estimated by subtracting the utility of physical attributes of the product from the total utility of a brand. A second way of estimating brand equity is based on the financial market value of the firm; where brand equity is defined as the incremental cash flow which accrue to branded products over unbranded products. The estimation technique extracts the value of brand equity from the value of the firm's other assets (Simon & Sullivan, 1993). As a key asset to the company, brand equity increases cash flow to the business (Simon & Sullivan, 1993). In addition, brand equity is critically important to create points of differentiation that lead to competitive advantages based on non-price competition (Aaker, 1991). Furthermore, the official Marketing Science definition of brand equity is *“the set of associations and behaviour on the part of a brand's customer, channel members and patent corporation that permits the brand to earn greater volume or greater margins than it could without the brand name”* (Leuthesser, 1988).

Academics and practitioners have long searched for the best method to value the strength of a brand, or brand equity. There is still a lot of confusion around the concept “brand equity” and no consensus on the best method to measure it have been reached yet. This is mainly explained by the fact that the measurement method that should be used varies on the context in which we want to evaluate brand equity, but can also be explained by the large number of existing definitions, concepts and measurement tools.

Brand equity comes from the combination of a financial concept (equity) and a marketing-based notion (the brand) (Aaker, 1990; Feldwick 1996). This introduces the fact of the growing awareness that professionals have towards the financial value of brands. Academics and practitioners were divided between “consumer-based brand equity” and “financial-based brand equity” measurements. However, the only way to end confusion around the brand equity domain seems to steam from creating a clear separation between brand assets, brand strength and brand value (Kapferer, 2008). Already in 1996, Feldwick had made a similar distinction between three concepts of brand equity. These three categories have also been used by Keller and Lehmann (2001) where brand asset is called “customer mind-set”, brand strength is called “product-market outcomes”, and brand value is called “financial-market outcomes”. The existing measures of brand equity are reorganised into three distinct categories. The first category, called brand assets, focuses on assessing the consumer-based sources of brand equity. The second and third categories, which are called strength and value focus on the outcomes or net benefit that a firm derives from the equity of its brands. The three distinct categories are further detailed below.

### **3.4.1. Brand assets (Kapferer, 2008) or customer mind-set (Keller & Lehmann, 2001)**

This category includes measures to assess the awareness, attitudes, associations, attachments, and loyalties that consumers have towards a brand. This first category has been the focus of numerous academic research (e.g., Aaker 1991, 1996; Ambler and Barwise 1998; Keller 1993, 2003). Kapferer (2008) recommend four indicators of brand assets or customer-based brand equity:

- Aided brand awareness: measure of the minimal resonance of the brand.
- Spontaneous brand awareness or recall: measure of saliency.
- Evoked set or consideration set: does the brand belong to the shortlist of two or three brands one would surely consider buying?
- Previous consumption: has the brand already been consumed or not?

To this list, some researchers also add the item “consumed most often”; although this item is irrelevant when it comes to durable goods, it is suitable for fast moving consumer goods (FMCG). However, according to empirical research on the item; it correlates with the evoked set, as it is linked to consumer preferences. Thus, it is not necessary to add that item in addition to the four main brand assets indicators.

Others (Aaker, 1990) maintain that brand value is composed by recognition, perceived quality, imagery, loyalty and patent quality.

As part of this study, the relationship between brand structure and brand assets will be measured. However, in addition to brand architecture strategies, many other factors can have an influence on brand assets. These other factors influencing brand assets can be for example: product quality, organisational capabilities, and marketing efforts (Yoo, Donthu and Lee, 2000).

### **3.4.2. Brand strength (Kapferer, 2008) or product-market outcomes (Keller & Lehmann, 2001)**

The benefit of brand equity should ultimately be reflected in the brand’s performance in the marketplace. A regularly mentioned such measure is price premium, that is, the ability of a brand to charge a higher price than an unbranded equivalent is able to charge (Aaker, 1991, 1996; Agarwal & Rao, 1996; Sethuraman, 2000; Sethuraman & Cole, 1997). Price premium is measured either by asking consumers how much more they would be willing to pay for a

brand than for a private label or an unbranded product, or by conducting conjoint studies in which brand name is an attribute. Other product-market outcome measures include market share, relative price (Chaudhuri and Holbrook 2001), share of category requirements (Aaker, 1996), market share adjusted by a “durability” factor (Moran 1994), the constant term in demand models (Srinivasan, 1979), the residual in a hedonic regression (Hjorth-Andersen, 1984), and the loyalty rate (Kapferer, 2008). It is important to note that a firm’s brand strength is directly influenced by the firm’s brand assets.

In this thesis, the selected measures of brand strength are market share and loyalty rate. It is important to highlight the fact the brand assets and brand value both have a direct effect on brand strength.

### **3.4.3. Brand value (Kapferer, 2008) or financial market outcomes (Keller & Lehmann, 2001)**

In short, the brand value is the ability of brands to deliver profits. It assesses the value of a brand as a financial asset; such measure includes purchase price at the time a brand is sold or acquired (Mahajan, Rao, and Srivastava, 1994), discounted cash flow valuation of licensing fees and royalties and the net discounted cash flow attributable to the brand after paying the cost of capital invested to produce and run the business and the cost of marketing (Kapferer, 2008), and so on. In this study, the net income will be used to measure brand value. The net income of a corporation is the sum of all the financial effects (positive or negative), and thus includes the effect of the brand.

Sometimes, losses are observed even when the brand adds value, this is the reason why it is interesting to not only look at one single equity variable, but instead to take each one of the three categories of brand equity measurements simultaneously into account. Indeed, focusing on only one equity measure as a performance evaluation measure is, in many cases, extremely misleading.

Of course, a multitude of factors can have an influence, either directly or indirectly, on brand value. Brand assets and brand strength both have a direct influence on brand value. Already in 1975, a study of 57 companies revealed a strong link between ROI and market share. The authors of this study discovered a positive correlation between market share and ROI. As market share increases, a business is likely to have a higher profit margin, a declining purchases-to-sales ratio, a decline in marketing costs as a percentage of sales, higher quality, and higher priced products (Buzzell, Gale and Sultan, 1975)



### 3.4.4. What else influences the three variables of brand equity?

For simplicity, the three brand equity measurement categories will be labelled as developed by Kapferer (2008): brand assets (customer measure), brand strength (market measure) and brand value (financial measure).



**Figure 2: conditional link between the three variables of brand equity**

As showed by the above model and as previously explained, there is a conditional link between these three measurement categories (Kapferer, 2008). A firm can, for example, have very high brand assets but due to, for instance, its high organisational and marketing costs, never achieve sufficient market share and thus never deliver any profits. Also, the same brand assets may produce different brand strength over time: this is a result of the amount of competitive or distributive pressure. The brand is not an end in itself, it is an instrument for companies to achieve growth and profitability; it is a business tool.

In addition, a number of other variables can influence these brand assets, brand strength and brand value. A few of them have been listed in the above sections. However, a number of these variables have been retained and will be evaluated as part of this study:

- Number of employees
- Marketing investment level
- Age of the office coffee branch
- Consumer satisfaction
- Brand reputation
- Price range

## 4. HYPOTHESIS

In this section, each hypothesis and their implications will be detailed. You will find two sub-sections: (1) the hypothesis linked to the independent variable and (2) the hypothesis linked to the moderating variables.

### ***4.1. Hypothesis: independent variable***

The mixed-branding architecture strategy, which will not be presented in this study, is the most flexible branding structure. It allows firms to selectively leverage particular brand entities to address emergent and conflicting strategy needs (Rajagopal & Sanchez, 2004). The mixed-branding strategy follows the logic of modern portfolio theory in finance (Markowitz, 1952), wherein the portfolio contains a mix of investment targets (Hsu et al., 2010). However, while the theory seems to suggest a superior performance of the mixed-branding strategy, researches have proven that the opposite seem to reflect reality more accurately (Hsu et al., 2015). In a study of 2015, Hsu, Fournier and Srinivasan presented a practical example of what would happen to a \$1000 investment made in three different brand structure strategies, (1) house-of-brands, (2) branded-house and (3) mixed-branding, on a ten-year period of time (from 1996 to 2006):

- Mixed-branding structure: investment increase from \$1000 to \$1140.
- House-of-brands structure: investment increase from \$1000 to \$1540.
- Branded-house structure: investment increase from \$1000 to \$1820.

They argued that the stock returns associated with the mixed-branding structure, which consists of a blend of the two other architecture strategies studied, are considerably lower than the returns associated with the branded-house or the house-of-brands architecture strategy. In fact, the steepest increase in stock returns was associated with the branded-house structure. In this same study, they also proved that the mixed-branding strategy has lower associated systematic risks, and idiosyncratic risk. Finally, they concluded that the mixed-branding architecture strategy, which is quite similar to financial portfolios in which risks are diversified across various investment elements, is associated with lower returns than the two other brand structures (Hsu et al., 2010; 2015).

Furthermore, a previous research conducted by Rao, Agarwal and Dahlhoff (2004) shows that branded-house architecture strategies generate higher values of Tobin's  $q$  than house-of-brands strategies. In addition, the study conducted by Hsu, Fournier and Srinivasan (2010), directionally supported the hypothesis that the branded-house architecture strategies are associated with higher abnormal returns than house-of-brands architecture strategies. Following the results of these previous studies, I am expecting to find that the branded-house architecture strategy is the strategy leading to the highest brand value level, in the Norwegian office coffee market.

The degree of synergy between the corporate brand and the product brand depends on the brand architecture (Keller, 1998; Varadarajan et al., 2006). In a branded-house architecture strategy, the corporate brand name is used throughout the entire firm's offer (Petromilli et al., 2002). This means that the corporate brand name is used on each and every products and services provided by the corporation. This consistency in the brand name, communication and visual identity observed in branded-house architecture strategy should lead to a greater level of brand awareness, brand recognition, and brand loyalty which in turn would lead to a higher level of customer-based corporate brand equity (Han et al., 2015), named brand assets and brand strength in this study.

However, the above assumption stating that branded-house strategies lead to greater level of brand assets (Han et al., 2015) does not mean that house-of-brands architecture strategies leads to weak brand assets. Indeed, there is an important distinction that has to be made here between corporate brand and secondary brands or product brands (Aaker and Joachimsthaler, 2000; Balmer, 2001; Hatch and Schultz, 2001). The house-of-brands structure can also lead to high levels of brand awareness and recognition (Han et al., 2015), and can therefore yield strong brand assets, but more easily at the secondary brand level than at the corporate brand level. High level of brand assets will mainly be observed at the secondary brand level (Aaker and Joachimsthaler, 2000), simply because the communication efforts are, in most cases, essentially focused on secondary brands. Firms implementing a house-of-brands structure communicate only rarely about their corporate brands. The corporate brand name is hid and in most cases the corporate logo appears only in very small characters on the back of pack. In the house-of-brands strategy, it is the secondary brand name that is advertised and communicated about, not the corporate brand name. This leads to weak corporate brand assets but strong secondary brand assets. For obvious reasons of time and resource constraints, in this research I chose to put the focus on corporate brands,

meaning that the variables brand assets, strength and value as well as the secondary independent variables are estimated only for the corporate brands. It would, of course, be of interest to analyse the three brand equity measures for each of the corporate brands as well as for each of the secondary brands, however, this would take more than one semester to be completed, and is therefore more suitable as part of a longer timespan research. However, differences between the three measures of brand equity will indicate which weak brand assets corporate brand could have strong brand assets secondary brands as part of its portfolio. Indeed, if a corporate brand has weak brand assets but high brand strength and high brand value, this could indicate strong secondary brand assets. This shows one more time the importance of simultaneously evaluating brand equity through each of the three different, but complementary measures.

At this stage, and according to each one of the above mentioned arguments, the following first hypothesis can be made: in pursuing a branded-house architecture strategy, a firm can create stronger corporate brand assets than in choosing to pursue a house-of-brands strategy. Also, firms that are currently implementing a house-of-brands architecture strategy could possibly get round this limitation by simply giving more visibility to their corporate brands. This will be further detailed and discussed in the following sections of the study, as it is part of a current trend.

**H1: The branded-house architecture strategy is associated with stronger corporate brand assets than the house-of-brands architecture strategy.**

Quite the contrary, the well-established concept of market segmentation supports the implementation of the house-of-brands architecture strategy. In short, the concept of segmentation underpins the idea that a differentiated branding approach for diverse target segments and products or services is highly beneficial to firms. Indeed, market segmentation enable firms to offer a highly differentiated product or service to each one of its various target consumer group. By segmenting the market and offering a differentiated offer to each consumer group, the firm can reach more consumer segment and ultimately capture a bigger part of the market. Already back in 1912, Shaw, who was a pioneer of marketing thought, described firms implementing a strategy of product differentiation as meeting human wants and needs more accurately than the competition. Meeting the wants and needs of various consumer targets more accurately leads to higher customer satisfaction and ultimately to higher brand strength and steeper brand equity growth (Hosseini & Shabani, 2015; Smith,

1956). This differentiation through segmentation can be achieved more easily in a house-of-brands structure than in a branded-house structure. This is due to the high degree of unit independence that is allowed by the house-of-brands architecture strategy. Indeed, the house-of-brands architecture strategy allows firms to differentiate their offers through a wide range of different brand names, called the secondary brands. Implementing a house-of-brands architecture strategy allows firms to simultaneously target various customer segments with different preferences, values and requirements; in providing a customised product to each of these segments. Of course, even if there is a great level of independence within the house-of-brands structure, the risk of opportunities and threats of image transfer persist (Martinez et al., 2003). However, in implementing a house-of-brands structure, and therefore making use of various brand names, firms can compete on a much wider range of products but also across categories. As an example, Mars own the famous chocolate bar of the same name, but also the brand Pedigree, selling pet products. By setting up a house-of-brands structure, Mars is now active on incompatible markets. If Mars used the same brand name for its chocolate bar, and its pet food products, it would have most probably ran into big troubles. To summarize, the house-of-brands architecture strategy allows a higher level of segmentation and differentiation.

With its diversified offer and high fragmentation resulting from its strong market segmentation opportunities, the house-of-brands architecture strategy leads to higher customer satisfaction, and therefore, can lead to a higher market share or brand strength, than the branded-house strategy. Similarly to the previous segmentation example, a company active in the office coffee market could more easily achieve a higher market share when pursuing a house-of-brands strategy simply because this brand structure gives the opportunity to create a different offering for each segment of consumers. House-of-brands strategies allow firms to offer different products with various values and images, to a wide range of consumer segments, while keeping customer's trust as well as both secondary and corporate brand reputation. However, firms implementing house-of-brands structures have to keep in mind the threats of image transfer linked to the creation or acquisition of a brand that has values that are in conflict with the existing portfolio of brands (Martinez et al., 2003).

A branded-house strategy will, in a majority of cases, force the firm to stick to a narrower consumer target due to the use of its sole corporate brand name through its entire portfolio. The reason is simple, the corporate brand name and thus image will be transferred to all

products and/or services and will of course have an influence on potential customer's choices. In choosing to use the corporate brand name throughout the whole range of products and services offered, in most cases, the corporation can only target a few segments of the target market at the same time. Quite the opposite, in pursuing a house-of-brands architecture strategy, firms can more easily target many, if not all segments on various markets as well as entering entirely new markets with very low risk of damaging the corporate brand.

Moreover, in a house-of-brands structure, all entities controlled by the corporation are independent. Therefore, the brand images seem to be more stable than in a branded-house structure. Indeed, if a scandal occurs in one of the product brands owned by the firm or at the corporate brand level, a negative effect will probably arise (Shenin, 2000; Thorbjørnsen, 2005; Dwivedi et al., 2010), but as each of the product brands are independent and well separated from each other, the spreading of the negative feedback effect will be limited. In other words, in a house-of-brands structure, if a scandal occurs in product brand A, B, C, and so on ... the corporate brand will most likely be less affected by this scandal than in the case of a branded-house structure (Milberg et al., 1997).

Quite the opposite, in the case of a branded-house structure, if a scandal touches any segment of the firm, it will affect the image of the whole firm; and therefore its performance. The risk of negative image spread between different units of the same firm is much higher in branded-house structures (Keller & Sood, 2003; Thorbjørnsen, 2005). This can be explained by the fact that, in branded-house structures, the same brand name is used on all products or services provided by the firm; while in house-of-brands structures, each product bears a different brand name, thus consumers often do not realise that various product brands they frequently use are owned by the same corporation.

These characteristics of the different brand structures firms can choose from are the basis for the second hypothesis of this study. In this second hypothesis, it is argued that, since house-of-brands structure allows firm to target many various consumers segments, or even all consumer segments, at the same time and without damaging its brand assets, house-of-brands structures lead to higher corporate brand strength which is measured by corporate market share than branded-house structures. Also, the image and reputation protection maximised by the house-of-brands structure offer stability to firm implementing this brand structure; which also is a prerequisite for brand strength. Hence:

**H2: House-of-brands (HOB) architecture strategy is associated with higher corporate brand strength than branded-house (BH) architecture strategy.**

One limitation can be spotted following this analysis. While the house-of-brands structure allows firms to target all customer segments in all markets at the same time with limited risks of damaging brand assets of either the corporate brand or the secondary brands, it also fail to leverage a valuable asset of the firm. This valuable asset that the firm often does not manage or is not willing to leverage is the corporate brand. This can sound surprising as the essence of the house-of-brands structure lies in the fact that product brands are created for the products sold by the firm and the corporate brand exists only as a support for all these product brands. However, the corporate brand name has been created, and exists. When implementing a house-of-brands, firms are investing in finding a corporate brand name, logo, and so on ... So why not maximising the benefits that can stem from this existing corporate brand name? That is a question firms have started to address only very recently. Some firms have spotted this loss of efficiency and have slowly started to try to leverage their corporate brands. Unilever and Procter & Gamble, for example, have started using their corporate brand name much more intensively as corporate social responsibility communication tool. These two huge companies are now providing all their product brands with an environmentally-friendly and socially-responsible image essentially through their corporate brand names. This very smart way of using the corporate brand name represent a significant source of competitive advantage. This is an interesting evolution and trend in the branding field which will be further developed and discussed in other parts of this study.

#### ***4.2. Hypothesis: moderating variables***

The house-of-brands architecture strategy is basically a tool that helps corporations to structure and differentiate their offer (Keller, 2014). With a house-of-brand strategy, firms can segment the market and offer adapted solutions to different customers on various markets (Uggla, 2014). Each product-brand has a different target market and is independent from all the other product-brands owned by the same firm. In a house-of-brands structure, each product-brand being independent, the image transfer between the entities owned by the firm is much lower than in the branded-house architecture strategy (Keller & Sood, 2003; Thorbjørnsen, 2005). This allows the corporation to own product-brands with different images and without conflicting or influencing each other.

However, it is worth mentioning that there is still a risk of image contamination between product-brands as well as between product-brands and the corporate brand; but this risk is lower in the house-of-brands than in the branded-house architecture strategy (Milberg et al.,

1997). Indeed, in a house-of-brands the corporate brand name is very discreet, almost hidden. Therefore, customers less easily manage to understand the relationship between the brands owned by the corporation.

In a branded-house architecture strategy, the corporate brand name is directly transferred to all entities of the corporation. This shows the importance of consistency of image and quality level throughout the whole corporation, in order to avoid confusion of consumers about the firm's offer. If consumers are confused by what the firm stands for, and what exactly they are offering, the performance of this firm will most likely suffer. Brands and by extension brand image as well as offer consistency constitute the basis to all branding strategy processes. Therefore, by choosing to pursue a house-of-brands architecture strategy, the corporation can achieve great differentiation between its own product-brands and can more easily offer low, middle, and high quality, while managing to protect each of its entities (Shenin, 2000; Thorbjørnsen, 2005; Dwivedi et al., 2010). This is why a hypothesis can be developed on the assumption that we usually can find a wider quality diversity between the products or services offered by a firm following a house-of-brands structure than by a firm following a branded-house structure.

**H3: The house-of-brands strategy is associated with wider price range than the branded-house architecture strategy.**

In branded-house architecture strategies, the corporate brand name is used both for the corporate brand and for all product-brands owned by the firm. In other words, the corporate brand name appears on each and every products or services provided by the firm. This generally leads to higher corporate brand awareness and thus higher corporate brand reputation (Han et al., 2015).

In the case of a house-of-brands architecture strategy, the corporate brand name is not used at the product-brand level. None of the products or services provided by the firm bears the corporate brand name. For example, Unilever or Procter & Gamble both own a large number of product-brands; but none of these product-brands bears the corporate brand name. Even if in both cases, the corporate brand logo discreetly appears on all products owned by the corporation, consumers often are not aware of these corporate brand names. Consumers often are familiar with the logo of these corporate brands, but could not recall anything else about these corporate brands. This shows that the corporate brand often has higher awareness



and therefore reputation in the case of a branded-house than in a house-of-brands; as in the latter architecture strategy, consumers often do not know the corporate brand of products they use daily. This is probably the reason why Unilever has recently tried to give more visibility to its logo and corporate brand name. This way, Unilever can achieve a higher corporate brand awareness and thus corporate brand reputation. This leads to the fourth hypothesis of this study.

**H4: The branded-house architecture strategy is associated with higher corporate brand reputation than the house-of-brands architecture strategy.**

A house-of-brands architecture is often built on a complex organisation of product brands. To support this complex organisation, employees are required at the corporate brand level as well as in each of the various product brands that compose this firm. In other words, the organisation that is required by the house-of-brands structure is composed by more intermediary levels than in the case of a simpler organisation such as in the branded-house structure; where the corporate brand name is used throughout the whole company.

Also, house-of-brands require a bigger differentiation and separation between the numerous product-brands as well as between the corporate brand and the product-brands. To illustrate this, we can look at the case of Dove, a product-brand of Unilever's wide portfolio of brands. Through the Dove Self-Esteem project<sup>1</sup>, Dove is associated with self-esteem, but also respect, simplicity, purity and so on. However, following its many successful campaign moves, Dove is yet often depicted as hypocritical<sup>2</sup>, as seen on dozens of websites. For example, on adweek.com they wrote about Dove's "Real Beauty" campaign, stating that *"It is hypocritical because it comes from Unilever, which also makes Axe, Slim-Fast and more"*<sup>3</sup>. In addition, Laura Stampler published on businessinsider.com that *"It's hypocritical for an ad aiming to instill healthy body images to come from Unilever, a company that makes a business of marginalizing women in Axe campaigns"*<sup>4</sup>. Plenty of similar articles can easily be found online. In other words, the reason why Dove has a hypocritical image is simple, some consumers have realised that Dove is owned by Unilever, and that Unilever also owns Axe. Dove and Axe are defending conflicting values about

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<sup>1</sup> <http://selfesteem.dove.co.uk/>

<sup>2</sup> <http://jezebel.com/310320/dove-vs-axe-is-unilever-hypocritical>

<sup>3</sup> <http://www.adweek.com/adfreak/5-reasons-why-some-critics-are-hating-doves-real-beauty-sketches-video-148772>

<sup>4</sup> <http://www.businessinsider.com/why-people-hate-doves-real-beauty-ad-2013-4?IR=T>

women and beauty in general. The fact that both brands are part of the same company negatively affects Dove, but also Unilever, the corporate brand and can weaken Axe's strategy. In other words, the separation and distance between the product-brands can be a very important issue in the case of a house-of-brands structure, as each of the product-brands often stands for very different or even conflicting values; this problem is commonly called negative feedback effect (Shenin, 2000; Thorbjørnsen, 2005; Dwivedi et al., 2010). This gives a hint on the large number of employees required to manage both all the different product-brands but also the corporate brand separately but efficiently.

Quite the opposite, a better synchronisation is easily observed in firms implementing a branded-house architecture strategy, as the corporate brand name, but also the brand image, values and associations are transferred throughout the entire range of product or service brands (Pauwels Delassus & Mogos Descotes, 2012). The organisational structure of a branded-house is more straightforward and thus leads to the possibility of having a smaller number of employees, while staying as effective as in the house-of-brands structure. This constitutes the basis for the fifth hypothesis of this study.

**H5: The house-of-brands architecture strategy is associated with higher number of employees than the branded-house architecture strategy.**

Corporations sometimes purposively choose to pursue a house-of-brands strategy. On the other hand, the implementation of a rebranding or of a house-of-brands structure is also often an unintended consequence of mergers and acquisitions (Muzellec & Lambkin, 2005; Franzen, 2009).

In other words, it seems that young corporations or start-ups usually naturally pursue a branded-house architecture strategy. The branded-house architecture strategy is quite straightforward and is the most logic and simple way to organise the firm's offer. While growing, and facing new challenges, brand managers are pushed to take decisions about market segmentation but also about post mergers and acquisitions branding strategies; which leads to different brand architecture such as the house-of-brands architecture strategy.

**H6: House-of-brands (HOB) strategy is associated with older firm branch than branded-house (BH) architecture strategy.**

Firms implementing a house-of-brands structure are able to create a distinct offer for each consumer segment. This flexibility in the segmentation allows firms to offer various products that are almost tailor-made to an infinite number of customers segment. The hypothesis can be made that this opportunity of creating a highly differentiated offer leads to higher customer satisfaction (Athanassopoulos et al., 2000). Indeed, as the product is more adapted to consumers, their satisfaction towards that product or service and therefore towards the brand increases.

**H7: House-of-brands (HOB) strategy is associated with higher consumer satisfaction than branded-house (BH) architecture strategy.**

The following section, called methods, will present how these seven hypothesis as well as the model will be investigated as part of this paper. More precisely, this methods section includes information on the variables selection, implementation and evaluation method; but also on the independent variable measurement as well as on the dependent variable measurement, and finally on the other secondary independent variables. The method section will be concluded by a short summary.

## **5. METHODS**

### ***5.1. Variables selection, implementation and evaluation method***

In order to evaluate each concept included in this study, two distinct surveys have been created. In other words, this thesis represent a multi-method study. First of all, for clarity purpose, it is important to clarify the terms used in the methodology. The survey sent to the firms active in the office coffee industry is named “survey 1”, as it is the first one that had to be conducted as part of this thesis. In order to survey the customers of these firms active in the office coffee industry in Norway, I needed to know which companies were willing to participate in my study. The goal of collecting information about both the firms active in the office coffee industry, and their consumers, was to establish and uncover possible existing links between the different studied variables. The information concerning brand value, age of the office coffee branch, number of employees, and so on, had to be collected directly from the firms, while the information concerning brand assets had to be collected directly from these firms’ customers.

Therefore, the survey sent to the office coffee firms is named “survey 1” and the survey sent to the consumers of these office coffee firms is called “survey 2”.

#### **5.1.1. Design of the two questionnaires**

- **Survey 1:** company survey

The first questionnaire, named survey 1 (see appendix 5), directly targets the firms that are currently active on the Norwegian office coffee market. This survey is providing the information on the number of employees, the age of the business-to-business branch of the firm, the marketing expenditure level, the quality diversity level, but also provides an evaluation of brand strength and brand value. In total this questionnaire was comprised of eight questions.

Due to the nature of the needed information, each question comprised in this survey required an open answer. The method used to collect the needed information was through a web-based questionnaire. The selected website was [surveymonkey.com](https://www.surveymonkey.com), a popular survey website. Collecting data online is a very convenient and easy way of collecting quantitative data. The data was collected during a period of approximately one month, from the first of February 2016, until the fourth of March 2016.

The questionnaire was first sent out via email to the entire list of companies active in the Norwegian office coffee industry. The first email always contained some details on the survey itself, information about the purpose of the research and confidentiality, as well as a link to the online survey. A follow up by phone was planned one week after the first email had been sent out. After the follow-ups made by phone, and according to the information collected during these phone calls, a second round of emails was sent out to the companies who stated that they were interested in participating in the survey.

Due to some concerns from respondents about the sensitivity of the data asked in this questionnaire, the survey is confidential. Therefore, the names of the firms participating in this study will not be revealed. Please note that the four companies who took part in this survey will be named firm A, firm B, firm C, and firm D. Firm A and B are implementing a branded-house structure, while firm C and D are following a house-of-brands structure. In addition to promising confidentiality to the respondents, I also decided that, in order to install a higher level of trust, all the numbers shared by the respondents should only be approximations in percentages. These two measures were implemented built on the feedback received during the first round of emails sent out to the targeted firms. These measures proved themselves to be very helpful in building trust and getting full answers from the targeted companies.

- **Survey 2:** consumer survey

The second questionnaire, named survey 2 (see appendix 6), was sent to Norwegian office employees. The answers of this second questionnaire have been collected through a panel agency and gives information on brand reputation, customer satisfaction as well as brand assets and brand strength.

The Likert-type scale was used in this questionnaire for most of the questions, to allow consumers to respond in varying degrees. Developed by R. A. Likert in 1932, this scale represents a bipolar continuum, where the low end represents a negative response while the high end represents a positive response. This is probably the most widely used approach to scaling responses in survey research. In addition, there was one open question, and two closed questions. In total this questionnaire was comprised of twelve questions.

The selected mean used to collect the data was the web-based survey, as it is a popular, easy, practical and effective tool for receiving feedback both for business or researchers alike. The

selected website to collect the data from the consumers was [www.surveymonkey.com](http://www.surveymonkey.com), as it offers both survey design and panel services.

The survey was conducted during the period from the fifth of March 2016 to the tenth of April 2016. The link to the survey was sent out to a panel of respondents by the panel agency. A short text was placed at the beginning of the survey in order to give some information on the purpose of the questionnaire.

The following sections give details about the methodology used for each variable; including the independent variable (brand architecture strategy), the dependent variables (brand assets, brand strength and brand value), as well as the secondary independent variables.

## ***5.2. Independent variable measurement: brand architecture strategy***

### **5.2.1. Classification method: branded-house versus house-of-brands**

The selected brand structure classification is similar to the one Rao et al. (2004) adopted; which is based on the theory developed by Laforet and Saunders (1994). This Laforet and Saunders' (1994) classification is a three-category taxonomy, which includes (1) the "branded-house", (2) the "house-of-brands" and (3) the "mixed-branding" structures. However, the existing number of companies active on the Norwegian office coffee market is fairly limited, and as a result, the available sample of firms active on that specific market is rather small. For these reasons, the mixed-branding strategy has been eliminated here as all respondent firms could be classified either in house-of-brands or in branded-house strategies, this is further detailed in the next section.

To summarise, the chosen classification is a two-category taxonomy, which includes (1) the branded-house and (2) the house-of-brands architecture strategies:

Branded-house: strategy in which the corporate brand name is dominant in endorsing all parts of the company's product and service brands. FedEx is one example of a firm implementing a branded-house architecture strategy (Laforet & Saunders, 1994; Rao et al., 2004; Rubera & Droge, 2013).

House-of-brands: the company does not use its corporate brand name in its different subsidiaries. It uses individual brand names to market its products. Two well-known examples to illustrate the house-of-brands strategy are Procter & Gamble and Unilever (Laforet & Saunders, 1994; Rao et al., 2004; Rubera & Droge, 2013).

The brands advertising for their products under the corporate brand name and therefore allowing a large visibility of the corporate brand name throughout their products, product ranges and product lines, will be classified as branded-house. Conversely, the brands advertising and naming their product, product ranges, and product lines, under different brand names than the corporate brand name will be classified as house-of-brands. This classification is made through a consumer point-of-view (see section 5.2.1.).

### **5.2.1. Firm allocation in brand structures: manifest branding architecture**

Firms can be categorised in the different brand architecture strategies in various ways. A categorisation has been made on the basis of (1) the level of leverage and prominence or visibility of the corporate brand, and (2) the specific brand entity that drives consumer behaviour (Aaker 2004a; Aaker and Joachimsthaler 2000a; Franzen 2009; Laforet and Saunders 1999).

Another way of thinking about brand architecture strategy classification is by splitting the sample according to what is observable from within the firm. According to this view, the mixed-branding pattern of branding architecture strategy considers the organisational image as well as the product pattern factors to determine the brand-building strategy (Sanchez, 2004). In line with this classification of the various branding structures, Unilever and Procter & Gamble would be seen as following mixed-branding strategies, as each of these two firms considers both the organisational image and the product pattern factors.

Hsu et al. (2010) and Rao et al. (2004) adopted a third way of classifying brand architecture strategies, called the manifest branding architecture. They described it as being what is observable to the researcher. In other words, that is a classification made through customer-facing product identification cues and brand presentations on packages, store shelves, company communications, and corporate websites (Laforet & Saunders, 1994, 1999, 2007; Rao et al., 2004; Hsu et al., 2010). In this study, I chose to follow the classification method adopted by Rao et al. (2004) and Hsu et al. (2010). Therefore, a customer point of view is taken in order to classify the various firms in the suitable brand architecture strategies.

The firms have been classified as follows: if none of the firm's products or services bear the corporate brand name, this firm should be classified as house-of-brands. If all products or services offered by the firm bears the corporate brand name, the firm should be classified as branded-house. If some products/services offered by the firm bear the corporate brand name, while others bear another brand name, the firm should be classified as house-of-brands.

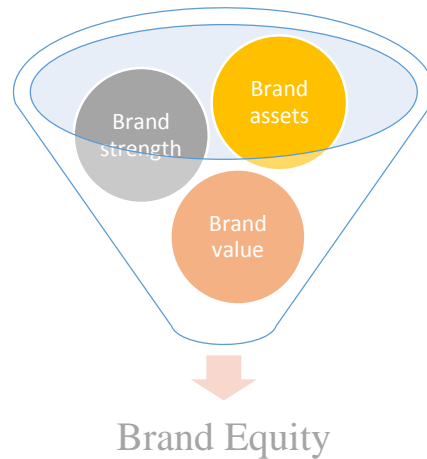
### **5.3. Dependent variable measurement: brand equity**

Firm performance can be assessed based on a variety of indicators, including long-term measures such as firm visibility, customer brand recognition and awareness, as well as market share, sales growth and cost efficiency at the corporate, product business and product level (Douglas & Craig, 2013). In this study, a new approach to evaluating the different branding structures is taken.

Brand equity has been selected as the measure of firm performance. But what makes brand equity a suitable performance measure to evaluate the various branding structures? The concept of brand equity can be defined as being the value added to a product by its brand name (Farquhar, Han, and Ijiri, 1991; Kamakura and Russell, 1993; Park and Srinivasan, 1994; Rangaswamy, Burke, and Oliva, 1993). Therefore, the brand name is a very important factor and as previously stated, when analysing brand structures as part of this thesis, a customer point of view is taken, and what the customers see first on a product, is in most cases the brand name. In the case of a branded-house strategy, in which all the products bear the same name, consumers will associate one product sold by the firm with all the other products sold by this same firm, this is called image transfer and will be further discussed in a subsequent section. Quite the opposite, in a house-of-brands, consumers will not be able to directly spot the links and associations between the different product brands owned by the same company, as they all bear different brand names (also called secondary brand names).

In addition, there are three dimensions in the evaluation of a firm's brand equity level: the customer dimension, the market dimension and the financial dimension. These three dimensions represent various performance measures and can be grouped under the brand equity dimension.





**Figure 3: Brand Equity variables**

Brand equity is measured through three different variables or measures, (1) brand assets, (2) brand strength and (3) brand value, in order to limit the risks of being too narrow-minded. This risk can occur when making use of a single performance measure. Indeed, choosing to analyse the effects of branding structures on performance in investigating a single measure, as Rao et al. (2004) did, can be highly misleading, as it does not take into account all the influent variables. Below are presented the three dimensions of brand equity, and the questions that have been used to evaluate each of them.

- **Brand assets:** in order to measure each element included in the variable brand assets, 7-item Likert scales will be used. The elements that are proven to be useful in evaluating the brand assets variable are (Kapferer, 2008):
  - Aided brand awareness: measure of the minimal brand resonance (survey 2)
    - *Have you heard of brand X? (Aaker, 1996) (Q2)*
    - *Some characteristics of brand X come to my mind quickly (Yoo & Donthu, 1997) (Q3)*
    - *I can quickly recall the symbol or logo of brand X (Yoo & Donthu, 1997) (Q4)*
    - *I have difficulty in imagining brand X in my mind (Yoo & Donthu, 1997) (Q5)*
  - Spontaneous brand awareness (recall): measure of saliency (Survey 2)
    - *Name the brands in this product class (Aaker, 1996) (Q1)*

- Evoked set or consideration set: does the brand belong to the shortlist of two or three brands one would surely consider buying (Survey 2)?
  - *The brand belongs to the shortlist of 2 or 3 brands I would surely consider buying (Kapferer, 2008) (Q6)*
- Previous consumption: has the brand been already consumed or not (Survey 2)?
  - *Have you already consumed the brand? (Kapferer, 20012) (Q7)*
- **Brand strength:** Three measures are selected to evaluate brand strength; the market share (2015) (Keller and Lehmann, 2001; Ailawadi et al., 2003; Kapferer, 2008), the loyalty rate (Kapferer, 2008), and in addition, the market share growth rate on the three last years (2013, 2014 and 2015) will also be analysed in order to detect any interesting information about potential different growth rates between the two brand structures. The market share and the growth rate will be evaluated through survey 1, while the loyalty rate will be measured in survey 2.
  - Market share and growth rate (Survey 1).
    - *What is the approximate market share of the Norwegian office coffee segment of your company? (2013, 2014, and 2015).*
  - Customer loyalty (Survey 2). A 7-item Likert scale will be used to evaluate customer loyalty, through two questions:
    - *I recommend the following brands to my friends and relatives (Tong & Hawley, 2009; Chen et al., 2010)*
    - *The following brand would be my first choice (Yoo & Donthu, 1997; Chen et al., 2010)*
- **Brand value:** The net income is the chosen financial measure to estimate brand value. The net income of a corporation is the sum of all the financial effects (positive or negative), and thus includes the effect of the brand (Kapferer, 2008). To measure brand value, the net income (2015) will be needed. In addition, the net income growth on the three previous years (2013, 2014, and 2015) will be analysed as it could give valuable information on the differences of income influenced by the brand structure (Survey 1).
  - *What is the approximate net income as a percentage of total revenue of the Norwegian office coffee segment of your company? (2013, 2014, and 2015)*

#### 5.4. Other independent variables

- **Number of employees:** as this study focuses on a single branch of firms, the office coffee segment, it is important to collect information on the exact number of employees active in that special branch of the company, not in the total company. Information on the total number of employees active in the company would be misleading as certain companies are mostly active in the business-to-business segment while others are mostly active in the business-to-consumer segment (Survey 1).
  - *How many employees are working in the Norwegian office coffee segment of your company?*
- **Age of the office branch:** for this variable, it is paramount to focus on the branch itself as well, and not on the company as a whole. The level of analysis is the office coffee market (Survey 1).
  - *When was the Norwegian office coffee segment of your company created?*
- **Product diversity level:** the measure of the product diversity or quality level is the “relative market price” measure. This is calculated by taking the average price at which the office coffee brand was sold during one randomly selected month divided by the average price at which all brands in the product class were sold during that same month (Aaker, 1996). This can also be calculated by comparing the range of prices of the offer of each of the firm studied in the sample (Survey 1).
  - *What is the approximate price difference (in NOK per kg) between the cheapest and the most expensive office coffee your company offers on the Norwegian market?*
- **Marketing investment level:** the marketing expenditures as a percentage of revenue allocated to the office coffee market for each of the three previous years: 2013, 2014 and 2015. Looking at three consecutive years will give an idea on the increase or decrease of the marketing expenditures. In addition, the average marketing expenditures as a percentage of revenue could be an interesting indicator to compare the different brand structures and will therefore also be calculated (Survey 1).
  - *What is the approximate marketing expenditures as a percentage of total revenue of the Norwegian office coffee segment of your company?*

- **Brand reputation:** this item will be evaluated through the two below questions. A 7-item Likert scale will be used (Survey 2).
  - *People I know think highly of this Coffee brand (Kuenzel & Halliday, 2010)*
  - *This Coffee brand has a very good reputation (Kuenzel & Halliday, 2010)*
- **Customer satisfaction:** this item will be evaluated through the below question. A 7-item Likert scale including the option “Neutral” will be used to measure customer satisfaction (Survey 2).
  - *How would you rate your experience with the following brands?*

### 5.5. Summary

	Survey 1	Survey 2
Brand assets		<p>Name the brands in this product class. (Aaker, 1996) (<i>appendix 6, question 1</i>)</p> <p>Have you heard of brand X? (Aaker, 1996) (<i>appendix 6, question 2</i>)</p> <p>Some characteristics of X come to my mind quickly. (Yoo &amp; Donthu, 1997) (<i>appendix 6, question 3</i>)</p> <p>I can quickly recall the symbol or logo of X. (Yoo &amp; Donthu, 1997) (<i>appendix 6, question 4</i>)</p> <p>I have difficulty in imagining X in my mind. (Yoo &amp; Donthu, 1997) (<i>appendix 6, question 5</i>)</p> <p>The brand belongs to the shortlist of 2 or 3 brands I would surely consider buying. (<i>appendix 6, question 6</i>)</p>

		Have you already consumed the brand? <i>(appendix 6, question 7)</i>
Brand strength	What is the approximate market share of the Norwegian office coffee segment of your company? (2013, 2014, and 2015) Name the brands in this product class. (Aaker, 1996) <i>(appendix 5, question 3)</i>	I recommend the following brands to my friends and relatives. <i>(appendix 6, question 8)</i>  The following brand would be my first choice <i>(appendix 6, question 9)</i>
Brand value	What is the approximate net income as a percentage of total revenue of the Norwegian office coffee segment of your company? (2013, 2014, and 2015) <i>(appendix 5, question 2)</i>	
Number of employees	How many employees are working in the Norwegian office coffee segment of your company? <i>(appendix 5, question 6)</i>	
Age of the branch	When was the Norwegian office coffee segment of your company created? <i>(appendix 5, question 7)</i>	
Product diversity level	What is the approximate price difference (in NOK per kg) between the cheapest and the most expensive office coffee your company offers on the Norwegian market? <i>(appendix 5, question 5)</i>	
Marketing investment	What is the approximate marketing expenditures as a percentage of total	

level	revenue of the Norwegian office coffee segment of your company? ( <i>appendix 5, question 4</i> )	
Brand reputation		<p>People I know think highly of this Coffee brand. (<i>appendix 6, question 10</i>)</p> <p>This Coffee brand has a very good reputation. (<i>appendix 6, question 11</i>)</p>
Consumer satisfaction		How would you rate your experience with the following brands? ( <i>appendix 6, question 12</i> )
Extra informational questions	<p>What is the name of your company? (<i>appendix 5, question 1</i>)</p> <p>Please, list your 3 biggest competitors on the Norwegian office coffee market. (<i>appendix 5, question 8</i>)</p>	

**Table 1: summary of survey 1 and 2**

## 6. DESCRIPTIVE STATISTICS

The data has been collected through two distinct surveys, as described in the previous section. Therefore, the descriptive statistics will accordingly be detailed in two distinct sections. This section has been written based on the SPSS Survival Manual (Pallant, 2013).

### ***6.1. Survey 1: to the firms active in the Norwegian office coffee industry.***

The total office coffee industry in Norway is shared between approximately eleven firms, including three firms implementing a house-of-brands strategy, and eight firms implementing a branded-house strategy. After contacting each one of these eleven firms, four of them were willing to participate in this research by providing the necessary information. As the required information was seen, by some companies, as being sensitive, this study is confidential and therefore the names of the firms who have agreed to participate will not be cited. For this reason, these four firms which have participated in this study will be called “firm A”, “firm B”, “firm C” and “firm D”.

Firm A and B are two Norwegian office coffee suppliers which are currently implementing a branded-house architecture strategy. On the contrary, firm C and D can both be classified as firms implementing house-of-brands architecture strategies.

The total number of firms participating in this study can be perceived as quite low. However, as previously described, when taking a closer look at the Norwegian office coffee industry, we can see that not many firms are currently active in this industry. Therefore, the sample of respondents corresponds to 30 percent of the total sample, which is a fair percentage when it comes to a business-to-business survey. Together, these four companies also own approximately 57 percent of the total market share of the Norwegian office coffee industry. This will nonetheless be discussed more in depth in the limitations section.

In total, seven questions were asked to these four companies. The data has been screened and checked for missing data and outliers. In addition, it is important to state that the data is non-normally distributed. This is most probably due to the large number of extreme values observed in the firms' answers, see the detailed information below.

In the output presented in appendix 1.1., the descriptive statistics of each variable evaluated in survey 1 are summarised. In this section, the descriptive statistics of each one of these variables will be presented.

First of all, for each variable, we have a total of 4 respondents; corresponding to the four firms (A, B, C and D) who have accepted to participate in this study.

The mean for the brand value variable (2015) is 17,7500 with a standard deviation of 3,2. In addition, the Skewness is 0,084 and the Kurtosis is -5,518. The skewness value gives an indication of the symmetry of the distribution. The Kurtosis value gives indication on the 'peakedness' of the distribution. If the distribution is perfectly normal, the Skewness and Kurtosis values would be equal to 0. Although having Skewness and Kurtosis values equal to 0 is rather uncommon in the social sciences. In this case, the Skewness value indicates a positive skew, which means that the scores for the variable brand value are clustered to the left at the low values. The Kurtosis value is rather low, and values below 0 indicate a distribution that is relatively flat, which suggests that there are too many cases in the extremes.

The descriptive statistics of the variable brand strength (2015) show a mean value equal to 14,2500, with a standard deviation of 7,89. The Skewness is -1,443 and the Kurtosis is 2,235. Negative skewness values indicate a clustering of scores at the high end or right-hand side of a graph. Positive Kurtosis values indicate that the distribution is rather peaked, or clustered in the centre, with long thin tails. The Skewness and Kurtosis values of the variable brand strength are indicating a non-normal distribution.

The mean value of the marketing investment (2015) variable is 4,50 with a standard deviation of 3,317. The Skewness value is -0,877 and the Kurtosis value is 1,934. The Skewness and Kurtosis values are indicating that the values are clustered at the right-hand side of the graph and that the distribution is rather peaked. The Skewness and Kurtosis of this variable indicates a non-normal distribution.

The number of employees variable shows a mean value of 25,75 with a standard deviation of 25,250. In addition, the Skewness is 0,012 and the Kurtosis is -5,682. The Skewness value is close to zero but indicates a positive skew, which suggests that the values are clustered to the left at the low values. In addition, the Kurtosis value is very low, and therefore indicates a distribution that is relatively flat, which indicates that there are too many cases in the extremes. This variables presents a non-normally distributed data.



The mean value of the date creation variable is 1996,25, with a standard deviation of 11,117. In addition, the Skewness value is -1,695 and the Kurtosis value is 3,121. The Skewness and Kurtosis are indicating that the values are clustered at the right-hand side of the graph and that the distribution is rather peaked. The Skewness and Kurtosis of this variable indicates a non-normal distribution.

The price range variable has a mean value of 145,25, with a standard deviation of 86,238. In addition, this variable shows Skewness and Kurtosis values of respectively 0,541 and -2,850. The Skewness value indicates a positive skew, suggesting that the values are clustered to the left at the low values. Also, the Kurtosis value is low, and therefore indicates that there are too many cases in the extremes. The variable price range is non-normally distributed.

Finally, the structure variable has a mean value of 0,5, with a standard variation of 0,577. The Skewness and Kurtosis values are equal to 0,000 and -6,000 respectively. The Skewness value indicates normality, while the kurtosis value is low under zero. Therefore the values are clustered in the middle, and the distribution is rather peaked.

In addition to the Skewness and Kurtosis values, the Shapiro-Wilk Test can also be used in order to evaluate normality (see table called Tests of Normality appendix 1.1.). If the Shapiro-Wilk Test indicates a value above 0.05, the data is normal. In this case the data for brand value, brand strength, marketing investment, number of employees, date creation and price range are normally distributed according to this test. This contradicts with the previous indications given by the Skewness and Kurtosis values.

## **6.2. Survey 2: to the consumers**

In order to simultaneously study the effects of brand architecture on the three equity variables, (1) brand assets, (2) brand strength and (3) brand value; a second survey was required. Therefore, in addition to the data given by the firms, a consumer survey has also been conducted. This consumer survey was directed to anyone currently working in Norway. In total, the survey was comprised of 13 questions and the number of full responses collected is equal to 138. The goal of this survey 2 was essentially to capture the values of brand assets and brand strength.

As for survey 1, the data of survey 2 is non-normally distributed. Again, this is most probably due to the large number of extreme values that have been collected. The output of the descriptive statistics is developed below (see appendix 1.2.).

The brand assets variable is measured on a scale from 1 to 7, and presents a mean value of 2,87 with a standard deviation of 1,5. In addition the Skewness and Kurtosis values are 0,454 and -0,805 respectively. These two values indicate that the values are clustered on the left hand-side, with a tendency towards the low values and that the distribution is relatively flat.

The brand strength variable is comprised between 0,36 and 4,24, with a mean value of 1,66 and a standard deviation of 1,04. The skewness and Kurtosis values indicate that the values are clustered on the left hand-side, with a tendency towards the low values and that the distribution is relatively flat.

The brand reputation variable is comprised between 1 and 6, with a mean value of 3,34 and a standard deviation of 1,33. The values indicate a clustering of scores at the high end of the graph, and the distribution appears to be relatively flat, because of the many extreme values.

The satisfaction variable is comprised between the values of 1 and 7, with a mean value of 3,82 and a standard deviation of 1,45. The scores are clustered at the high end of the graph and the distribution is rather peaked.

The table labelled Tests of Normality (see appendix 1.2.) gives the results of the Kolmogorov-Smirnov statistic. In addition to the Skewness and Kurtosis value, this table also assesses the normality of the distribution of scores. A non-significant result (Sig value higher than 0,05) indicates normality. In this case the Sig. value is equal to 0,000 for each variable, suggesting violation of the assumption of normality. This is quite common in larger samples. This supports the indications previously given by the Skewness and Kurtosis values.

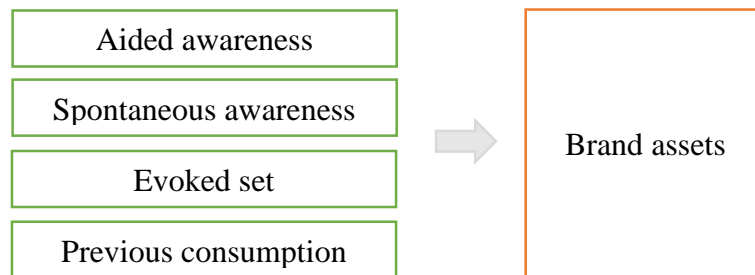
Having a non-normal distribution of course represent a limitation. However, researchers have not yet agreed on the real consequences of running a test on a non-normally distributed data. Therefore, and as the risks of incorrect results are very low, the tests will be run on the collected data.

## 7. FINDINGS

### 7.1. General observations

In this section is presented an extension of the previous section, which only included the answers to the hypothesis. This general observation section is based on the summary of the output of survey 1 and survey 2 put together. To be able to present all the studied variables on the same graph, each variable of the output from both survey 1 and 2 have been re-scaled on a scale from 1 to 7.

#### 7.1.1. Aided brand awareness, spontaneous brand awareness, evoked set and previous consumption as measures of brand assets



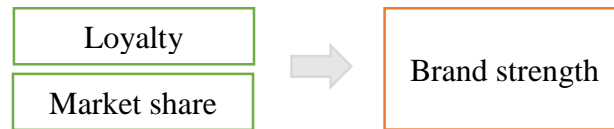
**Figure 11: Aided brand awareness, spontaneous brand awareness, evoked set and previous consumption as measures of brand assets**

Aided awareness was measured through four questions (Q2, Q3, Q4, and Q5) in survey 2. A reliability analysis has been conducted (see appendix 7.1.) and shows a Cronbach's Alpha of 0,795, which supports these five questions as measuring one single variable: aided awareness.

Spontaneous awareness, evoked set and previous consumption were measured by one question each, respectively Q1, Q6 and Q7.

A second reliability scale has been run in order to confirm that aided awareness, evoked set and previous consumption are indeed all measuring the same concept. The Cronbach's Alpha is 0,754, which confirms that these four variables are measuring the same variable: brand assets (figure 11). The Cronbach's Alpha if item deleted for Q6, evoked set is a bit higher than the Cronbach's Alpha. However, as the scale used is a common scale (as described in the theory section), and has previously been used by many researchers, but also as the Cronbach's Alpha including Q6 is already respectably high, I decided to keep the evoked set inside the set of variables that are used to measure brand assets.

### 7.1.2. Loyalty and market share as measures of brand strength



**Figure 12: Loyalty and market share as measures of brand strength**

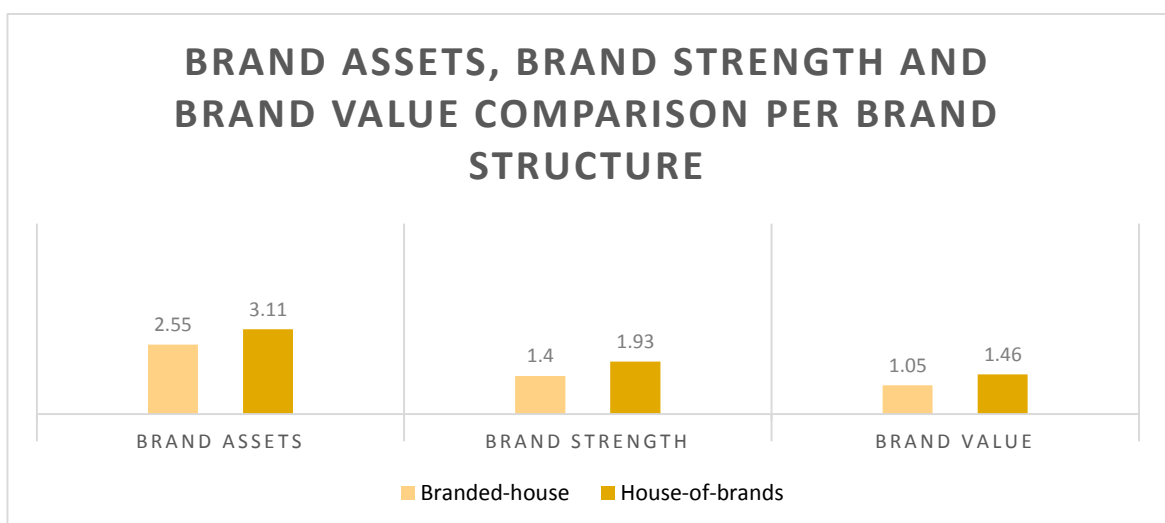
The loyalty variable has been measured by two questions in survey 2, while the market share variable has been measured by one question in survey 1.

- Q8: *I recommend the following brands to my friends and relatives*
- Q9: *The following brand would be my first choice*

However, the two questions were measured differently and are therefore difficult to put together as a part of this analysis. The difference between the two measurement systems is that for Q8, a Likert-scale has been used, while to evaluate Q9, a single-choice question has been used. However, this difficulty can be solved by rescaling the collected data of Q9

A reliability scale has been conducted on the loyalty and market share variables (see appendix 7.3.). The Cronbach's Alpha is equal to 0,648, which is a good value and gives support to the model. Therefore, the conclusion of this reliability analysis is that the loyalty and the market share variables are both measuring the same concept: brand strength.

### 7.1.3. Brand assets, brand strength and brand value

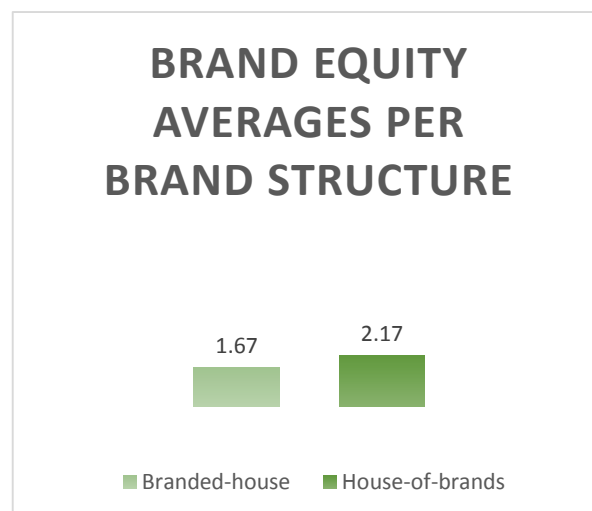


**Figure 13: brand assets, brand strength and brand value comparison per brand structure**

With figure 13, we can take a closer look at the three brand equity variables. Brand assets is the variable that scored the highest all-in-all, following by brand strength and finally brand value, all evaluated on a scale from 1 to 7.

The dependent variable, brand equity, has been created by clustering brand assets, brand strength and brand value together, as shortly explained in the above section as well as developed more thoroughly in the theory section. In addition, and to validate this scale of brand equity made of brand assets, brand strength and brand value, a reliability analysis has been conducted (see appendix 7.4.). The Cronbach's Alpha is 0,761, which is very good and gives support to the model. However, the Cronbach's Alpha if brand value is deleted is higher than the Cronbach's Alpha. This can be explained by the fact that brand value was evaluated through survey 1, the survey answered by the companies, while brand value and brand strength were evaluated through survey 2, the survey answered by the consumers. Of course, these two surveys were using different scales, and got a very different amount of answers. This represents a weakness of the study, however, these differences in measurement systems between these three variables represent one of the biggest reason why researchers did not previously use these three variables to measure brand equity, as it is very complex.

Nonetheless, this reliability analysis shows that these three variables really do measure the same concept: brand equity; and that it is therefore possible to test this model.



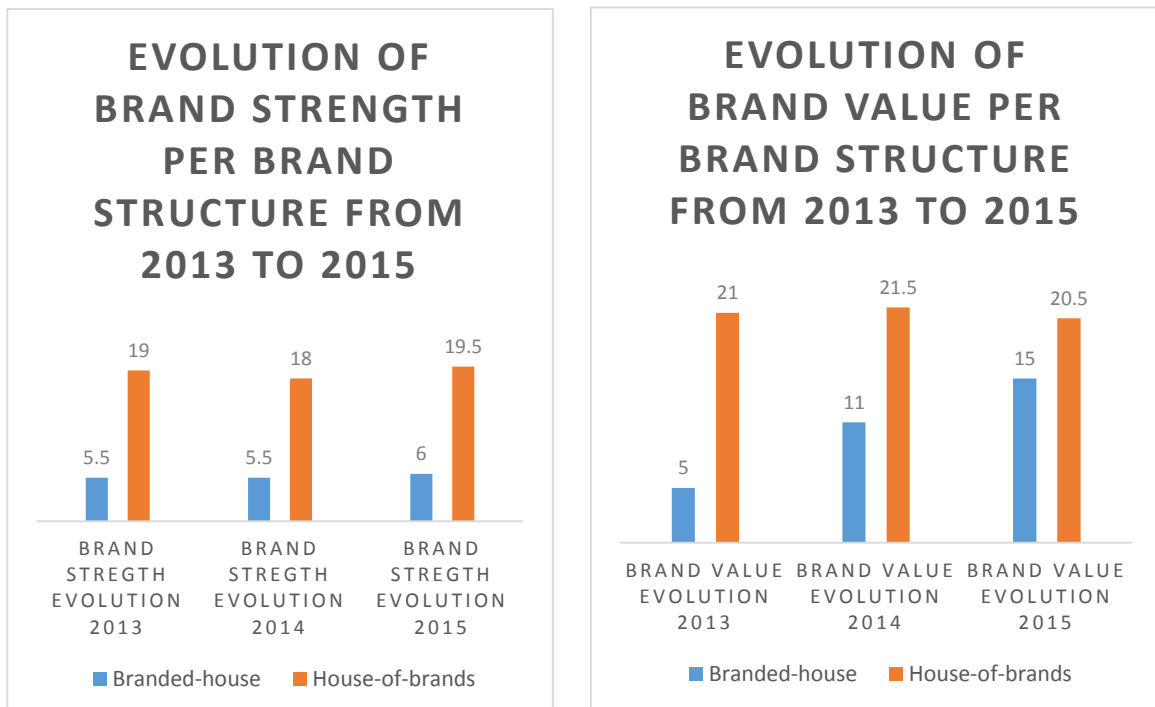
**Figure 14: brand equity averages per brand structure**

As observed on the graph, on average house-of-brands present higher brand equity levels than branded-house (see figure 14). Indeed, as presented in the above hypothesis section, brand assets, brand strength and brand value levels are always higher in the house-of-brands than in branded-house architecture strategy.

#### 7.1.4. Evolution (growth rates) of brand strength and brand value in each brand structure

There are two big indications on figure 15 and 16:

1. House-of-brands architecture strategy is scoring significantly higher in both brand strength and brand value. This was already indicated and detailed in the above analysis.
2. The variable brand strength, both for the branded-house and the house-of-brands structures, has proved itself to be very stable, at least on a short time span. The variable brand value also seem to be very stable when it comes to house-of-brands structure. However, figure 16 shows an outstanding growth rate in brand value for the branded-house architecture strategy in the three past years. In 2013, the average brand value for the house-of-brands structure was 5%, in 2014 brand value more than doubled to achieve 11% and in 2015 it continued its growth to reach 15%. Despite this very steep growth, the growth in brand value for the branded-house architecture strategy stays under the growth in brand value achieved by the house-of-brands.



**Figure 15: evolution of brand strength per brand structure from 2013 to 2015**

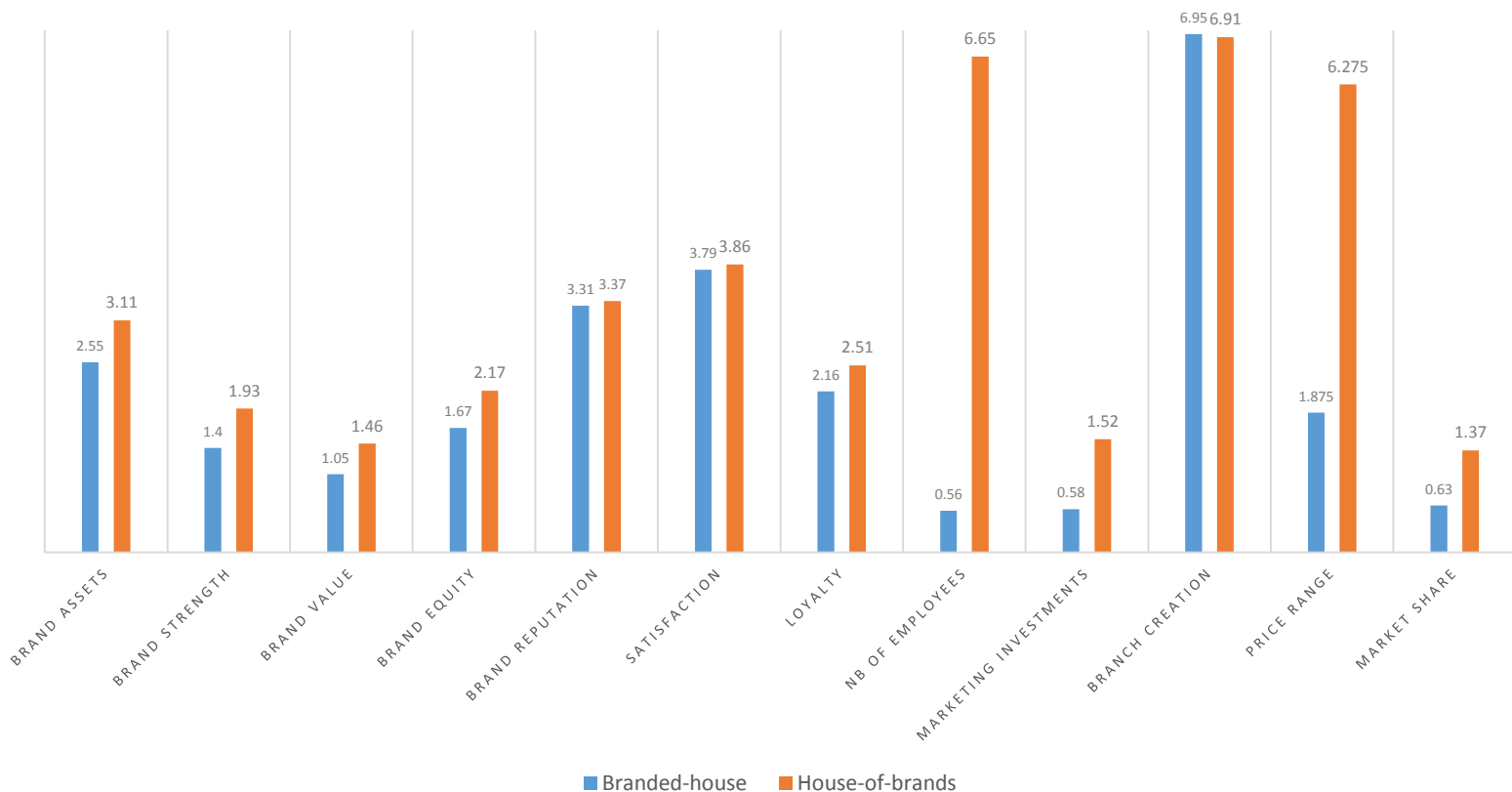
**Figure 16: evolution of brand value per brand structure from 2013 to 2015**

### 7.1.5. All variables

Below is the chart presenting the value from 1 to 7 for each one of the nine studied variables (figure 17), classified by brand architecture strategy. This graph gives a lot of information about the final data that has been collected through the two surveys.

First of all, house-of-brands architecture strategies score higher in each one of the three independent variables (1) brand assets, (2) brand strength and (3) brand value. In addition, house-of-brands architecture strategies also score higher on both brand reputation and satisfaction.

**COMPARISON BETWEEN  
BRANDED-HOUSE AND HOUSE-OF-BRANDS; PRESENTS ALL VARIABLES, ON A  
SCALE FROM 1 TO 7**



**Figure 17: comparison between branded-house and house-of-brands; presents all variables, on a scale from 1 to 7**

Branded-house architecture strategy is associated with significantly lower average number of employees active in the branch, lower average level of marketing investments, younger branch age, and narrower price range.

There is one secondary variable that is tightly linked to this observation: date of branch creation. Indeed, the firms implementing a house-of-brands architecture strategy are on average twelve years older than the firms implementing a branded-house architecture strategy. As discussed in the hypothesis section, mature companies tend to engage more easily in mergers and acquisitions, and these mergers and acquisitions often lead to a rather natural switch from a branded-house structure (with only the firm's own brand) to a house-of-brands structure (including the firm's own brand and the acquired brand).

In addition to the "age" variable, brand equity also correlates with brand reputation, satisfaction, loyalty, number of employees, marketing investment level, and price range. To summarize, firms implementing house-of-brands architecture strategies have on average a better brand equity level than those implementing branded-house architecture strategies. This is due to their brand assets, brand strength and brand value, which presents on average also higher levels for the house-of-brands architecture strategies than for the branded-house strategies.

As already assumed in the hypothesis section and described in the data analysis section, firms that scored higher on the brand equity scale generally were older, had a wider price quality range, but also higher prices. First, the evidence that the house-of-brands structure leads to wider price range is probably due to the fact that implementing a house-of-brands architecture strategy can allow these firms to target a wider range of consumer segment, segment the market at a higher level and ultimately create and offer a more varied range of products. As branded-house are presenting themselves only under one single corporate brand name, it gives them fewer opportunities when it comes to serving various segments on a same market. The second observation, showing that on average, firms implementing a house-of-brands structure presents globally higher prices can be linked to their higher average brand equity levels. Indeed, the fact that a firm's brand assets, strength and value are higher, most likely means that consumers value the brand. The firm can in turn, charge higher prices with smaller chances of losing consumers.

Another observation that should be highlighted again here, is the extremely significant difference between the numbers of employees working in the two distinct brand architecture strategies. The average number of employees in a branded-house architecture strategy is 91,6% lower than the number of employees working in a house-of-brands strategy. This can of course be explained by the age of the branch, as a newer company will most likely need



a smaller number of employees than an older firm. But this can also be explained by the fact that house-of-brands architecture strategies, with their more complex organisation including different levels of brands (corporate brand level and secondary brand level), are also more complex to manage and therefore require a higher number of employees. This was already thoroughly detailed in the hypothesis section, under the fifth hypothesis.

In addition, the level of marketing investment seem to significantly correlate with the level of market share achieved by the different brand structures. The branded-house structure, probably because they are younger, seem to commit less resources to allocate to the marketing expenditures than the house-of-brands structure. This of course, can be of influence when it comes to their brand equity. Brand strength, the market-oriented brand equity measure correlates with the level of marketing investment made, simply because smaller level of marketing expenditures means smaller brand awareness, and therefore, smaller market share. This is a good illustration of the conditional link described in section 3.4.4. existing between the three distinct variables of brand equity.

## 7.2. Hypothesis testing

### **H1: The branded-house architecture strategy is associated with stronger corporate brand assets than the house-of-brands architecture strategy.**

First, a logistic regression has been run to understand the relationship between brand assets and brand structure (or brand architecture strategy) (see appendix 2.3). The logistic regression provides support for the model and indicates that brand assets is a significant variable, as the Sig. value is equal to .000. The chi-square value, is 19.124 with 1 degree of freedom. In the Model Summary, the Cox & Snell R Square and the Nagelkerke R Square values indicate that the amount of variation in the brand structure explained by brand assets is between 3,4 percent and 4,6 percent. The Hosmer and Lemeshow Test also supports this model as being worthwhile. Indeed, to provide support for the model, the Sig. value should be higher than .05. In this case, the chi-square value for the Hosmer-Lemeshow Test is 3.475, with Sig. value of .482, indicating support for the model. The Wald test suggests that the brand assets variable contributes significantly to the model. The last interesting information provided by the logistic regression is given by the B value. In this case, the B value is .253, which indicates that house-of-brands structure are associated with higher brand assets levels. This does not provide support for H1.

Second, in order to find the percentage of each structure type and their respective Brand Assets level, a Crosstab analysis has been implemented (see appendix 4.1.). The Chi-Square value is equal to 14,283, with an associated significance level of .000. These values indicates significance and suggests that the proportion of branded-houses that have high brand assets is significantly different from the proportion of house-of-brands that have high brand assets.

	Low Brand Assets	High Brand Assets
Branded-house	73,4%	26,6%
House-of-brands	58%	42%

**Table 2: results crosstab analysis of brand assets**

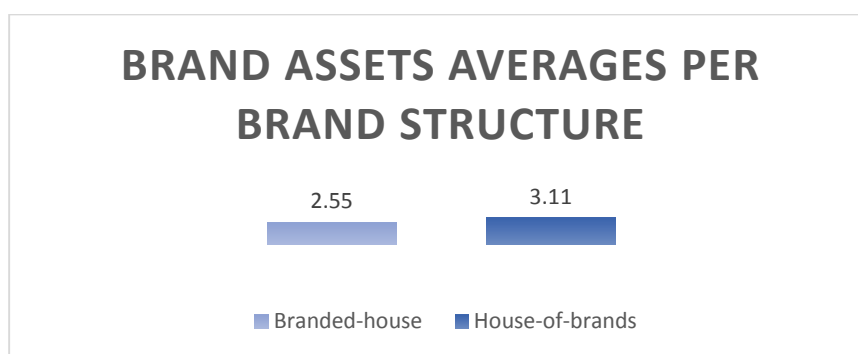
The results of this Crosstab analysis showed that 73,4 percent of branded-house structures have low brand assets levels, while 26,6 percent have high brand assets levels. Concerning house-of-brands structures, 58 percent have low brand assets levels, 42 percent have high brand assets levels. This confirms the results of the above logistic regression, showing that firms implementing house-of-brands structures are more likely to have high brand assets levels.

Concerning the percentage of the sample as a whole, 65,7 percent of the total sample have low brand assets levels, while 34,3 percent have high brand assets levels. Finally, the total amount of firms in the samples having high brand assets values are dispatched as follows:

- Branded-house architecture: 38,8 percent of cases have high values.
- House-of-brands architecture: 61,2 percent of cases have high values.

The Crosstab analysis clearly shows that house-of-brands structures seem to, in general, present higher levels of brand assets. This goes against the assumption made in H1.

In addition, and following the observations made in the logistic regression and in the Crosstab analysis, a graph comparing brand assets levels between the branded-house and the house-of-brands has been set up. The data that has been used to create this graph is the summarized output of the consumer survey.



**Figure 4: brand assets averages per brand structure**

This graph validates the information given by both the logistic regression and the Crosstab analysis. In the above graph, a significantly higher level of brand assets is observed in the house-of-brands structure compared to the level of brand assets observed in the branded-house structure.

The logistic regression, the Crosstab analysis and the graph made out of the summarized output of the consumer data do not support H1. The first hypothesis previously made as part of this study supported higher brand assets levels in branded-house architecture strategies than in house-of-brands architecture strategies. The conclusions that can be made based on the statistical results is that brand structure significantly predicts brand assets levels. Indeed, according to the collected data, on the Norwegian office coffee industry, house-of-brands structures generally present higher brand assets level than branded-house structures.

## **H2: House-of-brands (HOB) architecture strategy is associated with higher corporate brand strength than branded-house (BH) architecture strategy.**

To assess the relationship between brand strength and brand architecture strategy, the same three analysis as for assessing the relationship between brand assets and brand architecture strategy have been used: logistic regression (see appendix 2.4.), Crosstab analysis (see appendix 4.2.) and summarized data from the consumer output (see graph presented below).

Similarly as in the brand assets analysis, in the brand strength analysis, the logistic regression (see appendix 2.4.) provides support for the model, as in the Omnibus Tests of Model Coefficients, the Sig. value is 0,000, which indicates that brand strength is a significant variable. In the Model Summary, the Cox & Snell R Square and Nagelkerke R Square values indicate that between 6,5 percent and 8,7 percent of the variability in the brand structure variable is explained by brand strength, which is a little bit higher than the variability explained by the brand assets variable, in the previous hypothesis. In the Classification table, the model correctly classifies 62,2 percent of cases, which represents an improvement over the model without the brand strength variable. The Variable in the Equation table shows a Sig. value equal to .000, which indicates that brand strength is significantly correlated with brand structure. The last interesting information the can be found in the logistic regression is given by the B value, which in this case is equal to .516, and therefore indicates that higher brand strength levels are associated with the house-of-brands structure, providing support for H2.

The results of the Crosstab analysis showed that 92,7 percent of firms implementing a branded-house structure have low brand strength levels, while 7,3 percent have high brand strength levels. The Chi-square value is 16,513 and the sig. value is equal to .000, which means that the proportion of branded-houses that have high brand strength is significantly different from the proportion of house-of-brands that have high brand strength.

Firms implementing a house-of-brands structure are 81 percent to have low brand strength levels, while 19 percent shows high brand strength levels.

	Low Brand Strength	High Brand Strength
Branded-house	92,7%	7,3%
House-of-brands	81%	19%

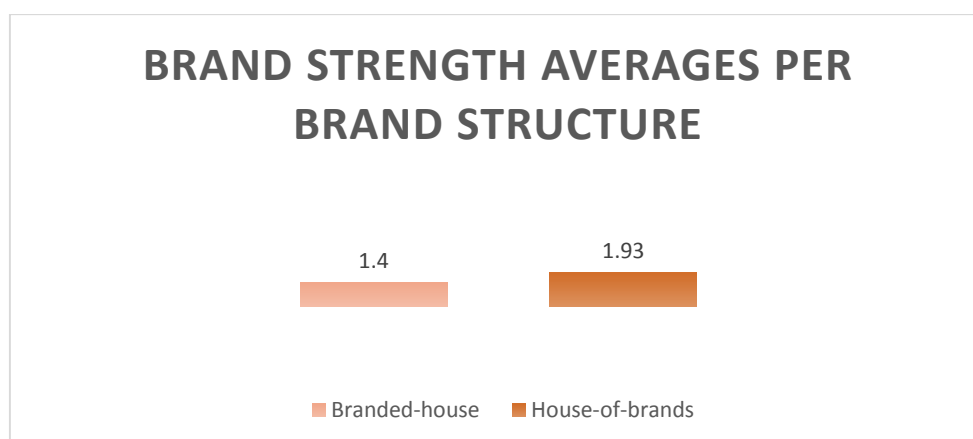
**Table 3: results crosstabs analysis of brand strength**

Concerning the percentage of the sample as a whole, 86,8 percent of the total sample have low brand strength levels, while 13,2 percent have high brand strength levels. Finally, and most importantly, the total amount of firms in the samples having high brand strength values are dispatched as follows:

- Branded-house architecture: 27,8 percent of cases have high values
- House-of-brands architecture: 72,2 percent of cases have high values

The Crosstab analysis shows that firms implementing house-of-brands architecture strategies in the Norwegian office coffee market seems to, in general, present higher levels of brand strength.

In addition, and following the observations made in the logistic regression and in the Crosstab analysis, a graph comparing brand strength levels between the branded-house and the house-of-brands has been set up. The data used to create this graph is the summarized data of the consumer survey output.



**Figure 5: brand strength averages per brand structure**

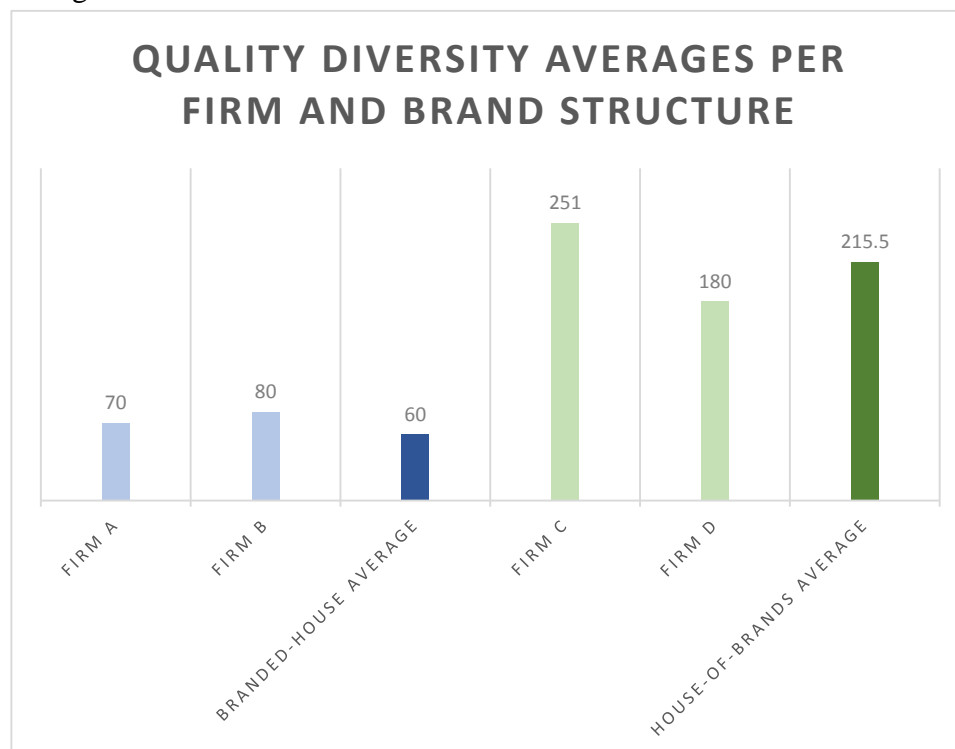
Similarly to the graph presenting the brand assets averages per brand structure, this graph also validates the information given by both the logistic regression and the Crosstab analysis conducted on the relationship between brand strength and brand structure. Indeed, the above graph shows a significantly higher level of brand strength for the house-of-brands structure than for the branded-house structure, in the Norwegian office coffee market.

The logistic regression, the Crosstab analysis and the graph made out of the summarized output of the consumer data provide support for H2. Therefore, two conclusions can be made; brand structure significantly predicts brand strength and H2 is supported. In the Norwegian office coffee market, the house-of-brands structure is in general generating higher brand strength than the branded-house structure.

### **H3: The house-of-brands strategy is associated with wider price range than the branded-house architecture strategy.**

A logistic regression has been run to assess the relationship between the price range variable and the brand structure variable (see appendix 2.11.). However, there is a perfect correlation between the variables price range and brand architecture strategy, as presented on figure 6.

In the logistic regression, the Omnibus Tests of Model Coefficients, which gives an overall indication of how well the model performs, often referred to as a ‘goodness of fit’ test presents a highly significant Sig. value equal to 0,000. Therefore, suggesting support for the model. The Cox & Snell R Square & Nagelkerke R Square values indicate that between 75 percent and 100 percent of the variability is explained by the price range variable. In addition, the Hosmer and Lemeshow Test supports this model as being worthwhile, as the Sig. value equals 1,000, which is the maximum value, due to the fact that price range perfectly correlates with brand structure. This is easily observed in figure 6. In addition, the Variables in the Equation table gives information about the contribution or importance of the predictor variable. In the Wald test, the price range variable present a highly significant value 0,000. This suggests that price range is significantly correlated with brand structure. Finally, in this case, the B value is 0,000; indicating that price range is constant, as also observed in figure 6.



**Figure 6: quality diversity averages per firm and brand structure**

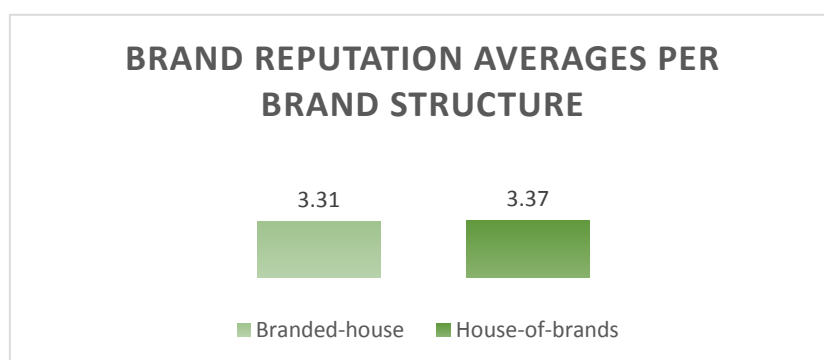
Firm A and firm B reported price ranges of respectively 70 and 80 NOK per kg. Firm C and firm D reported price ranges of respectively 180 and 251 NOK per kg. On the below graph (figure 6), the price range averages for the two brand structures are also shown in darker colours. Branded-house architecture strategy is associated with an average price range difference of 75 NOK per kg, while house-of-brands architecture strategy reported an average price range difference of 215,5 NOK per kg.

The conclusion can be made that the third hypothesis (H3) is supported by the results collected through the company survey (survey 1). The house-of-brands strategy is indeed associated with wider price range than the branded-house architecture strategy.

#### **H4: The branded-house architecture strategy is associated with higher corporate brand reputation than the house-of-brands architecture strategy.**

To assess the relationship between brand reputation and brand architecture strategy, the two following analysis have been used: a logistic regression (see appendix 2.7.) and the summarized data from the consumer output (see figure 7).

The Omnibus Tests of Model Coefficients table, the Sig. value is equal to 0,629, which indicates that this variable is not significant in the model. In addition, the Cox & Snell R Square and Nagelkerke R Square values indicate that the amount of variation in the brand structure explained by brand reputation is between 0 percent and 0,1 percent, which is extremely low. Also, the Hosmer-Lemeshow Test chi-square value is 3,931, with a Sig. value of 0,449, which is higher than 0,05 and therefore indicates support for the model. In the classification table in Block 1, the model correctly classified 49,6 percent of cases, which is worse than the 50% of cases that were classified in Block 0 (without the brand reputation variable). The last interesting information given by the logistic regression is given by the B value which in this case is equal to 0,031 and indicates that In the Norwegian office coffee industry, house-of-brands structures are associated with slightly higher brand reputation values, which contradicts with the assumption made in H4, however, 0,031 is a very low B value, indicating a very small difference between the two brand structures when it comes to corporate brand reputation outcomes. This very slight difference can also be observed in the below graph (figure 7).



**Figure 7: brand reputation averages per brand structure**

The fact that brand structure is not significant in predicting brand reputation supports the basic model presented in this thesis, suggesting that brand structure mainly influences brand equity through brand assets, brand strength and brand value.

Finally, in looking at the above brand reputation graph, one conclusion can be made; the

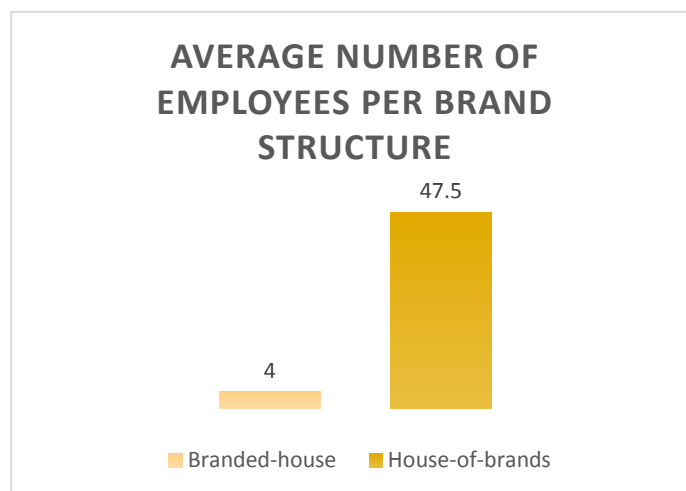


house-of-brands and the branded-house architecture strategies are associated with a similar level of brand reputation, with the house-of-brands strategy presenting a slightly higher value. This does not support the fourth hypothesis (H4).

**H5: The house-of-brands architecture strategy is associated with higher number of employees than the branded-house architecture strategy.**

As for the variable price range observed in H3, a logistic regression (see appendix 2.9.) was run for the variable number of employees. However, this secondary variable is directly correlated with brand structure.

In the Omnibus Tests of Model Coefficients, the Sig value is 0,000. Therefore, the model, with number of employees used as predictors, is better than SPSS's original guess shown in Block 0. The Cox & Snell R Square & Nagelkerke R Square values indicates that the amount of variation in the number of employees explained by the model is between 75 percent and 100 percent. The Hosmer and Lemeshow Test supports this model as being worthwhile. As the Sig value is equal to 1,000 ( $>0,05$ ), this is the maximum value as there is a perfect correlation between the number of employees and the brand structure. The Variables in the Equation table indicates that the number of employees variable is not a significant variable (Sig. = 1,000).



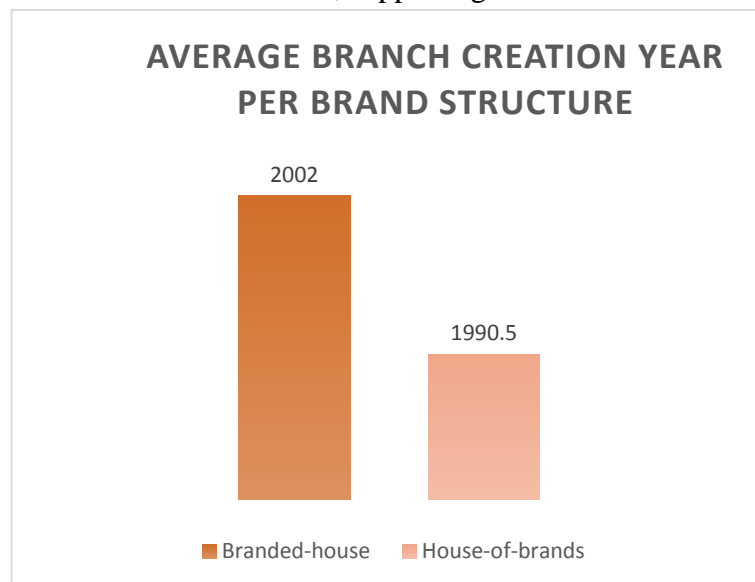
**Figure 8: average number of employees per brand structure**

In addition to the running a logistic regression, the information given by the firms A, B, C and D have been summarized and presented in figure 8. A huge difference is observed between the average number of employees of each of the two studied brand structures. This illustrates the perfect correlation that exists between the two studied variables. House-of-brands architecture strategy is clearly associated with higher numbers of employees than the branded-house architecture strategy, supporting the fifth hypothesis made in this paper (H5).

### **H6: House-of-brands (HOB) strategy is associated with older firm branch than branded-house (BH) architecture strategy.**

To assess the relationship between number of employees and brand architecture strategy, the two following analysis have been used: a logistic regression (see appendix 2.8.) and the summarized data from the consumer output (see figure 9).

The logistic regression does provide support for the model and indicates that brand structure is a significant (Sig. = 0,000) variable in predicting the variable branch creation, with a chi-square value of 246,009 and 1 degree of freedom. The Cox & Snell R Square and Nagelkerke R Square values indicate that the amount of variation in the variable branch creation explained by brand structure is between 36,2 percent and 48,2 percent. However, the chi-square value for the Hosmer-Lemeshow Test is 399.408, with a Sig value of 0,000 (< 0,05), indicating no support for the model. In the Classification table, the model correctly classified 75 percent of cases, compared to 50 percent of cases correctly classified in Block 0. The last interesting information given by the logistic regression is provided by the B value, here equal to -0,240, indicating that higher (= younger) branch creation is associated with branded-house structures, which therefore gives support for H6. To summarize, the logistic regression gives an important indication: house-of-brands are often observed to have older date of branch creation than branded-house, supporting H6.



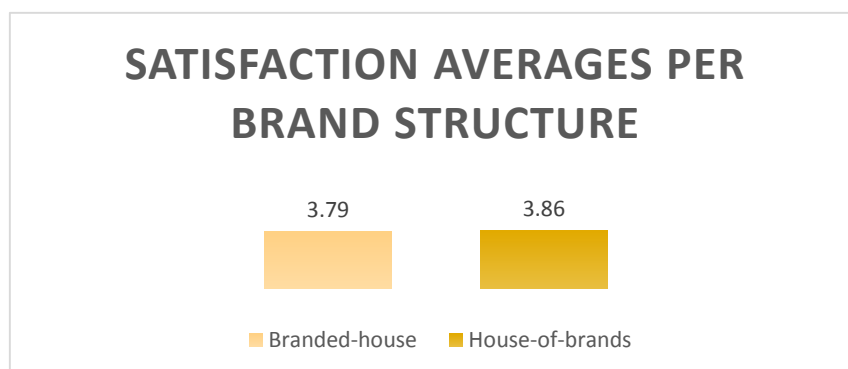
**Figure 9: average branch creation year per brand structure**

In addition, figure 9 also supports H6, as it clearly shows that the average date of brand creation is 2002 for the branded-house structure and 1990,5 for the house-of-brands structure. The average creation date of the house-of-brands structure is significantly older than the average creation date of the branded-house structure.

### **H7: House-of-brands (HOB) strategy is associated with higher customer satisfaction than branded-house (BH) architecture strategy.**

To assess the relationship between satisfaction and brand architecture strategy, the two following analysis have been used: a logistic regression (see appendix 2.6.) and the summarized data from the consumer output (see graph presented below).

The logistic regression does not provide support for the model and suggests that structure is not a significant variable in predicting satisfaction. In the Omnibus Tests of Model Coefficients table, the Sig. value is 0,554, the chi-square value is 0,350 with 1 degree of freedom. Therefore, the model including satisfaction, is not better than the model in Block 0. In addition, in the Classification table, the model correctly classified 49,5 percent of cases in Block 1. In the Model Summary table, the Cox & Snell R Square and Nagelkerke R Square values indicate that the amount of variation in satisfaction explained by brand structure is approximately 0,1 percent, which is very low. The Hosmer and Lemeshow Test supports this model as being worthwhile, as its associated Sig. value is 0,292. The Variables in the Equation table suggests that Satisfaction is not a significant variable as its Sig. value is equal to 0,554. The last interesting information given by the logistic regression is given by the B value, in this case equal to 0,035, and indicates that higher satisfaction level is associated with house-of-brands structures, which therefore gives support for H6. However, the B value being very low, it indicates a very small difference between the two brand structures when it comes to satisfaction outcomes. To summarize, the logistic regression gives the following indication: house-of-brands are observed to have higher satisfaction levels than branded-house, however, this relationship is not significant.



**Figure 10: satisfaction averages per brand structure**

In addition, figure 10 supports H7, as it shows that the average satisfaction level is on average slightly lower in the branded-house structure than in the house-of-brands structure. However, brand structure does not significantly predicts customer satisfaction.

## 8. DISCUSSION

### ***8.1. Originality and value of the study***

This study represents a good starting point for future research. The topic that has been treated in this thesis is a subject that is currently still source of many interrogations across countries and industries. Branding architecture strategy, as its name indicates, is a topic that represents a strategic function of the firm, therefore the choice of implementing one or another brand architecture strategy can have great repercussions on firm performance, both at a corporate and at a product level.

The way brand equity is measured in this study represents a new way of looking at this already well-known concept. To my knowledge, no previous study is presenting this brand equity measurement method, with its three variables including brand assets, brand strength and brand value, as a performance concept. This represents a big opportunity for researchers to start thinking of, and measuring brand equity differently. Indeed, the three proposed variables included in the concept of brand equity represent a consumer-based view, a market-based view and a financial-based view. These three variables complement each other and measure different but complementary facets of brand equity. Using these three variables instead of only the brand assets variable, for example, as it is often the case in previous studies, allows us to grasp results and understandings that are closer to the “real-world”. This is thanks to the fact that this method includes three distinct “views” of a firm’s situation: a consumer-based view, a market-based view and a financial-based view. Indeed, as previously discussed, focusing on only one or two variables can be highly misleading. This is demonstrated in section 8.5. called “importance of leveraging the corporate brand”.

The market that has been chosen as focus of the analysis also brings great value. Indeed, this chosen focus brings value to the market itself, and to the managers who are active on that market, in addition of bringing value to the researchers. Indeed, the coffee market being already far from the most researched industry, this study also focuses on the business-to-business only. And in addition to the business-to-business focus, there is also a focus on the Norwegian market. In other words, three focus have been chosen as a basis for this study: coffee market, business-to-business branch, only in Norway. Norway being a small country, and the coffee industry being far from the biggest industry of that country, the field is enormously under-researched. Very few information is available on the Norwegian coffee industry online. When adding the business-to-business “layer” to the research, it is close to

impossible to find any information without contacting the companies directly. This thesis provides information on the performance of branded-house versus house-of-brands architecture strategy on that focus market, which gives great managerial implications and information on the way forward.

To conclude, this research brings originality as well as value both through its selected focus market, the Norwegian office coffee industry, and its theoretical input, through its innovative way to look at and measure brand equity. This of course provides a good starting point for future research and gives information and various indications to Norwegian, and potentially foreign managers and business owners on brand architecture strategies.

## ***8.2. Link to existing studies***

First of all, and as previously stated, to the best of my knowledge, no existing study is identical to this research. However, other researchers also have previously investigated the relationship between brand architecture strategies and brand performance. The dissimilarities that can be observed between the few similar existing researches mainly stem either from the brand architecture strategy classification that is chosen by the researcher, or the selected way of measuring brand performance.

The four existing studies that are somewhat similar to this study, on their purposes, are the following ones: Rao and Agarwal (2004); Hsu, Fournier and Srinivasan (2010); Muylle, Dawar and Rangarajan (2012); and Hsu, Fournier and Srinivasan (2014).

**Rao and Agarwal (2004)** used a three-taxonomy classification of branding strategies, including branded-house strategy, house-of-brands strategy and mixed-branding strategy. They chose to use a single performance measure: Tobin's  $q$ , a financial-based measure. They found out that the branded-house strategy is associated with higher Tobin's  $q$ , while mixed-branding strategy is associated with lower values of Tobin's  $q$ . They also showed that most of the surveyed firms would have been able to improve their Tobin's  $q$  if they had adapted a branding strategy that is different from the one their brand portfolios revealed.

**Hsu, Fournier and Srinivasan (2010)** focused on the effects of brand portfolio strategy on shareholder value (levels of returns, systematic risk, and idiosyncratic risk) as well as risk profile. They evaluated those variables on five strategies along the brand portfolio continuum: branded-house, sub-branding, endorsed branding, house-of-brands and hybrid strategy. They found out that sub-branding, a variant of the branded-house strategy,

outperforms all other strategic options in returns, but at high levels of risk. House-of-brands and endorsed branding seem to help improving the risk profile as they offer higher distance and separation from the product brand to the corporate brand. The hybrid strategy presents the least good performance when it comes to returns and also presents the highest levels of risk.

**Muyllé, Dawar and Rangarajan** (2012) is the only one of these four similar studies that has a business-to-business focus. They designed a four-taxonomy business-to-business brand structure classification, including brand stack, brand park, brand tower and brand silos. The main goal of this study was to propose a brand architecture framework that is applicable to the business-to-business context, in opposition to the frameworks previously presented by Kapferer (1992) and Aaker and Joachimsthaler (2000).

**Hsu, Fournier and Srinivasan** (2014) made a second research four years after publishing their first study on brand architecture strategies. In this research, they replicate Rao et al.'s (2004) investigation of brand portfolio strategy and firm performance by (1) adding sub-branding and endorsed branding architectures, and (2) by clarifying the “mixed-branding” to constitute a BH-HOB hybrid, and (3) by quantifying the impact of a company's brand architecture strategy on stock risk in addition to returns. Their results show that risk/return trade-offs for sub-branding, endorsed branding, and the BH-HOB hybrid differ significantly from what common wisdom suggests. The stock returns, idiosyncratic risk, systematic risk and investment returns of the sub-branding structure are the highest. This suggests that the more risky the brand structure is, the higher are the associated returns.

Following the summary of each one of the similar studies that have been implemented during the past years, due to design differences it is extremely difficult to make clear-cut comparisons between their results and the results of this study. However, in general, they seem to find higher financial results for the branded-house structure in opposition with the house-of-brands structure. In this study, the opposite outcome is observed.

In addition to what similar studies are taking into account, this study also looks at various secondary variables that give important insight on the reasons why the different brand structures show different firm performance. For example, looking at the age of the company and its associated customer satisfaction could give indication on why its market-based performance (brand strength) presents higher or lower levels according to which brand structure it currently implements.

The biggest difference that can be observed when comparing the previous studies and this study is the performance measure that is chosen by the researchers. These performance measures are very different from one study to the other. However, they always focus on only one or two measures: financial-based and risk levels. This study combines three different but complementary measures: brand assets (customer-based), brand strength (market-based), and brand value (financial-based). It is very important, when evaluating the effects of a concept (brand structure), to take into account a broad set of variables in order to avoid being too narrow-minded. By focusing on only one or two aspects of brand performance, the previous studies failed to capture the various causal effects between the different variables. In missing these links, it is extremely difficult to find the cause of higher or lower performance levels. And therefore, to ultimately take suitable managerial decisions. This is the reason why a broader set of measures has been adopted in this study; in order to evaluate the effects of brand structure on firm performance, but also in order to find causal links, and explanations to the observed effects.

### ***8.3. Theoretical and managerial implications***

First of all, it is important that managers and researchers realise the importance of branding in business-to-business industries. The focus of researchers has mostly been on business-to-consumer industries, this has probably negatively influenced the managers' view on the importance of branding in business-to-business industries. In addition, managers seem to believe that resources should be primarily allocated to their sales force. However, investing in a large sales force without investing in the basic branding of the brand or firm represents a big loss of efficiency (Muylle et al., 2004).

In addition, researchers should re-evaluate the way they are looking at brand equity as a performance measure. The model presented in this thesis (figure 1), including three distinct brand equity performance measures can be a good starting point to re-think the common views on brand equity as the model has proven itself to be significant.

As observed in the results of this thesis, a firm can perform very differently according to the brand structure it is implementing. Managers should understand the brand structure they are currently implementing, and have a grasp of the consequences, both positives and negatives, that this brand architecture strategy has on the firm performance as a whole as well as on the individual product brands.

Further, it is important for managers to be able to follow and understand the very interesting trend of leveraging the corporate brand name, in an attempt to improve their overall firm performance. Indeed, when taking the example of firm D, by understanding the importance of wisely using associations across its entire portfolio of brands, the managers of this firm could achieve great rewards. An essential thing to keep in mind is to strongly evaluate the various branding possibilities and solutions before restructuring a firm's portfolio. Indeed, as previously stated, the theory and results on the various branding architecture strategies provide significant opportunities, but also substantial threats if poorly analysed and implemented. Therefore, the answer to the questions "Which architecture strategy to implement? As well as how to implement it?" should be seriously considered. Indeed, leveraging the corporate brand creates easy associations and image transfers from one brand of the portfolio to another. These associations and image transfers created by putting forward the corporate brand, can be positives or negatives according to the essence and variety of brands comprised in the firm's portfolio. Some brands and products can be associated with each other, some cannot. Managers should understand the importance of the concept of brand architecture strategies in their business-to-business industries, and try to applicate it to their own portfolios. In some cases however, leveraging the corporate brand can prove to being risky or next to impossible.

Researchers should also further investigates the importance of leveraging the corporate brand, but also analyse the trend by surveying the companies who are currently following this current trend. Indeed, by collecting qualitative as well as quantitative information on the performance and evolution of firms implementing a house-of-brands while leveraging their corporate brands, researchers could provide managers and decision-makers in general with a better understanding of branding strategies.

#### ***8.4. Limitations and future research***

This study focuses on the Norwegian office coffee market. This market is shared by a total of only fourteen significant firms. The first and biggest limitation of this study is its narrow scope. Indeed, researchers should consider conducting this study across markets, categories, and countries. To produce significant results across categories, the study should be conducted on a large number of business-to-business industries, but also on a large number countries located on various continents. To summarize, the first limitation of this study is its lack of cross-category and international perspectives. Of course, this limitation is due to the



scope of the work itself, this study being a master thesis, a focus had to be chosen because of time and resources constraints. This represents a great opportunity for further research.

In addition to the lack of cross-category and international perspectives, more variations in the branding structures studied should be used. In this study, only two branding architecture strategies are studied: branded-house and house-of-brands. Previous researches have focused on many different taxonomies. For example, a six-category taxonomy has been used in a similar research conducted by Hsu, Fournier and Srinivasan (2015). Another classification was developed by Laforet and Saunders (1994) and later on adopted by Rao et al. (2004). This Laforet and Saunders' (1994) classification is a three-category taxonomy, including the branded-house architecture strategy, the house-of-brands architecture strategy and the mixed-branding structure. The mixed-branding structure could unfortunately not be studied as part of this thesis as the small number of companies active in the Norwegian office coffee industry did not allow for a three-category taxonomy, but only for a two-category taxonomy. I believe that researchers should test the model and follow the implementation of this study, but with a wider scope, and the three-category taxonomy developed by Laforet and Saunders' (1994) or even the six-category taxonomy used by Hsu, Fournier and Srinivasan (2015). In adopting a broader scope (across more categories and countries), more firms will be included in the study, and it will therefore be possible to simultaneously study a larger number of brand architecture strategies. The limitation that is created by the limited number of categories studied comes from the fact that one of the studied firms was a mixed-branding strategy, but has been classified under the house-of-brands strategy category in order to study two categories of two firms each. Therefore, the house-of-brands architecture strategy and the mixed-branding strategy have been re-grouped into one single category, while Laforet and Saunders' (1994) advised to keep these two categories separated from each other. This represents a limitation, but is not dramatically affecting the study, as mixed-branding can be seen as a sub-category of house-of-brands structure. However, being able to segment the total number of firms active on a market into a bigger number of branding categories would offer higher precision in the observations, as well as further details on branding strategies that are unfortunately not studied as part of this thesis.

An additional limitation that can be mentioned is that the variables that have been calculated on the three last years (i.e. marketing investment levels, market share...), would have been more useful to the study if they would have been analysed on a longer timeframe. A period of three years is very short and does not give so much indications on important changes and

disruption in the firm. However, the data on the three last years was already very difficult to get from the firms, and having access to older data is close to impossible. This is the reason why the short timeframe has been chosen. However, future researches, with smaller time and budget constraints should consider collecting the data on a longer period of time, in order to get more information out of the collected data.

In the introduction section, the following important question has been highlighted: “Do we have the appropriate reporting data that such an analysis requires?” (Kapferer, 2008). The answer is yes, and no. It is extremely difficult to get data from firms, in general. But the biggest difficulty is that Norwegian employees often do not even have the exact numbers for their office branch. The data often is available for the total firm, including business-to-consumers and business-to-business. The data is sometimes available for the separate business-to-business branch of the firm, including restaurants, offices, coffee shops, and so on. However, in Norway, the exact data is almost never directly available when it comes to the office branch only, and for the whole country. There are also differences in the available data between house-of-brands and branded-house structures and according to the revenues as well as the size of the different firms. Indeed, the data for the branded-house structure was much more difficult to access than the data for the house-of-brands structure. Collecting data represents a high resource commitment for firm, as it is an ongoing heavy load work. However, I truly believe that data collection is the best strategic tool one can get to get a deep understanding of the market, of its competitors, and of its own strength and weaknesses.

Finally, the fact that this research uses non-normal data should of course be listed as a limitation. However, the use of non-normal data in parametric tests and other analyses has been heavily debated for a long time. Some researchers (Field, 2000) suggest that non-normal data cannot be used in parametric tests. Others (Box, 1976) say that there is no difference, because to be realistic, no data gathered from the outside (real) world is normally distributed. The main conclusion on this issue is that there is very little to no difference between the results from normally and non-normally distributed data. Therefore, the analysis has been implemented even though the data is non-normally distributed.

## 9. CONCLUSION

This multi-method study responds to the call for studies linking branding strategy and firm performance by assessing the impact of two brand architecture strategies on the three dimensions of brand equity as a measure of firm performance. In this conclusion section are described a current trend as well as the most important learnings to keep in mind from this paper and finally, the link between these learnings and the current trend is made in the last subsection named “Importance of leveraging the corporate brand.”

### 9.1. Current Trends

Two current trends are identified following the data collection of survey 1 and survey 2. These two key trends are described below.

- **Good for you, better for the planet**

As part of this study, I would like to expose two key current trends which are influencing companies of all sizes. The first trend is linked to consumer preferences and foodstuffs consumption. Decades ago, consumers were not truly interested in knowing all about the composition of products they were consuming. Consumers had lower levels of awareness about the products they were consuming than today. Following this period, came the period where consumers were willing to consume healthy products<sup>5</sup>. Awareness about product composition rose, altering consumer preferences. Companies had to begin health campaigns, render their products more “healthy” and enhance transparency. Recently, and following the health trend, a new trend started, the trend of “natural” beginning with organic products. Consumer preferences switched from only health to health and nature. A recent European survey on motives for purchasing organic foods found that “*it is healthier for them*” (48 percent) and “*better for the environment*” (16 percent) (Walley et al., 2009). Now, consumers want to consume natural and therefore organic (Kearney, 2010). See the example of Campbell’s: “*At Campbell’s, organic and all natural are the buzzwords*”<sup>6</sup>. This trend affects companies in two ways. The first way is that consumers want to eat, drink, and consume natural products, made out of natural ingredients or components. The second way this trend

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<sup>5</sup> Retailer and Consumer Acceptance of Promising Novel Technologies and Collaborative Innovation Management, Deliverable D2.1, Overview of Consumer Trends in Food Industry, 2011: [http://www.recapt.org/images/PDF/D2.1\\_public.pdf](http://www.recapt.org/images/PDF/D2.1_public.pdf)

<sup>6</sup> Forbes, 2015: <http://www.forbes.com/sites/nancygagliardi/2015/02/18/consumers-want-healthy-foods-and-will-pay-more-for-them/#77eef759144f>

affects companies is that consumers want to consume environmentally friendly products (Walley et al., 2009; Kearney, 2010). Therefore, companies have to be more responsible with both the composition of their products or services and the way they are producing and delivering it to consumers. Consumers are willing to consume products that are good for them, and better for the planet (Walley et al., 2009).

- **The search for transparency**

These two reasons for the search of transparency to have become an ongoing trend is linked to the trend described above, the trend of natural and organic. Indeed, this trend of natural and organic forces companies to be more transparent, more honest and therefore, more “natural”. Transparency is considered by some as being the most important marketing tool of 2015<sup>7</sup>.

The effects of this second important trend, the search for transparency, can already be felt through a current brand architecture strategy switch adopted by various companies. Indeed, many firms who had chosen to follow a pure house-of-brands structure strategy tends to now have some characteristics of branded-house structure strategies. In looking at two of the largest and best examples of house-of-brands, Unilever and Procter & Gamble, we can clearly see this change in the brand structure through their communication only. They both were very discreet about their corporate brands, trying to hide it, and communicate solely about their product brands. However, for the five last years, they both have communicated much more on their corporate brand, and seem to increasingly using it as a marketing tool. The reason for this change of mind could be very easily understandable. First, consumers are willing to become more responsible in the products they choose to consume. Second, firms have realised that the corporate brand was an existing asset that was underexploited. Unilever and Procter & Gamble seem to have realised that their corporate brands can be used in order to unify their product brands under an environmentally friendly, responsible and more transparent corporate brand. On its corporate website, Unilever write “*We have ambitious plans for sustainable growth and an intense sense of social purpose*”<sup>8</sup>, as being its vision. Similarly, on the corporate website of Procter & Gamble, we can read: “*We work hard every day to make quality products and services that improve people’s lives, now and*

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<sup>7</sup> Avi Dan, 11 Marketing Trends To Watch For In 2015, 2014:

<http://www.forbes.com/sites/avidan/2014/11/09/11-marketing-trends-to-watch-for-in-2015/#d79c0327e83c>

<sup>8</sup> Unilever, <https://www.unilever.com/about/who-we-are/our-vision/>

*for generations to come*”<sup>9</sup>. Both companies are delivering a message of social and sustainability concerns. The sustainability value is tightly connected to protecting the environment and being environmentally friendly. Also, both companies are delivering a message on their willingness to deliver quality products, good for people; which is of course closely related to what people believe is high quality; and as discussed above, in the eyes of consumers, natural products equals quality products.

Both of them are also taking concrete actions to support their claims of sustainability and quality. Procter & Gamble created a sustainability program about which they say: *“P&G is committed to touching and improving lives in a way that preserves and protects the planet. We have established a long-term vision which can only be achieved by setting short-term goals to ensure we stay on track”*<sup>10</sup>. Unilever launched the program “Sustainable Living”: *“the Unilever Sustainable Living Plan will help us double the size of our business while reducing our environmental footprint and increasing our positive social impact”*<sup>11</sup>.

Clearly, these two trends are intertwined and consumer preferences have had an impact on both firms’ brand structure strategies.

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<sup>9</sup> Procter & Gamble, who we are, [http://us.pg.com/who\\_we\\_are](http://us.pg.com/who_we_are)

<sup>10</sup> Procter & Gamble, sustainability, <http://us.pg.com/sustainability>

<sup>11</sup> Unilever, sustainable living, <https://www.unilever.com/sustainable-living/>

## 9.2. Main results

The statistical results that have been made during the hypothesis testing can be summarized here as a reminder of the key information.

The conclusions that can be made based on the statistical results is that the house-of-brands structure generally presents higher brand assets, higher brand strength as well as higher brand value levels than the branded-house structure and the relationships between brand structure and these three variables are significant.

The house-of-brands structure is also associated with a wider price range than the branded-house architecture strategy.

Furthermore, the house-of-brands and the branded-house architecture strategies are associated with a similar level of brand reputation. However, the house-of-brands strategy nonetheless presents a slightly higher brand reputation level. It is important to note that brand structure does not significantly predicts brand reputation.

Also, the house-of-brands architecture strategy is clearly associated with a higher number of employees than the branded-house architecture strategy.

In addition, the average creation date of the house-of-brands structure is significantly older than the average creation date of the branded-house structure.

Finally, the average satisfaction level is on average slightly lower for the branded-house structure than for the house-of-brands structure. However, it is important to note that brand structure does not significantly predicts customer satisfaction.

Following this summary, below are presented two tables including the main results for each of the studied variables, including dependent, independent and secondary variables.

Structure		Brand Reputation	Satisfaction	Number of Employees	Marketing Investment	Age of the Branch	Price Range
Branded-house	Firm A	3,02	3,45	6	0,05	10	70
	Firm B	3,60	4,12	2	0,00	16	80
House-of-brands	Firm C	3,56	4,07	45	0,08	14	251
	Firm D	3,18	3,64	50	0,05	35	180

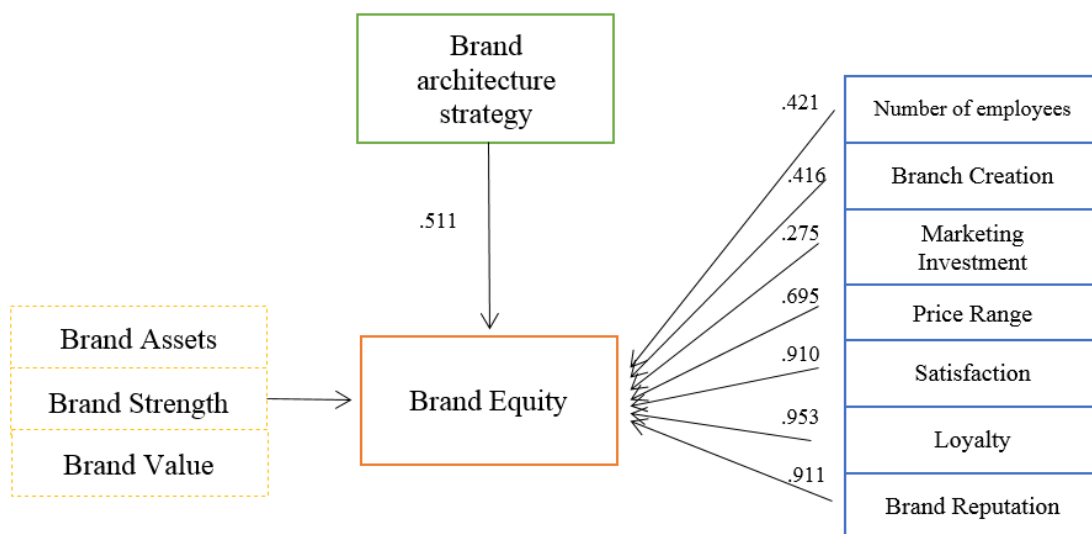
**Table 4: secondary and independent variables main results**

Structure		Brand Assets	Brand Strength	Brand Value	Brand Equity
Branded-house	Firm A	1,76	0,80	1,05	1,20
	Firm B	3,33	1,99	1,05	2,13
House-of-brands	Firm C	3,95	2,22	1,47	2,55
	Firm D	2,28	1,65	1,44	1,79

**Table 5: dependent variable main results**

As described in the theory part of this paper, an innovative view of brand equity has been developed as part of this thesis. Indeed, according to previous literature and the theory developed on the branding field, brand assets, brand strength and brand value are the three components of brand equity. However, no previous study has used this model in order to evaluate firm performance. Therefore, in this paper, the variable brand equity has been created by clustering the concepts of brand assets, brand strength and brand value together; in order to evaluate firm performance.

To make it easier to analyse the relationships between the different variables, the model created as basis for this thesis has been evaluated through a three-“layer” regression (see appendix 3.1.). The correlations between the different components are presented on the model below (figure 19).



**Figure 19: main model**

In the independent variables, composed by the brand architecture strategy (green), and the secondary variables (blue), including number of employees, brand creation, marketing investment, price range, satisfaction, loyalty, and brand reputation; all but one (i.e. marketing investments) present at least some relationship with the dependent variable, brand equity, as they show correlations higher than 0,3.

The only variable that does not correlates well with brand equity is the marketing investment variable. The correlation between these two variables is equal to 0,275, which is lower than expected. This can be due to a few different reasons. One of them can for example be caused by the fact that this marketing investment variable has been evaluated for each one of the three last years. However, the repercussions of commitment to marketing expenditures can often take a long time before being actually observed on the brand equity level of the firm. It can be assumed that three years is probably not enough to analyse in order to observe a real, tangible effect of the marketing expenditure level on brand equity. Marketing investments in general can be long- or short-term. However, in order to truly modify consumer behaviour and liking towards a particular brand or firm, a corporation often needs to commit to long-term investments. For example, a firm that has committed heavily on marketing expenditures ten years ago, could still feel the effects of this commitment at the moment, and would not need to advertise as much as a younger company, which would need to commit a lot before starting to feel the effects on its brand equity level.

The variables that correlate the most with brand equity (including brand assets, brand strength and brand value) are brand architecture strategy, price range, satisfaction, brand reputation and finally loyalty. The implication for our model is that, according to the three-layer regression (appendix 3.1.), in addition to the three dimensions of brand equity, six out of seven studied secondary variables also show at least some relationship with the dependent variable, brand equity.



### 9.3. Importance of leveraging the corporate brand

Following the analysis of the collected information on the Norwegian office coffee market, one striking observation had to be further detailed here. Indeed, when taking a closer look at the collected data (table 6), a striking observation can be made on the significant difference between the collected information regarding firm A, firm B, firm C and firm D.

		Brand Assets	Brand Strength	Brand Value
Branded-house	Firm A	1,76	0,80	1,05
	Firm B	3,33	1,99	1,05
House-of-brands	Firm C	3,95	2,22	1,47
	<b>Firm D</b>	<b>2,28</b>	<b>1,65</b>	<b>1,44</b>
	<b>Average</b>	<b>2,83</b>	<b>1,65</b>	<b>1,25</b>

**Table 6: summarized data**

First of all, it can be observed that despite the fact that firm C and D are both classified as house-of-brands structures, firm D performs surprisingly poorly compared to firm C. In addition, when comparing the values for firm D with the averages of each one of the four studied firms, it can be observed that for the brand assets variable, firm D performs poorly compared to the average value. Indeed, firm D has a brand assets value of 2,28 against 2,83 for the average made out of the values collected from the four firms. Even more interesting, surprisingly, despite having a brand assets level lower than average, firm D still manages to have an equal brand strength level than the average, and to perform above average when it comes to brand value levels. How can we possibly explain that a firm can perform poorly on brand assets, while having an average brand strength and an above average brand value? This means that this firm has lower than average brand awareness, consideration set frequency, and previous consumption rate, while still having an average market share as well as an above average net income. The answer to this can be found by analysing the portfolio of the firm, and more precisely by evaluating the firm's secondary brands performances. Indeed, and as already described in the hypothesis section, in the case where a corporate

brand has weak brand assets but high brand strength and high brand value, it could indicate strong secondary brand assets. In other words, the corporate brand has low brand assets, but one or more of its secondary brands have high brand assets, which can lead to a higher market share owned by that brand, or a higher profit margin and therefore higher net profits. In this case however, firm D's brand strength level is similar to the average brand strength level, while firm D's brand value level is higher than the average brand value level. This can be explained by the fact that while having an average market share, brand D has high profit margin thanks to its brand assets, which reflects on its brand value. Indeed, having high brand awareness, consideration set frequency, and previous consumption rate allows firms to charge more for their products. I would like to highlight that this shows one more time the importance of simultaneously evaluating brand equity through each one of the three different, but complementary measures presented in this paper: brand assets, brand strength and brand value. As already stated, it is important to remember that measuring only one of these three variables, as it has been done way too many times in previous studies (Rao et al., 2004; Hsu et al., 2010; Hsu et al., 2014), does not give a complete and objective overview of a firm's situation.

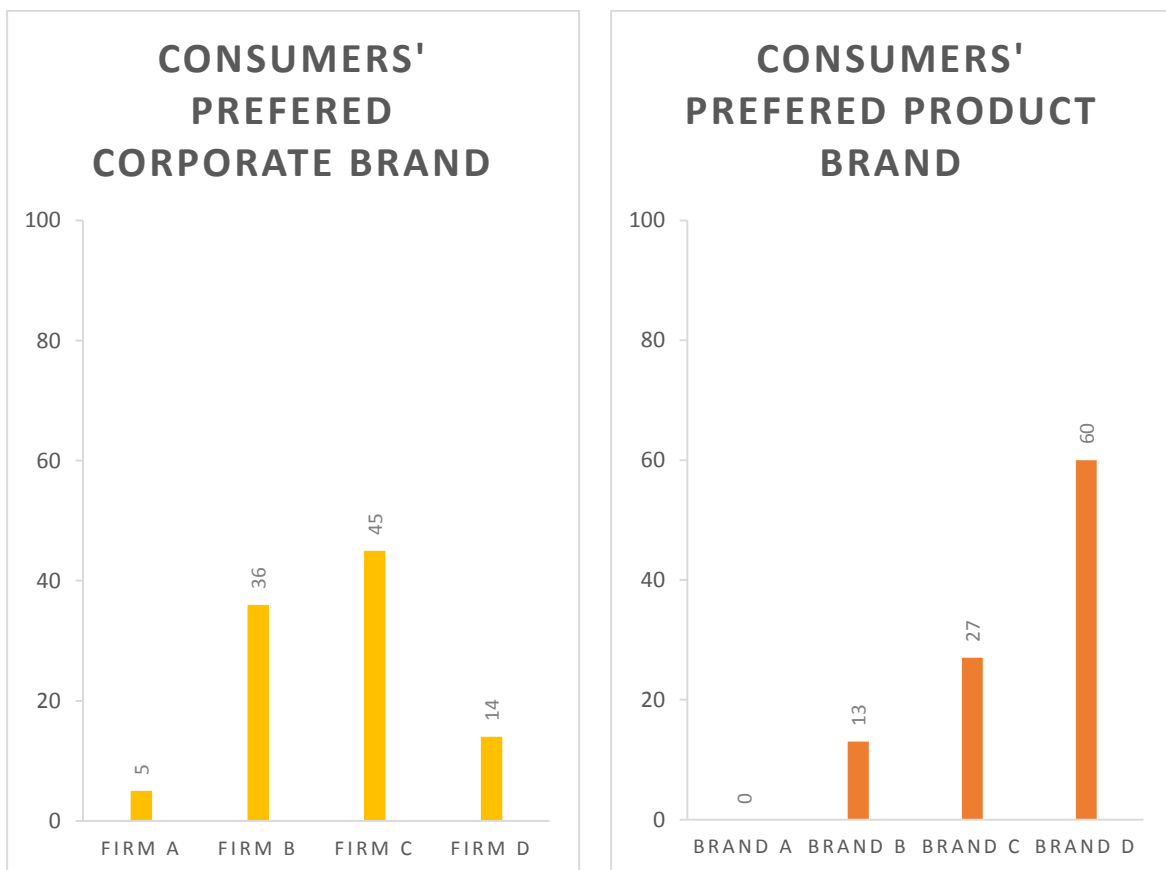
This thesis being confidential, the names of the firms who participated in the study will of course not be revealed. However, to put this study in a minimum of context, it is important to state that firm D recently merged with one of the best performing brand active on the Norwegian office coffee market, brand D. This brand D has been acquired by firm D, and is therefore a secondary or product brand of firm D. Consumers are not aware yet that brand D, is now owned by firm D. Therefore, this represents an interesting case that will be further analysed and described.

Indeed, with this strong brand in its portfolio, firm D should perform much better than what it actually does compared to the industry average, at least on the brand assets variable. In order to further investigate this interesting case, and as part of this paper, a third unplanned questionnaire has been quickly created and conducted (see appendix 8), on a much smaller population this time, in order to investigate the scores of brand assets, loyalty, brand reputation, and satisfaction for one product brand of each corporate brand studied in survey 1 and 2. This third questionnaire aims at investigating brand D and is called survey 3.

Survey 3 has been conducted from the fourth of May, until the fifteenth of May. This survey constitutes only a rapid survey that has been created on top of the two originally planned and designed surveys. Therefore, a small number of respondents has been accepted, and only

thirty full answers were collected. In order to obtain comparable results with survey 2, the design of survey 3 is based on the design of survey 2. Therefore most questions were evaluated on a Likert scale, in order to give a high level of freedom to the respondents. While survey 2 evaluates the corporate brands of firm A, B, C and D; survey 3 evaluates the product brands of firm A, B, C, and D, called brand A, brand B, brand C and brand D. Brand A is the product brand of firm A, brand B is the product brand of firm B, brand C is the largest product brand of firm C and brand D is the recently acquired product brand of firm D.

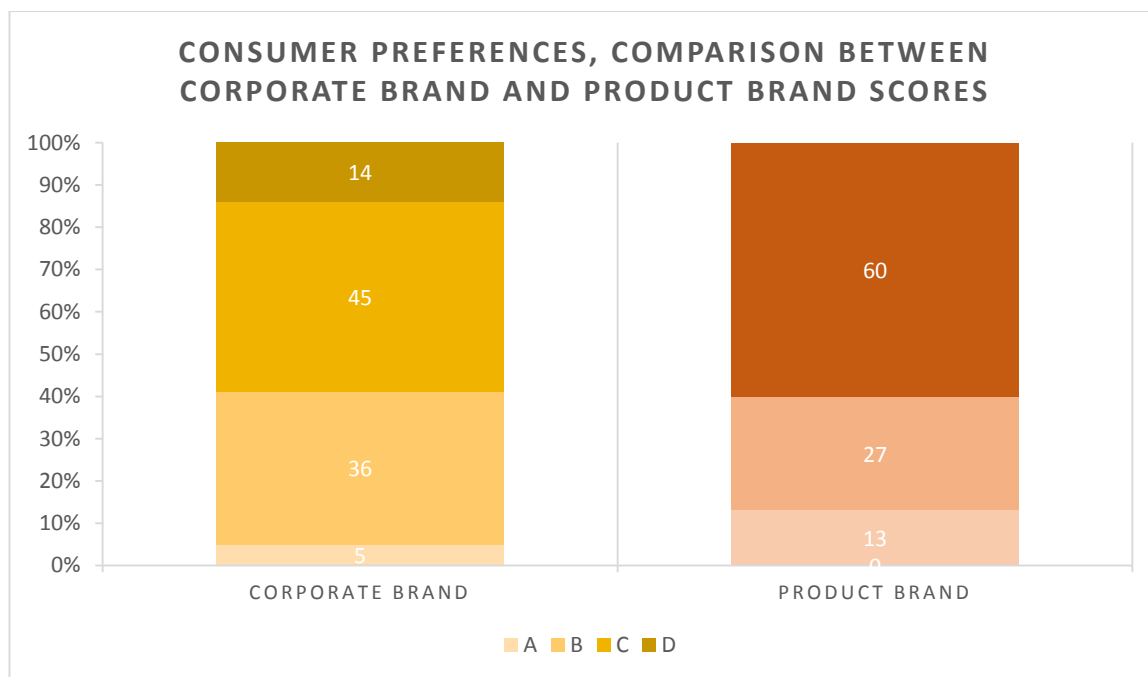
Only one question was not evaluated through a Likert-scale: *“the following brand would be my first choice”*. For this question, the respondents had the choice to select one of the following answers: brand A, brand B, brand C or brand D. Below, the graph on the right hand side (figure 20) illustrates the results of survey 3 for the following question on product brand: *“The following brand would be my first choice”*. The graph on the left side (figure 19) presents the results of the same question collected in survey 2, on corporate brand.



**Figure 19 (left): consumers' preferred corporate brand**

**Figure 20 (right): consumers' preferred product brand**

In addition to figure 19 and 20, and in order to ensure the reader's full comprehension of the implications following the analysis of the results collected in survey 3, a third graph is presented below (figure 21). This graph is presenting the comparison between consumers' preferred corporate brand and consumers' preferred product brand, and is basically the summary of figure 19 and 20.



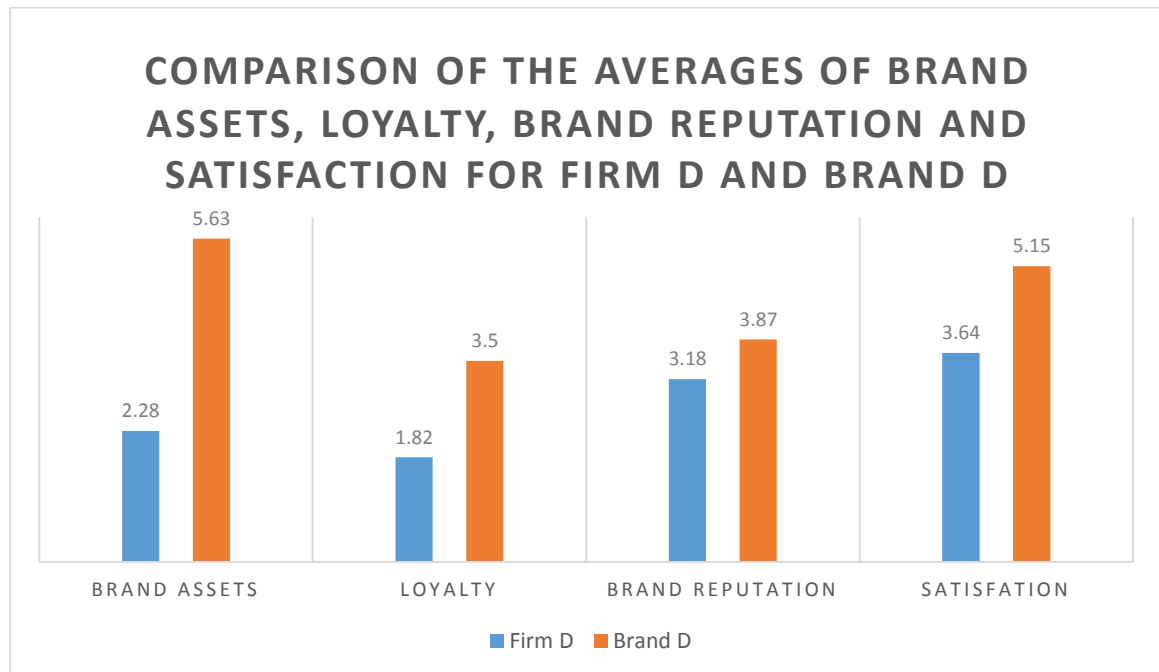
**Figure 21: Consumer preferences, comparison between corporate brand and product brand scores**

As seen on figure 20 and figure 21 (from survey 3), brand A has been the first choice of none of the thirty surveyed Norwegian consumers. Brand B is the first choice of 13 percent of consumers, brand C is the first choice of 27 percent of consumers and brand D is the first choice of an impressive 60 percent of surveyed consumers. This means that brand D, a product brand of firm D, is largely preferred against the product brands of firm A, B and C. This supports the above argument stating that brand D is one of the preferred brand currently active on the Norwegian office coffee market.

In addition, a striking observation can be made here: while firm D performs less good than firm B and C in survey 2; in survey 3, brand D, performs more than 2 times better than brand C, and more than five times better than brand B. Therefore, the conclusion that can be made here is that brand D represents a great asset for the corporate brand (brand D), and should be used in order to achieve image transfer from brand D towards the entire portfolio of firm D and therefore build higher equity for the corporate brand as a whole.

On figure 21, it is made more obvious that brand D represent a powerful asset for firm D. Indeed, on the left side of figure 21, firm D has been chosen as top choice by only 14 percent of consumers. Brand D however (right side), has been selected as top choice by 60 percent of consumers. This represent a huge opportunity for firm D to steal market shares from other brands and increase its entire portfolio performance.

Further, a graph presenting the comparison between firm D and brand D on the average brand assets, loyalty, brand reputation and satisfaction is analysed (figure 22).



**Figure 22: comparison of the averages of brand assets, loyalty, brand reputation and satisfaction for firm D and brand D**

The main observations that can be made about the above graph (figure 22) are all supporting the argument suggesting that brand D performs better than firm D as a whole. The average brand assets level is 5,63 for brand D against 2,28 for firm D. Therefore, this graph suggests that brand D performs more than two times better than firm D as a whole. In addition, brand D scores approximately two times higher than firm D on loyalty. The brand reputation level is equal to 3,87 for brand D against 3,18 for Firm D. Finally, the average satisfaction level is also significantly higher for brand D than for firm D. To summarize, brand D performs better than firm D on brand assets, loyalty, brand reputation as well as customer satisfaction.

Brand D performs extremely well on the above four presented variables. By looking into both qualitative and quantitative historic information, the reason for brand D's superior performance can be easily and logically explained. Indeed, brand D is an old Norwegian

brand that can probably be classified as heritage brand, as it is a very liked and trusted brand, which is part of this country's culture for several decades. Therefore, the image and reputation of brand D could be leveraged by firm D in order to elevate its other product brands as well as its portfolio as a whole. The concept of image transfer could be used by the managers of firm B in order to increase its corporate brand and other product brands performance. By linking its corporate brand name to brand D, firm D would benefit from an image transfer from brand D to firm D and further to the other brands owned by firm D.

It is important to underline here that even if the theoretical concept of image transfer can be implemented in real-life situations and can be a great source of leverage, it can also turn into a big threat if badly handled. Indeed, the image transfer from brand D to firm D can also go the other way around and become an image transfer from firm D to brand D. Over time, this would end up in reducing brand D's general performance, as well as possibly other product brands' performances and therefore firm D's general performance. A concrete risk in this case would be, for example, that by associating brand D, which is considered by all Norwegians as a true Norwegian brand, to Firm D, which is a foreign brand, consumers would start disliking the brand as they would realise that brand D is actually foreign-owned. This is linked to the theoretical concept of country-of-origin. This concept has been widely studied. Peterson and Jolibert (1995) showed that country of origin has a strong influence on product evaluation. In a few words, the concept of product country of origin, is an aspect of product information with a complex effect on consumer behaviour (Papadopoulos & Heslop, 1993; Askegaard & Ger, 1998). Dichter (1962) was the first to argue that products country of origin may have a "tremendous influence on the acceptance and success of products".

To conclude, brand D is a product brand of firm D, and is highly liked and chosen as the first choice by an estimated (see figure 20 and 21) 60 percent of Norwegian consumers. Brand D scores higher than firm D for each of the following variables: brand assets, loyalty, brand reputation and satisfaction. These high scores observed for brand D represents an opportunity for firm D. Indeed, by leveraging the corporate brand and using the concept of image transfer, firm D could achieve a great performance increase. However, it is important to highlight the fact that each great opportunity also hides great threats. Therefore, managers needs to handle this opportunity carefully in order not to accidentally transform it into a threat.

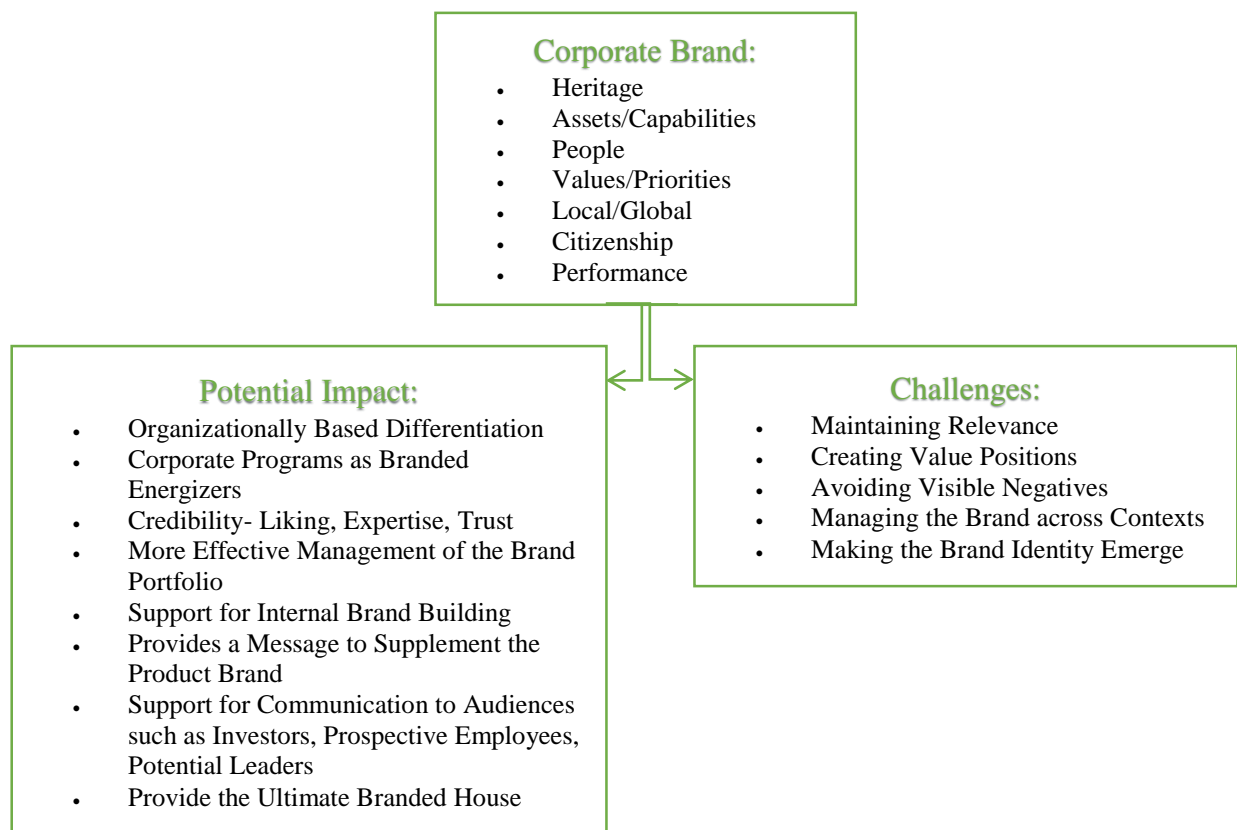
As stated before, more and more firms implementing house-of-brands structures are currently slightly shifting their branding architecture strategy from a pure house-of-brands towards a structure in between the house-of-brands and the branded-house strategies. This shift is mainly characterised by an enhanced communication and transparency around the corporate brand. This current trend in brand architecture strategies is observed in various firms, and manifests itself through small modification in the communication about the firm, including the product brands as well as the corporate brand. Indeed, this evolution from a house-of-brands to a more central (as opposed to polar) structure is not implemented through significant firm restructuration or deep changes of directions, but simply by making the corporate logo more visible across the whole product-range, as well as by according more resources to the corporate brand. By looking at Unilever, it can be observed that the corporate logo has been added to each video and commercial produced by the corporation. Indeed, television and online advertising are created with the purpose of presenting a product and its corresponding product brand. Recently, television and online advertising have got a second aim: putting the corporate brand name forward. Indeed, the corporate logo is now always added on the top right corner during the few last seconds of the video. This corporate logo has also been made more visible on the packaging of all products sold by Unilever. In addition, the firm has a corporate website, and corporate social media pages giving detailed information about Unilever's goals, mission and vision; pushing the corporate brand name forward. By adapting its strategy and following this current trend, Unilever leverages an asset that had previously stayed close to un-leveraged: the corporate brand. Indeed, the corporate brand has always been an asset that was existing in house-of-brands structures but that was often not leveraged. Meanwhile, firms who were implementing branded-house architecture strategies were using and leveraging their corporate brand names as they were using it across their entire portfolio.

The house-of-brands' subtle use of their corporate brand is a smart way to use this un-leveraged asset, while keeping a certain distance and separation between the product brands. The branded-house allows a very limited level separation, if not no separation at all. Quite the opposite, the traditional house-of-brands structure force too much separation between the various product brands. These two strategies being the polar solutions, leveraging the corporate brand when implementing a house-of-brands structure is what we can call a more "neutral" solution. Indeed, when leveraging the corporate brand, the firm is not implementing a pure house-of-brands structure anymore, but does not go too close to a

branded-house structure either. In other words, the recent trend that has emerged in brand architecture strategies seems to offer a middle ground in taking the advantages of each of the two polar architecture strategies; the house-of-brands and the branded-house.

One more time, this branding trend represents a big opportunity for firms, but it is important to keep in mind that behind all opportunities are hiding big threats and challenges. Therefore, it is important that managers realise the opportunities that can stem from leveraging the corporate brand name; but it also is important for them to carefully plan the way they are going to implement this leverage according to their existing and foreseen portfolio.

This thesis is not the only work supporting the idea of leveraging the corporate brand name as a strategic performance driven tool. Already in 2004, David A. Aaker wrote an article called “Leveraging the corporate brand”, in which he gives support and guidelines to firms in order to help them leverage their corporate brands. In this article, Aaker is presenting the following figure on the challenges and potential impact of the corporate brand.



**Figure 23: what is a corporate brand? (Aaker, 2004)**



In this figure, David A. Aaker (2004) made an attempt to describe the characteristics of a corporate brand. According to him, a corporate brand will potentially have a rich heritage, assets and capabilities, values and priorities, a local or global frame of reference, citizenship programs and a performance record.

As stated before, some challenges are linked to the leverage of the corporate brand, as for example: staying relevant, creating a concrete value proposition for the corporate brand, managing negative associations, adapting the corporate brand to different contexts, and making the corporate brand identity happen.

But what are the potential positive impacts of leveraging the corporate brand? Aaker (2004) has listed various reasons for the firms to start putting the corporate brand forward:

1. Organizationally Based Differentiation, meaning that while products and services tend to become similar over time, organizations are inevitably very different.
2. A corporate brand can draw on organisational programs that provide energy to the secondary brands.
3. Corporate brand associations can also provide credibility through liking, expertise, and trust.
4. Leveraging the corporate brand across products and markets renders the management of the brand portfolio easier and more effective.
5. Leveraging the corporate brand provides support for internal brand building.
6. Leveraging the corporate brand provides a message for the customer relationship to supplement the secondary brands' messages.
7. Creating a strong corporate brand communicates better to stakeholders, such as prospective employees, retailers, and investors. As previously explained, leveraging the corporate brand represents a big opportunity for firms as, when well implemented, it allows them to benefit from the advantages of both the branded-house and the house-of-brands architecture strategies.

As previously described in this paper as well as by Aaker (2004), there are threats, but most importantly opportunities that arises from leveraging the corporate brand. These threats and opportunities should be evaluated by managers and the adequate decisions should be taken in order to enhance firm performance through the three brand equity variables; brand assets, brand strength and brand value.

Therefore, to conclude this paper, the question must be answered: “Brand architecture strategy, does it matter in business-to-business contexts?” The answer to this question is definitely YES it does matter! Indeed throughout this paper, a large amount of information has been discussed, and the cases of four different companies active on the Norwegian office coffee industry have been looked into. In addition, the case of firm D has been further studied and analysed. This case is probably the best example to use in order to confirm that yes, brand architecture strategy does definitely matter in business-to-business contexts. Indeed, we have seen that by slightly shifting its pure house-of-brands structure towards a less strict structure in allowing more space for the corporate brand, firm D could have a significant opportunity to improve its product brands and firm performance. This case answers the question asked in the title of this paper, and leads to significant theoretical and managerial implications (as previously discussed in section 8.3.).

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## APPENDIX

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## Appendix 1: Descriptive statistics

### 1.1. Company Data (survey 1)

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BrValue2013	4	5,00	22,00	14,2500	8,09835	-,267	1,014	-3,931	2,619
BrValue2014	4	10,00	22,00	16,2500	6,13052	-,068	1,014	-5,348	2,619
BrValue2015	4	15,00	21,00	17,7500	3,20156	,084	1,014	-5,518	2,619
BrStrength2013	4	1,00	20,00	12,7500	8,53913	-1,174	1,014	,659	2,619
BrStrength2014	4	2,00	20,00	13,5000	8,26640	-1,275	1,014	,913	2,619
BrStrength2015	4	3,00	21,00	14,2500	7,88987	-1,443	1,014	2,235	2,619
MktInvest2013	4	,00	8,00	4,7500	3,40343	-1,199	1,014	1,979	2,619
MktInvest2014	4	0	7	4,75	3,304	-1,560	1,014	2,173	2,619
MktInvest2015	4	0	8	4,50	3,317	-,877	1,014	1,934	2,619
NbEmployees	4	2	50	25,75	25,250	,012	1,014	-5,682	2,619
DateCreation	4	1980	2005	1996,25	11,117	-1,695	1,014	3,121	2,619
PriceRange	4	70	251	145,25	86,238	,541	1,014	-2,850	2,619
Structure	4	0	1	,50	,577	,000	1,014	-6,000	2,619
Valid N (listwise)	4								

Each variable has 4 answers, which is the number of companies who accepted to participate in this study. Descriptive statistics also provides some information concerning the distribution of scores on continuous variables (skewness and kurtosis).

- Skewness value: indication of the symmetry of the distribution.
- Kurtosis value: information about the 'peakedness' of the distribution.

If the distribution is perfectly normal = skewness and kurtosis = 0. Positive skewness values indicate positive skew (scores clustered to the left at the low values). Negative skewness values indicate a clustering of scores at the high end (right-hand side of a graph). Positive kurtosis values indicate that the distribution is rather peaked (clustered in the centre), with long thin tails. Kurtosis values below 0 indicate a distribution that is relatively flat (too many cases in the extremes).

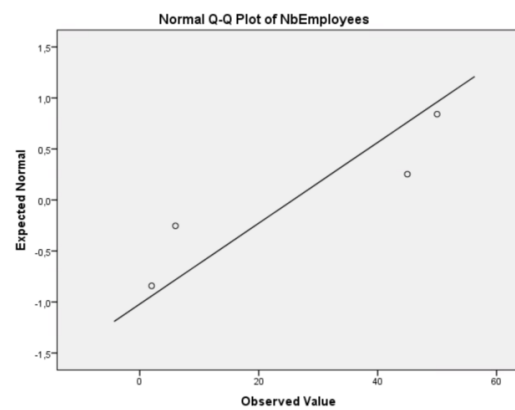
The data file has been inspected for missing data and outliers. However, no missing data has been found.

## EXPLORE

Case Processing Summary							
Structure		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
BrValue2015	,00	2	100,0%	0	0,0%	2	100,0%
	1,00	2	100,0%	0	0,0%	2	100,0%
BrStrength2015	,00	2	100,0%	0	0,0%	2	100,0%
	1,00	2	100,0%	0	0,0%	2	100,0%
MktInvestment2015	,00	2	100,0%	0	0,0%	2	100,0%
	1,00	2	100,0%	0	0,0%	2	100,0%
PriceRange	,00	2	100,0%	0	0,0%	2	100,0%
	1,00	2	100,0%	0	0,0%	2	100,0%
NbEmployees	,00	2	100,0%	0	0,0%	2	100,0%
	1,00	2	100,0%	0	0,0%	2	100,0%
BranchCreation	,00	2	100,0%	0	0,0%	2	100,0%
	1,00	2	100,0%	0	0,0%	2	100,0%

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BrValue2015	,305	4	.	,799	4	,100
BrStrength2015	,288	4	.	,887	4	,369
MktInvest2015	,310	4	.	,916	4	,515
NbEmployees	,283	4	.	,815	4	,131
DateCreation	,348	4	.	,827	4	,161
PriceRange	,275	4	.	,891	4	,390
Structure	,307	4	.	,729	4	,024

a. Lilliefors Significance Correction



All Normal Q-Q Plots look like the above one. There is a clear deviation from normality (non-normal distribution).

## 1.2. Consumer data (survey 2)

### DESCRIPTIVES

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BrAssets	548	1,00	7,00	2,8704	1,50551	,454	,104	-,805	,208
BrStrength	548	,36	4,24	1,6699	1,04982	,785	,104	-,486	,208
BrRep	548	1,00	6,00	3,3394	1,32675	-,346	,104	-,762	,208
Satisfaction	548	1,00	7,00	3,8175	1,44601	-,545	,104	,378	,208
Structure	548	,00	1,00	,5000	,50046	,000	,104	-2,007	,208
Valid N (listwise)	548								

### EXPLORE

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
BrAssets	548	100,0%	0	0,0%	548	100,0%
BrStrength	548	100,0%	0	0,0%	548	100,0%
BrRep	548	100,0%	0	0,0%	548	100,0%
Satisfaction	548	100,0%	0	0,0%	548	100,0%
Structure	548	100,0%	0	0,0%	548	100,0%

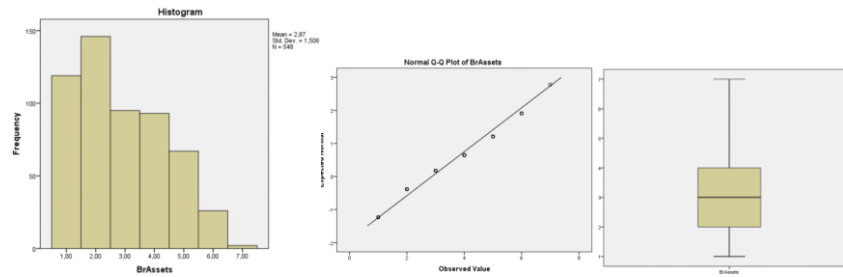
**Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BrAssets	,202	548	,000	,907	548	,000
BrStrength	,161	548	,000	,897	548	,000
BrRep	,245	548	,000	,915	548	,000
Satisfaction	,359	548	,000	,795	548	,000
Structure	,341	548	,000	,637	548	,000

a. Lilliefors Significance Correction

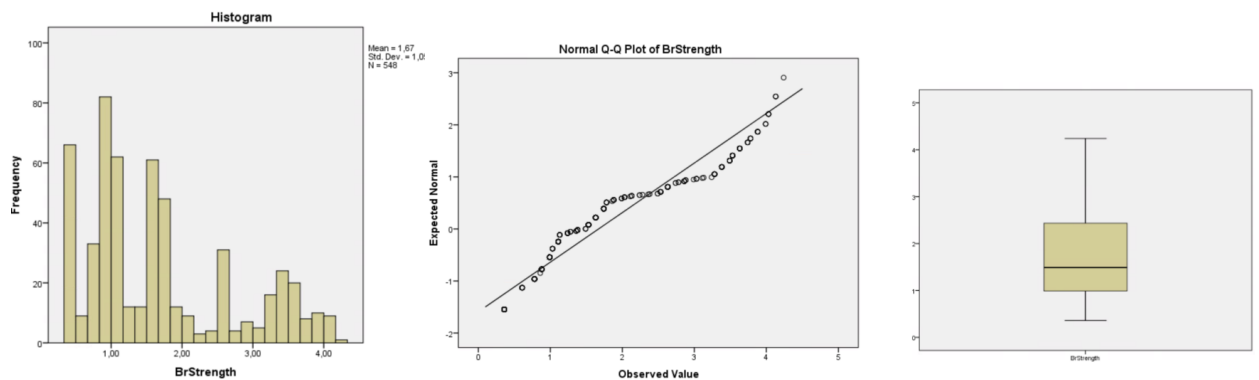
Tests of Normality, Kolmogorov-Smirnov= assesses the normality of the distribution of scores. A non-significant result (Sig value of more than .05) indicates normality. Here, Sig. value = .000 for each group, suggesting non-violation of the assumption of normality.

- BrAssets



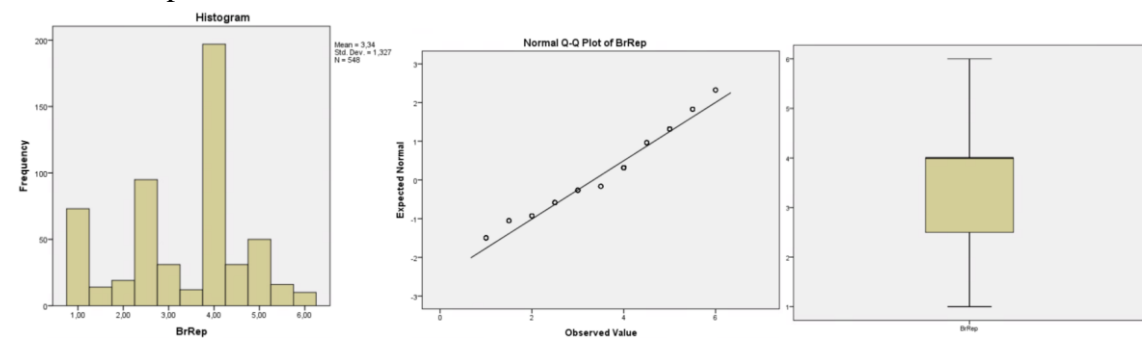
A reasonably straight line suggests a normal distribution.

- BrStrength



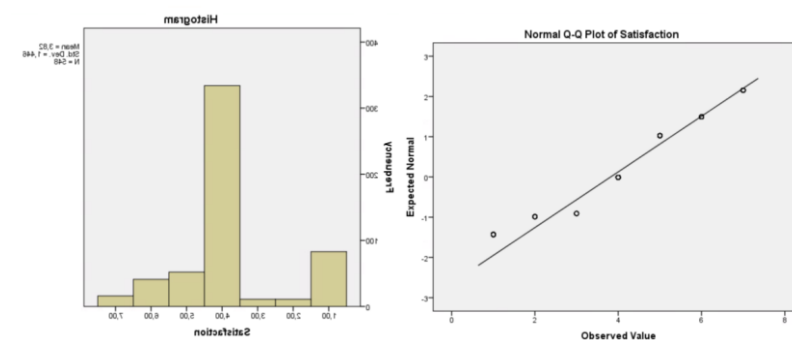
NON-NORMAL

- BrReputation



NON-NORMAL

- SATISFACTION



NON-NORMAL



## Appendix 2: Logistic regressions

### 2.1. Assets, strength and value on brand structure

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

#### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	14,242	2	,001
	Block	14,242	2	,001
	Model	14,242	2	,001

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	745,447 <sup>a</sup>	,026	,034

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6,182	8	,627

Contingency Table for Hosmer and Lemeshow Test

		Structure = ,00		Structure = 1,00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	16	16,614	10	9,386	26
	2	44	37,513	21	27,487	65
	3	10	10,272	8	7,728	18
	4	66	64,585	48	49,415	114
	5	17	19,694	21	18,306	38
	6	24	27,558	31	27,442	55
	7	26	27,946	32	30,054	58
	8	23	23,859	31	30,141	54
	9	22	23,931	36	34,069	58
	10	26	22,029	36	39,971	62

variables.

Hosmer and Lemeshow Test: SPSS states is the most reliable test of model fit available in SPSS, is interpreted very differently from the above omnibus test.

Here, to support our model we want Sig> .05. In our example the chi-square value for the Hosmer-Lemeshow Test is 6.182, with Sig= .627. (> .05) -> indicating support for the model.

#### Block 0: Beginning Block

Classification Table<sup>a,b</sup>

		Predicted Structure		Percentage Correct
		,00	1,00	
Step 0	Observed Structure ,00	0	274	,0
	1,00	0	274	100,0
Overall Percentage				50,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

	Score	df	Sig.
Step 0 Variables			
BrAssets	13,860	1	,000
BrStrength	4,198	1	,040
Overall Statistics	14,090	2	,001

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. (Goodness of fit test).

We want highly significant value (Sig < .05). Here Sig= .001. Therefore, **the model (with our set of variables used as predictors) is better than SPSS's original guess shown in Block 0**, which assumed that everyone would report no problem with their sleep. The chi-square value, which we will need to report in our results, is 14,242 with 2 degrees of freedom.

Model Summary: gives another piece of information about the usefulness of the model. Cox & Snell R Square & Nagelkerke R Square values: indication of the amount of variation in the dep variable explained by the model (0 -> 1) (described as pseudo R square statistics). **Here: between 2,6%% and 3,4% of the variability is explained by this set of**

Classification Table<sup>a</sup>

Observed		Predicted		
		Structure		Percentage Correct
		,00	1,00	
Step 1	Structure ,00	176	98	64,2
	1,00	136	138	50,4
	Overall Percentage			57,3

a. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 <sup>a</sup>	BrAssets	,306	,098	9,747	1	,002	1,358	1,121
	BrStrength	-,029	,059	,242	1	,623	,972	,866
	Constant	-,865	,249	12,043	1	,001	,421	1,090

a. Variable(s) entered on step 1: BrAssets, BrStrength.

Correlation Matrix

		Constant	BrAssets	BrStrength
Step 1	Constant	1,000	-,841	,229
	BrAssets	-,841	1,000	-,648
	BrStrength	,229	-,648	1,000

Classification table: provides indication of how well the model is able to predict the correct category (BH/HOB) for each case. We can compare this with the Classification table shown for Block 0, to see how much improvement there is when the predictor variables are included in the model. The model **correctly classified**

**57.3% of cases**, an improvement over the 50% in Block 0.

Variables in the Equation: gives information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values  $< .05$ . These are the variables that contribute significantly to the predictive ability of the model. In this case we have 1 significant variable (BrAssets  $p = .002$ ).

**B values:** equivalent to the B values obtained in a multiple regression analysis. These are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB). Here, BrAssets = .306 indicating that higher BrAssets is associated with HOB. Here, BrStrength = -.029 indicating that higher BrStrength is associated with BH.

Exp(B): values are the odds ratios (OR) for each of your independent variables. The odds ratio is 'the increase (or decrease if the ratio is less than one) in odds of being in one outcome category when the value of the predictor increases by one unit'.

Here, being a HOB, is 1.358 times higher for high BrAssets, all other factors being equal. Here, being a HB, is  $0.972 =$  the higher the BrStrength, the more likely to be a BH.

## 2.2. Satisfaction and brand reputation on brand structure

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table<sup>a,b</sup>

Observed		Predicted		
		Structure		Percentage Correct
		,00	1,00	
Step 0	Structure ,00	0	274	,0
	1,00	0	274	100,0
Overall Percentage				50,0

a. Constant is included in the model.

b. The cut value is ,500

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	,378	2	,828
	Block	,378	2	,828
	Model	,378	2	,828

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	759,311 <sup>a</sup>	,001	,001

a. Estimation terminated at iteration number 2 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4,263	6	,641

Contingency Table for Hosmer and Lemeshow Test

		Structure = ,00		Structure = 1,00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	33	34,167	32	30,833	65
	2	32	33,735	34	32,265	66
	3	14	15,114	16	14,886	30
	4	37	34,106	31	33,894	68
	5	12	11,485	11	11,515	23
	6	91	83,911	78	85,089	169
	7	20	25,041	31	25,959	51
	8	35	36,442	41	39,558	76

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	BrRep	,234	1	,629
		Satisfaction	,350	1	,554
	Overall Statistics		,378	2	,828

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. (Goodness of fit test).

We want highly significant value (Sig < .05). Here Sig = .828. Therefore, **the model (with our set of variables used as predictors) is NOT better than SPSS's original guess shown in Block 0**, which assumed that everyone would report no problem with their sleep. The chi-square value, which we will need to report in our results, is .378 with 2 degrees of freedom.

Model Summary: gives another piece of info about the usefulness of the model.

Cox & Snell R Square & Nagelkerke R Square values: indication of the amount of variation in the dep variable explained by the model (0 -> 1) (described as pseudo R square statistics).

**Here: approximately 0.1% of the variability is explained by this set of variables.**

Hosmer and Lemeshow Test: SPSS states is the most reliable test of model fit available in SPSS, is interpreted very differently from the above omnibus test.

Here, we want Sig > .05. In our example the chi-square value for the Hosmer-Lemeshow Test is 4.263, with Sig = .641. (> .05) -> indicating support for the model.

Classification table: provides indication of how well the model is able to predict the correct category (BH/HOB) for each case. We can compare this with the Classification table shown

Classification Table<sup>a</sup>

Observed		Predicted		
		Structure		Percentage Correct
		,00	1,00	
Step 1	Structure ,00	116	158	42,3
	1,00	113	161	58,8
Overall Percentage				50,5

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	BrRep	,013	,080	,029	1	,866	1,014	,867	1,185
	Satisfaction	,028	,073	,145	1	,704	1,028	,891	1,186
	Constant	-,151	,262	,331	1	,565	,860		

a. Variable(s) entered on step 1: BrRep, Satisfaction.

Correlation Matrix

		Constant	BrRep	Satisfaction
Step 1	Constant	1,000	-,390	-,470
	BrRep	-,390	1,000	-,586
	Satisfaction	-,470	-,586	1,000

information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values  $< .05$ . These are the variables that contribute significantly to the predictive ability of the model. In this case we have 0 significant variable.

**B values:** equivalent to the B values obtained in a multiple regression analysis. These are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB). Here, BrRep= .013 indicating that higher BrRep is associated with HOB. Here, Satisfaction= .028 indicating that higher Satisf is associated with HOB.

Exp(B): values are the odds ratios (OR) for each of your independent variables. The odds ratio is 'the increase (or decrease if the ratio is less than one) in odds of being in one outcome category when the value of the predictor increases by one unit'.

Here, chances of being a HOB, is 1.014 times higher for high BrRep, all other factors being equal.

Here, chances of being a HOB, is 1.028 times higher for high Satisf, all other factors being equal.

for Block 0, to see how much improvement there is when the predictor variables are included in the model. The model **correctly classified 50.5% of cases**, a very small improvement over the 50% in Block 0.

Variables in the Equation: gives

## 2.3. Brand Assets & brand Structure

### Block 0: Beginning Block

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	19,124	1	,000
	Block	19,124	1	,000
	Model	19,124	1	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	740,565 <sup>a</sup>	,034	,046

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	3,475	4	,482

Classification Table<sup>a</sup>

Observed			Predicted		
			Structure		Percentage Correct
			,00	1,00	
Step 1	Structure	,00	154	120	56,2
		1,00	111	163	59,5
	Overall Percentage				57,8

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	BrAssets	,253	,059	18,406	1	,000	1,288	1,147	1,446
	Constant	-,725	,189	14,675	1	,000	,484		

a. Variable(s) entered on step 1: BrAssets

Correlation Matrix

		Constant	BrAssets
Step 1	Constant	1,000	-,888
	BrAssets	-,888	1,000

Hosmer and Lemeshow Test: supports this model as being worthwhile. Here, to support our model we want Sig> .05. In our example the chi-square value for the Hosmer-Lemeshow Test is 3.475, with Sig= .482. (> .05) -> **indicating support for the model.**

Classification table: model **correctly classified 57,8% of cases**, an improvement over Block 0.

Classification Table<sup>a,b</sup>

		Predicted		
		Structure		Percentage Correct
Observed		,00	1,00	
Step 0	Structure ,00	0	274	,0
	1,00	0	274	100,0
	Overall Percentage			50,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	BrAssets	13,860	1	,000
	Overall Statistics		13,860	1	,000

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. This is referred to as a 'goodness of fit' test.

We want a highly significant value (Sig < .05). Here Sig= .000. Therefore, **the model (with our set of variables used as predictors) is better than the previous model (Block 0)**, which assumed that every firm would report to be a house-of brands. The chi-square value, is 19.124 with 1 degrees of freedom.

Model Summary: Cox & Snell R Square & Nagelkerke R Square values: indication of the amount of variation in the dependent variable explained by the model (0 -> 1)

**Here: between 3,4% and 4,6% of the variability in**

**Structure is explained by Brand Assets.**

Variables in the Equation: gives information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values  $<.05$ . These are the variables that contribute significantly to the predictive ability of the model. In this case BrAssets is a significant variable.

**B values:** equivalent to the B values obtained in a multiple regression analysis. These are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB).

Here, BrAssets = .253 indicating that higher BrAssets is associated with HOB.

## 2.4. Brand Strength & brand Structure

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

Step	Step	Chi-square	df	Sig.
Step 1	Step	36,763	1	,000
	Block	36,763	1	,000
	Model	36,763	1	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	722,926 <sup>a</sup>	,065	,087

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	237,674	7	,000

Omnibus Tests of Model Coefficients:

highly significant value (Sig < .05). Here Sig= .000. Therefore, **the model (with our set of variables used as predictors) is better than the previous model (Block 0)**, which assumed that every firm would report to be a house-of brands.

Model Summary: **between 6,5% and 8,7% of the variability is explained by this variable.**

Hosmer and Lemeshow Test: to support model we want Sig > .05. In example Sig= .000. -> indicating no support for the model.

Classification table: the model **correctly classified 62.2% of cases**, an improvement over Block 0.

Variables in the Equation: **Sig. < .05**. In this case BrStrength is a significant variable.

**B values:** equivalent to the B values obtained in a multiple regression analysis. These are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB). Here, BrStrength = .516 indicating that higher BrStrength is associated with HOB.

### Block 0: Beginning Block

Classification Table<sup>a,b</sup>

		Predicted		Percentage Correct
		Structure	1,00	
Step 0	Structure	,00	0	274
	1,00	0	274	100,0
Overall Percentage				50,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

Step 0	Variables	Score	df	Sig.
	BrStrength	4,198	1	,040
	Overall Statistics	4,198	1	,040

Classification Table<sup>a</sup>

		Predicted		Percentage Correct
		Structure	1,00	
Step 1	Structure	,00	202	72
	1,00	135	139	50,7
Overall Percentage				62,2

a. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
Step 1 <sup>a</sup> BrStrength	,516	,089	33,679	1	,000	1,675	1,407	1,994
Constant	-,852	,169	25,517	1	,000	,427		

a. Variable(s) entered on step 1: BrStrength.

Correlation Matrix

Step 1	Constant	BrStrength
Constant	1,000	-,852
BrStrength	-,852	1,000

## 2.5. Brand Value

CANNOT BE COMPUTED (always  $1.05 = 0$  and  $1.44 = 1$ ), constant

## 2.6. Satisfaction on brand Structure

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

### Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

### Block 0: Beginning Block

Classification Table<sup>a,b</sup>

Observed		Predicted		
		Structure		Percentage Correct
		,00	1,00	
Step 0	Structure ,00	0	274	,0
	1,00	0	274	100,0
	Overall Percentage			50,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

	Score	df	Sig.
Step 0 Variables Satisfaction	,350	1	,554
Overall Statistics	,350	1	,554



### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	,350	1	,554
	Block	,350	1	,554
	Model	,350	1	,554

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	759,339 <sup>a</sup>	,001	,001

a. Estimation terminated at iteration number 2 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	3,729	3	,292

Contingency Table for Hosmer and Lemeshow Test

		Structure = ,00		Structure = 1,00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	43	43,545	40	39,455	83
	2	8	11,254	14	10,746	22
	3	175	166,467	159	167,533	334
	4	24	25,462	28	26,538	52
	5	24	27,272	33	29,728	57

Hosmer and Lemeshow Test: supports this model as being worthwhile.

Here, to support our model we want Sig > .05. In our example the chi-square value for the Hosmer-Lemeshow Test is 3.931, with Sig = .292. (> .05) -> indicating support for the model.

Classification Table<sup>a</sup>

		Predicted		
		Structure		Percentage Correct
Observed		,00	1,00	
Step 1	Structure ,00	51	223	18,6
	1,00	54	220	80,3
Overall Percentage				49,5

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	Satisfaction	,035	,059	,349	1	,554	1,036	,922	1,163
	Constant	-,134	,242	,306	1	,580	,875		

a. Variable(s) entered on step 1: Satisfaction.

Correlation Matrix

		Constant	Satisfaction
Step 1	Constant	1,000	-,935
	Satisfaction	-,935	1,000

Classification table: provides indication of how well the model is able to predict the correct category (BH/HOB) for each case. We can compare this with the Classification table shown for Block 0, to see how much improvement there is when the predictor variables are included

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. This is referred to as a 'goodness of fit' test.

We want a highly significant value (Sig < .05). Here Sig = .554. Therefore, **the model (with our set of variables used as predictors) is NOT better than the model in Block 0.** The chi-square value, is .350 with 1 degrees of freedom.

Model Summary: Cox & Snell R Square & Nagelkerke R Square values: indication of the amount of variation in the dependent variable explained by the model (0 -> 1)

**Here: approximately 0.1% of the variability is explained by this variable. (BAD)**

in the model. The model **correctly classified 49.5% of cases**, worse than the 50% in Block 0.

Variables in the Equation: gives information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values  $<.05$ . These are the variables that contribute significantly to the predictive ability of the model. **In this case Satisfaction is NOT a significant variable.**

**B values:** equivalent to the B values obtained in a multiple regression analysis. These are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB). Here, Satisfaction = .035 indicating that higher Satisfaction is associated with HOB.

**BRAND STRUCTURE IS NOT SIGNIFICANT IN PREDICTING SATISFACTION**

## 2.7. Corporate Brand Reputation and brand structure

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	,234	1	,629
	Block	,234	1	,629
	Model	,234	1	,629

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	759,456 <sup>a</sup>	,000	,001

a. Estimation terminated at iteration number 2 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4,735	5	,449

Hosmer and Lemeshow Test: supports this model as being worthwhile.

This test, which SPSS states is the most reliable test of model fit available in SPSS, is interpreted very differently from the above omnibus test.

Here, to support our model we want Sig > .05. In our example the chi-square value for the Hosmer-Lemeshow Test is 3.931, with Sig = .449. (> .05) -> indicating support for the model.

Block 0: Beginning Block

Classification Table<sup>a,b</sup>

		Predicted			
		Structure		Percentage Correct	
Observed		,00	1,00		
Step 0	Structure	,00	0	274	,0
		1,00	0	274	100,0
	Overall Percentage				50,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

	Score	df	Sig.
Step 0 Variables BrRep	,234	1	,629
Overall Statistics	,234	1	,629

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. This is referred to as a 'goodness of fit' test.

We want a highly significant value (Sig < .05). Here Sig = .629. Therefore, **the model (with our set of variables used as predictors) is NOT better than the model in Block 0.** The chi-square value, is .350 with 1 degrees of freedom.

Model Summary: Cox & Snell R Square & Nagelkerke R Square values: indication of the amount of variation in the dependent variable explained by the model (0 -> 1)  
**Here: between 0% and 0.1% of the variability is explained by this variable. (BAD)**

Classification Table<sup>a</sup>

Observed		Predicted		
		Structure		Percentage Correct
		,00	1,00	
Step 1	Structure ,00	115	159	42,0
	1,00	117	157	57,3
Overall Percentage				49,6

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	BrRep	,031	,064	,234	1	,629	1,032	,909	1,171
	Constant	-,104	,232	,202	1	,653	,901		

a. Variable(s) entered on step 1: BrRep.

Correlation Matrix

		Constant	BrRep
Step 1	Constant	1,000	-,929
	BrRep	-,929	1,000

Classification table: provides indication of how well the model is able to predict the correct category (BH/HOB) for each case. We can compare this with the Classification table shown for Block 0, to see how much improvement there is when the predictor variables are included in the model. The model **correctly classified 49.6% of cases**, worse than the 50% in Block 0.

Variables in the Equation: gives information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values <.05. These are the variables that contribute significantly to the predictive ability of the model. **In this case BrRep is NOT a significant variable.**

**B values:** equivalent to the B values obtained in a multiple regression analysis. These are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB).

Here, **BrRep** = .031 indicating that higher **BrRep** is associated with HOB.

**BrRep NOT SIGNIFICANT IN PREDICTING BRAND STRUCTURE**

## 2.8. Branch Creation and brand structure

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	246,009	1	,000
	Block	246,009	1	,000
	Model	246,009	1	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	513,680 <sup>a</sup>	,362	,482

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	399,408	2	,000

Here, to support our model we want Sig > .05. In our example the chi-square value for the Hosmer-Lemeshow Test is 399.408, with Sig = .000. (< .05) -> indicating NO support for the model.

Block 0: Beginning Block

Classification Table<sup>a,b</sup>

		Predicted			
		Structure		Percentage Correct	
Observed		,00	1,00		
	Step 0	Structure ,00	0	274	,0
		1,00	0	274	100,0
	Overall Percentage				50,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

	Score	df	Sig.
Step 0 Variables DateCreation	195,477	1	,000
Overall Statistics	195,477	1	,000

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. This is referred to as a 'goodness of fit' test.

We want a highly significant value (Sig < .05). Here Sig = .000. Therefore, **the model (with our set of variables used as predictors) is better than model in Block 0.** The chi-square value, which we will need to report in our results, is 246.009 with 1 degrees of freedom.

Model Summary: Cox & Snell R Square & Nagelkerke R Square values: indication of the amount of variation in the dependent variable explained by the model (0 -> 1)

**Here: between 36.2% and 48.2% of the variability is explained by this variable.**

Classification Table<sup>a</sup>

Observed		Predicted		
		Structure		Percentage Correct
		,00	1,00	
Step 1	Structure ,00	274	0	100,0
	1,00	137	137	50,0
Overall Percentage				75,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	DateCreation	-,240	,030	65,361	1	,000	,787	,743	,834
	Constant	478,673	59,272	65,219	1	,000	7,678E+207		

a. Variable(s) entered on step 1: DateCreation.

Correlation Matrix

		Constant	DateCreation
Step 1	Constant	1,000	-,100
	DateCreation	-,100	1,000

Classification table: provides indication of how well the model is able to predict the correct category (BH/HOB) for each case. We can compare this with the Classification table shown for Block 0, to see how much improvement there is when the predictor variables are included in the model. The model **correctly classified 75% of cases**, much better than the 50% in Block 0.

Variables in the Equation: gives information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values <.05. These are the variables that contribute significantly to the predictive ability of the model. **In this case DateCreation is a significant variable.**

**B values:** equivalent to the B values obtained in a multiple regression analysis. These are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB).

Here, **DateCreation** = -.240 indicating that younger (higher) **DateCreation** is associated with HB. (And older DateCreation associated with HOB)

## 2.9. Number of employees and brand structure

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
Total		548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

### Block 0: Beginning Block

Classification Table<sup>a,b</sup>

		Predicted		Percentage Correct
		Structure	Structure	
Observed	Structure	,00	1,00	
	Structure	0	274	,0
Overall Percentage		0	274	100,0

a. Constant is included in the model.

b. The cut value is ,500

Contingency Table for Hosmer and Lemeshow Test

		Structure = ,00		Structure = 1,00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	137	137,000	0	,000	137
	2	137	137,000	0	,000	137
	3	0	,000	137	137,000	137
	4	0	,000	137	137,000	137

### PERFECT CORRELATION

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. This is referred to as a 'goodness of fit' test. We want a highly significant value (Sig < .05). Here Sig = ,000. Therefore, **the model (with our set of variables used as predictors) is better than SPSS's original guess shown in Block 0.**

Cox & Snell R Square & Nagelkerke R Square values: indication of the amount of variation in the dependent variable explained by the model (0 -> 1)

**Here: between 75% and 100% of the variability is explained by the number of employees variable.**

Hosmer and Lemeshow Test: supports this model as being worthwhile. Here, to support our model we want Sig > .05. In our example the chi-square value for the Hosmer-Lemeshow Test is ,000, with Sig = 1,000. (> .05) -> indicating support for the model.

Variables in the Equation: gives information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values < .05. These are the variables that contribute significantly to the predictive ability of the model. **Here, number of employees is not a significant variable.**

**B values:** are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB). Here, **number of employees** is constant.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

	Score	df	Sig.
Step 0 Variables NbEmployees	542,127	1	,000
Overall Statistics	542,127	1	,000

### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	759,689	1	,000
	Block	759,689	1	,000
	Model	759,689	1	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	,000 <sup>a</sup>	,750	1,000

a. Estimation terminated at iteration number 19 because a perfect fit is detected. This solution is not unique.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	,000	2	1,000

## 2.10. Marketing Investment

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

Block 0: Beginning Block

Classification Table<sup>a,b</sup>

		Predicted	
		Structure	Percentage Correct
Observed	,00	0	274
	1,00	0	274
Overall Percentage			50,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

	Score	df	Sig.
Step 0 Variables	MktInvest	265,697	1
Overall Statistics		265,697	1

### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	379,845	1	,000
	Block	379,845	1	,000
	Model	379,845	1	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	379,845 <sup>a</sup>	,500	,667

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	,000	1	1,000

of variation in the dependent variable explained by the model (0 -> 1)

**Here: between 50% and 66.7% of the variability is explained by the MktInvestment variable.**

Hosmer and Lemeshow Test: supports this model as being worthwhile.

This test, which SPSS states is the most reliable test of model fit available in SPSS, is interpreted very differently from the above omnibus test.

Here, to support our model we want Sig > .05. In our example the chi-square value for the Hosmer-Lemeshow Test is .000, with Sig = 1.000. (>.05) -> indicating support for the model.

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. This is referred to as a 'goodness of fit' test.

We want a highly significant value (Sig < .05). Here Sig = .000. Therefore, **the model (with our set of variables used as predictors) is better than SPSS's original guess shown in Block 0**, which assumed that everyone would report no problem with their sleep. The chi-square value, which we will need to report in our results, is .350 with 1 degrees of freedom.

Model Summary: gives another piece of information about the usefulness of the model.

Cox & Snell R Square & Nagelkerke R Square values: indication of the amount



Contingency Table for Hosmer and Lemeshow Test

		Structure = ,00		Structure = 1,00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	137	137,000	0	,000	137
	2	137	137,000	137	137,000	274
	3	0	,000	137	137,000	137

Classification Table<sup>a</sup>

		Predicted		
		Structure		Percentage Correct
		,00	1,00	
Step 1	Structure ,00	137	137	50,0
	1,00	0	274	100,0
	Overall Percentage			75,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	MktInvest	6,670	630,559	,000	1	,992	788,507	,000	.
	Constant	-33,351	3152,796	,000	1	,992	,000		

a. Variable(s) entered on step 1: MktInvest.

Correlation Matrix

		Constant	MktInvest
Step 1	Constant	1,000	-.1,000
	MktInvest	-.1,000	1,000

Classification table: provides indication of how well the model is able to predict the correct category (BH/HOB) for each case. We can compare this with the Classification table shown for Block 0, to see how much improvement there is when the predictor variables are included in the model. The model **correctly classified 75% of cases**, much better than the 50% in Block 0.

Variables in the Equation: gives information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values <.05. These are the variables that contribute significantly to the predictive ability of the model. **In this case MktInvestment is NOT a significant variable.**

**B values:** equivalent to the B values obtained in a multiple regression analysis. These are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB).

Here, **MktInvestment** = 6.670 indicating that higher **MktInvestment** is associated with HOB.

## 2.11. Price Range and brand structure

Case Processing Summary

Unweighted Cases <sup>a</sup>		N	Percent
Selected Cases	Included in Analysis	548	100,0
	Missing Cases	0	,0
	Total	548	100,0
Unselected Cases		0	,0
Total		548	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
,00	0
1,00	1

### Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	759,689	1	,000
	Block	759,689	1	,000
	Model	759,689	1	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	,000 <sup>a</sup>	,750	1,000

a. Estimation terminated at iteration number 19 because a perfect fit is detected. This solution is not unique.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	,000	2	1,000

Contingency Table for Hosmer and Lemeshow Test

		Structure = ,00		Structure = 1,00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	137	137,000	0	,000	137
	2	137	137,000	0	,000	137
	3	0	,000	137	137,000	137
	4	0	,000	137	137,000	137

support our model we want Sig> .05. In our example the chi-square value for the Hosmer-Lemeshow Test is .000, with Sig= 1.000. (>.05) -> indicating support for the model.

Variables in the Equation: gives information about the contribution/importance of each of our predictor variables. The test that is used here is Wald test. Scan down the column labelled **Sig.** looking for values <.05. These are the variables that contribute significantly to the predictive ability of the model. **Here, price range is a significant variable (Sig. 1,000)**

**B values:** are the values used in an equation to calculate the probability of a case falling into a specific category. Check whether B values are positive or negative, this tells about the direction of the relationship (which factors increase the likelihood of having a HOB and which decreases it. Negative B values indicate that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (HOB). Here, **price range** is constant, so B = ,000.

### Block 0: Beginning Block

Classification Table<sup>a,b</sup>

		Predicted		
		Structure		Percentage Correct
Observed		,00	1,00	
Step 0	Structure ,00	0	274	,0
	1,00	0	274	100,0
	Overall Percentage			50,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	,000	,085	,000	1	1,000	1,000

Variables not in the Equation

	Score	df	Sig.
Step 0 Variables PriceRange	484,863	1	,000
Overall Statistics	484,863	1	,000

### PERFECT CORRELATION

Omnibus Tests of Model Coefficients: gives an overall indication of how well the model performs, over and above the results obtained for Block 0. This is referred to as a 'goodness of fit' test. We want a highly significant value (Sig <.05). Here Sig= ,000. Therefore, **the model (with our set of variables used as predictors) is better than SPSS's original guess shown in Block 0.**

Cox & Snell R Square & Nagelkerke R Square values: indication of the amount of variation in the dependent variable explained by the model (0 -> 1)

**Here: between 75% and 100% of the variability is explained by the price range variable.**

Hosmer and Lemeshow Test: supports this model as being worthwhile. Here, to

## Appendix 3: multiple regression

### 3.1. Independent variable and independent Secondary variables on Brand Equity

Descriptive Statistics			
	Mean	Std. Deviation	N
Equity	1,9175	,57046	4
Loyalty	2,3325	,86473	4
BrRep	3,3400	,28519	4
Satisfaction	3,8200	,32752	4
NbEmployee	25,7500	25,25041	4
MktInvestment	4,50	3,317	4
DateCreation	1996,2500	11,11680	4
PriceRange	145,2500	86,23756	4
Structure	,5000	,57735	4

Correlations													
		Equity	BrAssets	BrStrength	BrValue	Loyalty	BrRep	Satisfaction	NbEmployee	MktInvestment	DateCreation	PriceRange	Structure
Pearson Correlation	Equity	1,000	,973	,979	,539	,953	,911	,910	,421	,275	,032	,695	,511
	BrAssets	,973	1,000	,928	,367	,991	,951	,949	,233	,196	-,190	,574	,332
	BrStrength	,979	,928	1,000	,520	,925	,912	,914	,418	,147	,183	,634	,501
	BrValue	,539	,367	,520	1,000	,264	,150	,151	,989	,805	,556	,957	,999
	Loyalty	,953	,991	,925	,264	1,000	,983	,982	,130	,062	-,201	,468	,230
	BrRep	,911	,951	,912	,150	,983	1,000	1,000	,023	-,113	-,164	,336	,121
	Satisfaction	,910	,949	,914	,151	,982	1,000	1,000	,025	-,117	-,156	,336	,123
	NbEmployee	,421	,233	,418	,989	,130	,023	,025	1,000	,784	,642	,905	,995
	MktInvestment	,275	,196	,147	,805	,062	-,113	-,117	,784	1,000	,075	,841	,786
	DateCreation	,032	-,190	,183	,556	-,201	-,164	-,156	,642	,075	1,000	,313	,597
	PriceRange	,695	,574	,634	,957	,468	,336	,336	,905	,841	,313	1,000	,941
	Structure	,511	,332	,501	,999	,230	,121	,123	,995	,786	,597	,941	1,000

No more infos because constant variables

Correlation with branch creation for firm D = 2015 (because of merger):

	Equity
Pearson Correlation	Equity
	BrAssets
	BrStrength
	BrValue
	Loyalty
	BrRep
	Satisfaction
	NbEmployee
	MktInvestment
	DateCreation
	PriceRange
	Structure

Correlations

	BrValue	Structure
Pearson Correlation	BrValue	,999
	Structure	1,000

Brand structure and value

Correlations

		BrAssets	Structure
Pearson Correlation	BrAssets	1,000	,332
	Structure	,332	1,000

Brand structure and assets

Correlations

		BrStrength	Structure
Pearson Correlation	BrStrength	1,000	,501
	Structure	,501	1,000

Brand structure and strength

## Appendix 4: 2x2 tables using Fisher's exact test:

### 4.1. Brand assets and Brand Structure

Structure * BrAssets Crosstabulation									
			BrAssets						
			1,00	2,00	3,00	4,00	5,00	6,00	7,00
Structure	Count		79	75	47	36	27	9	1
	% within Structure		28,8%	27,4%	17,2%	13,1%	9,9%	3,3%	0,4%
	% within BrAssets		66,9%	51,4%	49,5%	38,7%	40,3%	34,6%	50,0%
	% of Total		14,4%	13,7%	8,6%	6,6%	4,9%	1,6%	0,2%
	Residual		19,9	1,9	-,6	-10,6	-6,6	-4,0	,0
	Standardized Residual		2,6	,2	-,1	-1,6	-1,1	-1,1	,0
1,00	Count		39	71	48	57	40	17	1
	% within Structure		14,3%	26,0%	17,6%	20,9%	14,7%	6,2%	0,4%
	% within BrAssets		33,1%	48,6%	50,5%	61,3%	59,7%	65,4%	50,0%
	% of Total		7,1%	13,0%	8,8%	10,4%	7,3%	3,1%	0,2%
	Residual		-19,9	-1,9	,6	10,6	6,6	4,0	,0
	Standardized Residual		-2,6	-,2	,1	1,6	1,1	1,1	,0
Total	Count		118	146	95	93	67	26	2
	% within Structure		21,6%	26,7%	17,4%	17,0%	12,2%	4,8%	0,4%
	% within BrAssets		100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total		21,6%	26,7%	17,4%	17,0%	12,2%	4,8%	0,4%

To find what % of each structure type and their respective Brand Assets level, we need to look at Crosstab. To find out what percentage of BH have LOW Assets, read across the page in the first row, which refers to BH. In this case we look at the values next to '0' within Structure'.

For this example 28,8% of BH have low Assets equal to 1, while 14,3% of House-of-brands have low Assets (=1).

In clustering the values in 3 clusters: low, middle, high we observe:

**HOB have, in general HIGHER BRAND ASSETS than BH**

The Chi-Square is 14,283, with an associated significance level of .000.

To be significant the Sig. value needs to be <.05. In this case the value of .000 is smaller than the alpha value of .05, so we can conclude that our result is significant. This means that the proportion of BH that have high Brand Assets is significantly different from the proportion of HOB that have high Brand Assets.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Structure * BrAssetsCAT	548	100,0%	0	0,0%	548	100,0%

Structure * BrAssetsCAT Crosstabulation				
		BrAssetsCAT		Total
		,00	1,00	
Structure	Count	201	73	274
	% within Structure	73,4%	26,6%	100,0%
	% within BrAssetsCAT	55,8%	38,8%	50,0%
	% of Total	36,7%	13,3%	50,0%
1,00	Count	159	115	274
	% within Structure	58,0%	42,0%	100,0%
	% within BrAssetsCAT	44,2%	61,2%	50,0%
	% of Total	29,0%	21,0%	50,0%
Total	Count	360	188	548
	% within Structure	65,7%	34,3%	100,0%
	% within BrAssetsCAT	100,0%	100,0%	100,0%
	% of Total	65,7%	34,3%	100,0%

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	14,283 <sup>a</sup>	1	,000		
Continuity Correction <sup>b</sup>	13,611	1	,000		
Likelihood Ratio	14,374	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	14,257	1	,000		
N of Valid Cases	548				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 94,00.

b. Computed only for a 2x2 table

## 4.2. BrandStrength replaced by StrengthCat (categorical)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Structure * BrStrenghtCAT	547	99,8%	1	0,2%	548	100,0%

Structure \* BrStrenghtCAT Crosstabulation

			BrStrenghtCAT		Total
			,00	1,00	
Structure	,00	Count	254	20	274
		% within Structure	92,7%	7,3%	100,0%
		% within BrStrenghtCAT	53,5%	27,8%	50,1%
		% of Total	46,4%	3,7%	50,1%
	1,00	Count	221	52	273
		% within Structure	81,0%	19,0%	100,0%
		% within BrStrenghtCAT	46,5%	72,2%	49,9%
		% of Total	40,4%	9,5%	49,9%
Total	Count	475	72	547	
	% within Structure	86,8%	13,2%	100,0%	
	% within BrStrenghtCAT	100,0%	100,0%	100,0%	
	% of Total	86,8%	13,2%	100,0%	

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	16,513 <sup>a</sup>	1	,000		
Continuity Correction <sup>b</sup>	15,501	1	,000		
Likelihood Ratio	17,025	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	16,483	1	,000		
N of Valid Cases	547				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 35,93.

b. Computed only for a 2x2 table

Strength, 13,2% HIGH Strength.

The total HIGH Strength values are dispatched as follows: BH: 27,8%; HOB: 72,2%

**HOB have, in general, HIGHER BRAND STRENGTH than BH**

The Pearson Chi-square value is 16,513, with an associated significance level of .000

To be significant the Sig. value needs to be <.05. In this case the value of .000 is smaller than the alpha value of .05, so we can conclude that our result is significant. This means that the proportion of BH that have high Brand Strength is significantly different from the proportion of HOB that have high Brand Strength.

0= from 0 to 3,290 and  
1= from 3,291 to 7

To find what % of each structure type and their respective Brand Strength level, we need to look at Crosstab. To find out what % of BH structure has LOW Strength, read across the page in the first row, which refers to BH. In this case we look at the values next to '% within Structure'. For this example 92,7% of BH have LOW Strength, while 7,3% have HIGH Strength.

For HOB, 81% have LOW Strength, 19% HIGH Strength.

% of the sample as a whole have HIGH Strength, look at total row '% of total'.

86,8% of the total sample have LOW

#### 4.3. BrandValue replaced by ValueCat (categorical): 0= 1,05 and 1= 1,44

Crosstab

			ValueCat		Total
			,00	1,00	
Structure	,00	Count	137	0	137
		Expected Count	68,5	68,5	137,0
		% within Structure	100,0%	0,0%	100,0%
		% within ValueCat	100,0%	0,0%	50,0%
		% of Total	50,0%	0,0%	50,0%
	1,00	Count	0	137	137
		Expected Count	68,5	68,5	137,0
		% within Structure	0,0%	100,0%	100,0%
		% within ValueCat	0,0%	100,0%	50,0%
		% of Total	0,0%	50,0%	50,0%
Total	Count		137	137	274
	Expected Count		137,0	137,0	274,0
	% within Structure		50,0%	50,0%	100,0%
	% within ValueCat		100,0%	100,0%	100,0%
	% of Total		50,0%	50,0%	100,0%

To find what % of each structure type and their respective Brand Value level, we need to look at Crosstab. To find out what % of BH structure has LOW Value, read across the page in the first row, which refers to BH. In this case we look at the values next to ‘% within Structure’.

BH: 100% LOW Value; 0% HIGH Value.

HOB: 0% LOW Value; 100% HIGH Value.

% of the sample as a whole have HIGH Value, look at total row ‘% of total’.

50% of the total sample have LOW Value, 50% HIGH Value.

The total HIGH Value values are dispatched as follows: BH: 0%; HOB: 100%

**HOB always have HIGHER BRAND VALUE than BH**

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	274,000 <sup>a</sup>	1	,000	,000	,000
Continuity Correction <sup>b</sup>	270,015	1	,000		
Likelihood Ratio	379,845	1	,000		
Fisher's Exact Test					
Linear-by-Linear Association	273,000	1	,000		
N of Valid Cases	274				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 68,50.

b. Computed only for a 2x2 table

The corrected value is 270.015, with an associated significance level of .000.

To be significant the Sig. value needs to be <.05. In this case the value of .000 is smaller than the alpha value of .05, so we can conclude that our result is significant. This means that the proportion of BH that have high Brand Value is significantly different from the proportion of HOB that have high Brand Value.

## **Appendix 5: survey 1**

1. What is the name of your company?

2. What is the approximate net income as a percentage of total revenue of the Norwegian office coffee segment of your company?

2013

2014

2015

3. What is the approximate market share of the Norwegian office coffee segment of your company?

2013

2014

2015

4. What is the approximate marketing expenditures as a percentage of total revenue of the Norwegian office coffee segment of your company?

2013

2014

2015

5. What is the approximate price difference (in NOK per kg) between the cheapest and the most expensive office coffee your company offers on the Norwegian market?

6. How many employees are working in the Norwegian office coffee segment of your company?

7. When was the Norwegian office coffee segment of your company created?

## Appendix 6: survey 2

### 1. Vennligst navngi merkene som tilbyr kaffe til bedrifter som du kjenner til

---

### 2. Jeg har hørt om de følgende merkene

Firm A	<input type="text" value="Aldri"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Veldig Ofte"/>
Firm B	<input type="text" value="Aldri"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Veldig Ofte"/>
Firm C	<input type="text" value="Aldri"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Veldig Ofte"/>
Firm D	<input type="text" value="Aldri"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Veldig Ofte"/>

### 3. Noen karakteristikk ved de følgende merkene dukker opp i tankene raskt

Firm A	<input type="text" value="Aldri"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Veldig Ofte"/>
Firm B	<input type="text" value="Aldri"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Veldig Ofte"/>
Firm C	<input type="text" value="Aldri"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Veldig Ofte"/>
Firm D	<input type="text" value="Aldri"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Veldig Ofte"/>

### 4. Jeg kan raskt minnes symbolet eller logoen til de følgende merkene

Firm A	<input type="text" value="Sterkt Uenig"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Sterkt Enig"/>
Firm B	<input type="text" value="Sterkt Uenig"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Sterkt Enig"/>
Firm C	<input type="text" value="Sterkt Uenig"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Sterkt Enig"/>
Firm D	<input type="text" value="Sterkt Uenig"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Sterkt Enig"/>

### 5. Jeg har vanskeligheter med å forstille meg de følgende merkene

Firm A	<input type="text" value="Sterkt Uenig"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Sterkt Enig"/>
Firm B	<input type="text" value="Sterkt Uenig"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Sterkt Enig"/>
Firm C	<input type="text" value="Sterkt Uenig"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Sterkt Enig"/>
Firm D	<input type="text" value="Sterkt Uenig"/>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="text" value="Sterkt Enig"/>

### 6. Disse 2 merkene tilhører de nominerte som jeg uten tvil ville ha vurdert å kjøpe til min bedrift

- ☐ Firm A
- ☐ Firm B
- ☐ Firm C
- ☐ Firm D



### 7. Jeg har allerede konsumert de følgende merkene ved min arbeidsplass

Firm A	Aldri	1	2	3	4	5	6	7	Veldig Ofte
Firm B	Aldri	1	2	3	4	5	6	7	Veldig Ofte
Firm C	Aldri	1	2	3	4	5	6	7	Veldig Ofte
Firm D	Aldri	1	2	3	4	5	6	7	Veldig Ofte

### 8. Jeg anbefaler de følgende merkene til mine venner og min familie

Firm A	Veldig usannsynlig	1	2	3	4	5	6	7	Veldig Sannsynlig
Firm B	Veldig usannsynlig	1	2	3	4	5	6	7	Veldig Sannsynlig
Firm C	Veldig usannsynlig	1	2	3	4	5	6	7	Veldig Sannsynlig
Firm D	Veldig usannsynlig	1	2	3	4	5	6	7	Veldig Sannsynlig

### 9. Det følgende merket ville vært mitt førstevalg

- ☐ Firm A
- ☐ Firm B
- ☐ Firm C
- ☐ Firm D

### 10. Folk jeg kjenner tenker høyt om dette kaffemerket

Firm A	Sterkt Uenig	1	2	3	4	5	6	7	Sterkt Enig
Firm B	Sterkt Uenig	1	2	3	4	5	6	7	Sterkt Enig
Firm C	Sterkt Uenig	1	2	3	4	5	6	7	Sterkt Enig
Firm D	Sterkt Uenig	1	2	3	4	5	6	7	Sterkt Enig

### 11. Dette kaffemerket har et veldig godt rykte

Firm A	Sterkt Uenig	1	2	3	4	5	6	7	Sterkt Enig
Firm B	Sterkt Uenig	1	2	3	4	5	6	7	Sterkt Enig
Firm C	Sterkt Uenig	1	2	3	4	5	6	7	Sterkt Enig
Firm D	Sterkt Uenig	1	2	3	4	5	6	7	Sterkt Enig

### 12. Hvordan vil du bedømme din egen erfaring med de følgende merkene

Firm A	Veldig Dårlig	1	2	3	4	5	6	7	Veldig God
Firm B	Veldig Dårlig	1	2	3	4	5	6	7	Veldig God
Firm C	Veldig Dårlig	1	2	3	4	5	6	7	Veldig God
Firm D	Veldig Dårlig	1	2	3	4	5	6	7	Veldig God

## **Appendix 7: Reliability scales**

### **7.1. Reliability scale variable Q2-Q3-Q4-Q5 measuring branded-awareness**

**Reliability Statistics**

Cronbach's Alpha	N of Items
,795	4

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q2	9,38	9,645	,650	,722
Q3	8,93	10,233	,548	,775
Q4	9,57	9,033	,727	,680
Q5	8,49	11,834	,518	,786

### **7.2. Reliability scale variable Brand Assets (Q2-3-4-5-6-7)**

HB and HOB data. The Q5 data had to be reversed.

Cronbach's Alpha	N of Items
,754	6

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q2	14,25	20,755	,705	,660
Q3	13,80	22,828	,499	,716
Q4	14,43	20,758	,687	,663
Q5	13,35	24,687	,494	,722
Q6	13,81	23,570	,237	,815
Q7	15,30	24,192	,500	,719

### 7.3. Reliability scale variable Strength (Q8-MarketShare)

Q9 re-scaled.

#### Reliability Statistics

Cronbach's Alpha	N of Items
,648	2

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Loyalty	,9975	,305	,528	.
MarketShare	2,3325	,748	,528	.

#### 7.4. Reliability scale variable Brand reputation (Q10-11)

**Case Processing Summary**

		N	%
Cases	Valid	274	100,0
	Excluded <sup>a</sup>	0	,0
	Total	274	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,761	,772	2

**Inter-Item Correlation Matrix**

	Q10HOB	Q11HOB
Q10HOB	1,000	,629
Q11HOB	,629	1,000

**Inter-Item Covariance Matrix**

	Q10HOB	Q11HOB
Q10HOB	2,164	1,092
Q11HOB	1,092	1,394

## 7.5. Reliability scale variable Brand Assets, Brand Strength and Brand Value.

Has good Cronbach's Alpha, but Cronbach's Alpha if item Deleted is higher if we delete the variable Brand Value. This is probably due to the fact that this variable was part of the survey 1, while brand strength and assets were part of survey 2.

**Case Processing Summary**

		N	%
Cases	Valid	4	100,0
	Excluded <sup>a</sup>	0	,0
	Total	4	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
,761	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
BrAssets	2,9175	,594	,861	,510
BrValue	4,4950	2,517	,434	,910
BrStrength	4,0825	1,209	,947	,282

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
5,7475	2,893	1,70103	3

### Appendix 8: data summary of survey 3

Survey 3 is similar to survey 2, the consumer survey. However, this survey 3 focuses on one single product brand of firm D, called Brand D.

	Q2F	Q3F	Q4F	Q5F	Q7F	Q8F	Q10F	Q11F	Q12F	Assets	Satisfaction	Loyalty	BrandRep
1	0	0	0	0	8	8	8	4	2	0,8	1	2	5
2	0	0	0	4	0	2	2	0	0	0,8	0	0,5	2
3	0	0	4	2	0	0	2	2	0	1,8	0	0	4,5
4	0	10	6	4	0	10	8	6	6	8	12	2,5	22
5	2	8	2	2	8	2	6	4	6	11	15	0,5	20
6	6	4	6	6	2	2	2	4	6	14,4	18	0,5	12
7	22	8	12	12	12	6	2	10	10	46,2	35	1,5	24,5
	30	30	30	30	30	30	30	30	30	<b>83,00</b>	<b>11,57</b>	<b>1,07</b>	<b>12,86</b>

	Assets	Loyalty	BrRep	Satis	Assets cum.	Loyalty cum.	BrRep cum.	Satis cum.
1	5%	27%	20%	7%	5%	27%	20%	7%
2	3%	7%	3%	0%	8%	33%	23%	7%
3	4%	0%	7%	0%	12%	33%	30%	7%
4	13%	33%	23%	20%	25%	67%	53%	27%
5	15%	7%	17%	20%	40%	73%	70%	47%
6	16%	7%	10%	20%	56%	80%	80%	67%
7	44%	20%	20%	33%	100%	100%	100%	100%
	1	1	1	1	<b>5,63</b>	<b>3,50</b>	<b>3,87</b>	<b>5,15</b>

	Q9F	Q9F %
Brand A	0	0%
Brand B	4	13%
Brand C	8	27%
Brand D	18	60%
TOTAL	30	100%

