The Role of Brand Specific Associations in Brand Extensions: The Case of the Norwegian Food Market

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Abstract

Brand specific associations is confirmed to be an important driver for fit in brand extension strategy. Extended consumer packaged goods that include the same brand specific associations as the parent brand are more likely to succeed, and will thus enhance the equity of the parent brand. Previous research in the field of brand specific associations, consumer packaged goods, and brand extensions have however, never made a clear distinction between success criteria for extensions of edible and inedible goods. As consumer packaged goods consumption for edible and inedible goods differ in several ways, we believe it would be valuable for managers to know if they should include different brand specific associations for different product categories when extending. The purpose of this thesis is therefore to advance previous research on brand specific association effects, and hopefully enable managers to introduce extensions with greater chances of success.

Two pretests were carried out to find suitable brands and related brand specific associations, in order to create hypothetical brand extensions. The brands chosen were Jarlsberg and Jif, respectively an edible and an inedible product, which are two high equity brands on the Norwegian market. A questionnaire used in the online survey, constructed by pre-established scales from existing literature, was distributed through social media to obtain data. In the main study, fit between the parent brand and the extensions was manipulated to see how using brand specific associations in terms of different sensory attributes for different product categories impact brand extension responses. Three types of brand responses were evaluated: over all brand extension attitude, purchase intention and willingness to recommend.

The findings confirmed our hypotheses, that including brand specific associations in terms of a chemical sensory attribute enhances extension responses for edible goods. The findings also confirmed our assumption that including associations in terms of a visual sensory attribute enhances extension responses for inedible goods. The effect was, however, strongest for edible goods, and the overall effect was strongest for attitude across all conditions tested. Managers should thus be aware of what kind of brand specific association they transmit to an extension to optimize extension responses.
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1.0 Introduction

The launch of new brand extensions is an integrated part of the consumer packaged goods (CPG) business (Singh et al 2012). The industry is characterized as highly competitive (due to e.g. low consumer switching costs), and with products that are sold quickly and at relatively low cost. There are many advantages of using a brand extension strategy, including reduced promotional expenditures (Sullivan, 1992), increased likelihood of gaining retail distribution (Montgomery, 1978), and reduced consumer risk (Aaker and Keller, 1990). Building a strong brand should be the goal of many organizations, as a strong brand, among others, gives enhanced extension opportunities (Delgado 2005). Strong brands have strong brand equity, and this gives value to consumers by adding something extra besides the product itself, as well as giving financial value to companies. Brand awareness, brand loyalty, perceived quality, and brand associations are important assets that construct brand equity, and managers should thus create and enhance these assets in order to build a strong brand (Aaker 1992).

Despite that brand extension is a common strategy for growth, the failure rate of brand extensions in many CPG product categories in Norway is high, approximately 80% (Kantar TNS, 2016). If a brand extension is not thoughtfully conducted it can result in diluted brand image, and even worse, unsuccessful extensions can harm the parent brand. Therefore, potential determinants of success factors of brand extensions have emerged as an important focus of research inquiry to provide insights that may help managers reduce the failure rates of brand extensions (e.g. A. Bottomley & R. Doyle, 1996; D. A. Aaker & Keller, 1990; Dacin & Smith, 1994; Swaminathan, Fox, & RecJdy, 2001). Consequently, it is important for brand managers to understand what contributes to a successful brand extension, in order to minimize chances of failure.

A great amount of research have been done in the field of CPG and brand extensions in the last decades. Substantial research have addressed factors that promote brand extension success, and especially the perceived fit between the parent brand and the extension has been emphasized. Two dimensions of fit coexist in brand extension literature - similarity and relevance. Researchers (e.g. Boush & Loken, 1991; Broniarczyk & Alba, 1994) define brand extension fit as the perceived similarity (as usage situation and product category), and relevance (as benefits and attributes
of parent brand associations for the extension category), that positively influence consumer attitudes towards the extension. Previous research have argued that similarity is the primary determinant of fit, but the relevance dimension argues that brand specific associations (hereby referred to as BSA) is what drives the perceptions of fit (Spiggle, Nguyen, & Caravella, 2012). For high equity brands, relevant BSA for the extension is argued to have greater impact on an extension than similarity, and will enhance perception of fit even in the absence of similarity (Broniarczyk & Alba, 1994). Therefore, a central interest in this paper lies with the role of BSA linked to the relevance dimension.

Even though there exist an acknowledged importance of transmitting BSA to new product extensions, there has not been reached any consensus on how to conceptualize and operationalize BSA for different product categories in the CPG market (e.g. Boush & Loken, 1991; Broniarczyk & Alba, 1994). Previous research have until now mainly focused on how including BSA in a brand extension enhances extension responses for CPG in general (Boush & Loken, 1991; Broniarczyk & Alba, 1994; Spiggle et al., 2012). Moreover, there is limited systematic analyses of the role of BSA with regards to the distinguishment between for example edible and inedible CPG. This limitation can be a drawback for managers due to little direction on how to optimize a transmission of BSA for different product categories in the CPG market.

Research confirm that consumers’ evaluation of edible and inedible CPG differs in several ways (Glanz, Basil, Maibach, Goldberg, & Snyder, 1998; Steenkamp, 1993). Food consumption behavior is often based, among others, on properties of the food (Steenkamp, 1993). Steenkamp (1993) argues that properties of the food, such as its nutrient content, affect consumers’ purchase behavior through physiological effects such as hunger, satiation and appetite, as well as people’s sensory perception effects. Sensory perception effects include taste and smell, and are two chemical sensory attributes which are argued to have greatest influence on consumers’ food choice (Glanz et al., 1998; Stevenson, 2012). In other words, when consumers are about to choose an edible good in the grocery store, the taste and smell of the product are the most important factors for purchase behavior. On the other hand, inedible goods have no taste, and this sensory attribute is therefore not a part of consumers’ evaluation set when purchasing inedible CPG. Hence,
marketers need to focus on other sensory attributes, such as sight, in their marketing communication for inedible goods (e.g. Broniarczyk & Alba, 1994; Carter & Curry, 2013; Mao & Krishnan, 2006; Sing, Scriven, Clemente, Lomax, & Wright, 2012; Swaminathan et al., 2001). Sight can be defined as a visual sensory attribute, and is often communicated through product packaging (Silayoi & Speece, 2004). Package design such as logos, patterns, shapes, and symbols are factors that change the way consumers visually perceive the package and the product, often with the goal of increasing the consumption (Krishna, 2013).

Due to differences in edible and inedible CPG consumption, we argue that marketers should distinguish BSA in terms of chemical and visual sensory attributes when extending different product categories. For marketers, it is vital to comprehend the link between BSA and brand extension responses, which include overall attitudes toward the extension, purchase intentions, and willingness to recommend the new product (Spiggle et al., 2012). By understanding this connection for different product categories, it can be possible to form beneficial marketing strategies, and managers can be able to achieve success in an increasingly competitive market environment.

Brand extension strategy, CPG and fit have already received a lot of attention by researchers. There has however, to the authors’ knowledge, been paid minimal attention to the relationship between the three when taking differences in CPG consumption into account. The objective for this thesis is therefore to advance previous research on BSA effects for different product categories by answering the following research question:

“How will BSA in terms of different sensory attributes affect brand extension responses?”

This paper is structured as follows; first a review of the theoretical background for the study will be presented. Then, we submit our methodological approach, the chosen design, selection of brands and brand extensions, and corresponding pretests. Further the participants of the study, the questionnaire as well as the method used for data collection are discussed. Then, we outline and discuss the results from the analysis, followed by implications for managers, limitations and suggestions for further research.
2.0 Literature Review

2.1 Brand Equity

Brand equity is a concept that arose in the 1980’s, and has elevated the importance of the brand in marketing strategy ever since (Barwise, 1992; Taylor, Celuch, & Goodwin, 2004). Building a strong brand is the goal of many organizations because it provides a host of benefits for a firm, including brand extension opportunities (Delgado-Ballester & Munuera-Alemán, 2005). But what makes a strong brand?

Brand equity has been defined in many ways by several researchers such as; “an utility not explained by measured attributes” (Shocker & Weitz, 1988), “the added value that a brand endows a product” (Farquhar & Ijiri, 1992), and “a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm’s customers” (D. A. Aaker, 1992).

Pullig (2008) states that firms that have high value in the market, have the ability to create positive differential responses to the marketing outcome in the marketplace. The author also stresses the importance of understanding the source of the brand value, to be able to create these responses. D. A. Aaker (1992), explains that five brand equity assets are the source of the value created. These assets include brand loyalty, brand name awareness, perceived brand quality, brand associations. Brand awareness refers to the strength of a brand’s presence in consumers’ mind, perceived quality is defined as customers’ perception of the overall quality or superiority of a product or service with respect to its intended purpose relative to alternatives, brand loyalty is the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice, and brand associations is defined as anything linked to the memory of a brand (D. A. Aaker, 1992). Aaker states that managers need to do investments to create and enhance these assets in order to gain brand equity. This is supported by Kotler and Armstrong (2016) who also state that a powerful brand has a high level of consumer brand awareness and loyalty.
2.1.1 Customer-Based Brand Equity

There are two distinct approaches to the definition and measurement of brand equity. On the one hand, financial evaluation approaches, which focus more on the value of the brand asset, and on the other hand, consumer-based approaches which focus more on the asset itself (Ambler & Styles, 1997). According to Barwise (1992), the customer-based approach is the most common, and Kotler and Armstrong (2016) argue that this approach is the most fundamental underlying brand equity. They state that a powerful brand depends on a strong and profitable customer relationship, which they define as customer equity. This approach is also highlighted by Keller (2013) who refers to it as the concept customer-based brand equity. According to Keller (2013) customer-based brand equity provides a unique point of view on what brand equity is and how it should be built, managed and measured. The concept is defined as “the differential effect of brand knowledge on consumer response to the marketing of the brand” (Keller, 1993). The concept involves consumers' reactions to an element of the marketing mix of the brand, in comparison with their reactions to the same marketing mix element attributed to a fictitiously named/unnamed version of the product/service. Furthermore, a firm will gain customer-based brand equity when consumers are familiar with the brand and holds some favorable, strong, and unique brand associations in memory (Keller, 1993). Therefore, developing customer-based brand equity is crucial for all firms as the brand quality is a driving force in consumers’ decision making (D. A. Aaker, 1992; Keller, 1993).

According to Keller (2013), in order for the consumers to create favorable, strong, and unique brand associations and achieve customer-based brand equity, firms can build the brand according to the brand resonance model. The brand resonance model focuses on building brand value as a sequence of steps, each of which depending on successfully achieving the objectives of the previous one. These steps are brand salience, brand meaning, responses and brand resonance. Hence, customer-brand resonance arises once the consumer has a high level of awareness with the brand and some strong and positive brand association is established in consumers’ memories.

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2.2 Brand Extension

A common action for firms to gain brand equity is extending the firm’s product portfolio (Keller, 2013). First, some terminologies and definitions of the core concept “brand extension” will be established. There is some variation of how brand extension is defined and the various descriptions are often used interchangeably. One definition by Doyle (1994) is: “A brand extension means using a brand name successfully established for one segment or channel to enter another one in the same broad market”, while in contrast Barich and Kotler (1991) definition of brand extension is: “A brand extension strategy is any effort to extend a successful brand name to launch new or modified products or lines”. More recently Keller (2013) has defined it as: “A brand extension occurs when a firm uses an established brand name to introduce a new product, either as a line- or a category extension”, and the latter definition is the one we will apply in this paper.

A “line extension” is extending an existing brand name to new forms, colors, sizes, ingredients, or flavors of an existing product, and it can be introduced in order to meet consumers’ desires for variety, use excess capacity, or command more shelf space from resellers (Keller, 2013; Kotler & Armstrong, 2016). On the contrary, the term “category extensions” is applying the parent brand to enter a different product category, from the one it currently serves (Keller, 2013; Kotler & Armstrong, 2016). According to Ambler and Styles (1997), a category definition of a brand plays an important role as these definitions appears quite clear in theory, but the boundaries are much less clear in practice. For example, Tine’s range of yoghurts would not be considered as brand extensions if Tine's market was defined more broadly as "dairy products".
2.2.1 The Role of Brand Equity in Brand Extensions

Several studies of brand equity research have focused on brand extensions (e.g. Barwise, 1992; Pitta & Katsanis, 1995), and the general conclusion being that firms can leverage a brand’s existing equity in new categories (Shocker & Weitz, 1988). Hence, many firms capitalize brand equity through brand extensions rather than launching new products, as there are both risks and costs linked to new product development (Schiffman & Wisenblit, 2015).

Ambler and Styles (1997) also assess the role of brand equity in the extension decision process. Their paper elaborates that extension decisions are more about brand development than new product development, which means that brand equity is a key consideration throughout an extension decision process. Hence, when a company extend its brand, they have to ask themselves what the brand can do for the new product, not what the new product can do for the brand. Further, they conclude that highly valued brands extend more successfully. However, other researchers have looked at the opposite relationship; the effect of brand extensions on brand equity (D. A. Aaker, 1992; Dacin & Smith, 1994; Loken & Roedder, 1993). The general findings being that if a firm manage to have a successful brand extension, it may have a positive effect on the core brand, including building brand equity. Hence, there seems to be a mutual relationship between brand equity and brand extensions.

2.2.2 Advantages

A well-planned and well-implemented brand extension can offer several advantages for a firm. First of all, customers will most likely form expectations about the performance of an extension based on what they already know about the parent brand. These expectations can therefore improve the strength, favorability and uniqueness of the extension’s brand associations (Keller, 2013). Thus, perceptions of expertise and trustworthiness can be valuable associations when introducing brand extensions (Keller, 2013).

Second, an extension can also reduce risk perceived by customers. When potential buyers know that the firm is well established, it is more likely to presume that the firm will be around to support the new product, and are unlikely to promote a flawed
product. Consequently, if a well-known brand already has a high quality reputation, customers will try the new extension more easily (D. Aaker, 1990). Claycamp and Liddy (1969) did a study on fifty-eight new products introduced into the Philadelphia area, and they found that the extent to which a familiar parent brand name was involved was the most important predictor for trial of the new product.

Another advantage can be increased efficiency of promotional expenditures (Roberts & McDonald, 1989). When a company introduces a new product as an extension, they do not need to create awareness for both the new product and the brand, but they can concentrate solely on the new product itself. Hence, advertising can be more cost-effective for the parent brand as a whole. In addition, similar or identical packaging and labels can result in lower production costs (Keller, 2013). Lastly, the potential of increased consumer demand for new products introduced as an extension may convince retailers to stock and promote it (Keller, 2013). These advantages are due to how the brand extension gives a new product instant recognition and faster acceptance in the market (Kotler & Armstrong, 2016).

Lastly, when evaluating a brand, one often pinpoint areas where the brand is weak. One way to fill this gap, and thus improve brand image and values can be through a brand extension (Blackett, 1991). One example being when a brand, such as Nugatti is perceived unhealthy, customers may choose other alternatives with less sugar. Although, when Nugatti extended to Nugatti Zero which is a healthier alternative, the brand filled the weak gap, and improved their brand values.

2.2.3 Disadvantages

Every year many new products are introduced as completely new brands, despite potential advantages from a brand extension (Keller, 2013). To understand why, we will next outline some of the main risks of brand extensions. According to (Keller, 2013), consumers can transfer their existing quality perception from a parent brand to new products regardless of good or poor quality perception. First, extensions can cause confusion and frustration for customers in several ways. In regards to line extensions, different varieties of extensions can make consumers unsure of which product is the “right one” for them (Keller, 2013). For example, McDonald’s who is known for unhealthy fast food, introduced salads to the menu and confused
customers. Moreover, an overextended brand name might cause consumers to lose some of its specific manning and stimulate negative attribute associations (Kotler & Armstrong, 2016).

The most critical consequence of an unsuccessful extension is not solely to fail, but to harm the parent brand image in the process (Keller, 2013). The new brand can generate implications that may damage the parent brand if existing associations are weakened, quality image is affected, sales of the extensions come at the expense of the original customer base (cannibalization), or undesirable associations are created (D. Aaker, 1990). Keller (2013) explains that if the product linked to the parent brand and their marketing programs are not carefully considered and designed, the associations to the parent brand may become weaker and less favorable. Due to these negative consequences, it is important for firms to ensure successful extensions.

2.2.4 Success Criteria

Several researchers have examined important success criteria for a brand extension (e.g. D. A. Aaker & Keller, 1990; Boush & Loken, 1991; Broniarczyk & Alba, 1994; Kotler & Armstrong, 2016). According to the brand extension consultancy Parham-Santana, the success rests on three pillars; there should be logical fit between the extended product and the parent brand, the parent brand should give the extension a competitive advantage in the new category, and lastly the extension should offer significant sales and profit potential (Klara, 2013).

Other research have identified two factors that influence consumer perception of a brand extension; brand affect and the similarity between the original and extension product category (Boush & Loken, 1991). Hence, Boush and Loken (1991) mean that the evaluation of the extension is a joint function of the degree to which the new product is linked to the original brand, and the similarity between the extended and the original category. Some years later, Kim and Sullivan (1998) did similar research on brand extension, where they analyzed how customers’ experiences with the parent brand had significant impact on an extension’s success. Their research revealed that if a customer has good experience with the parent brand, the expectation of the extension quality is high, and the customer will be more likely to try the extension. In contrast, customers with little parent brand experience will be
less likely to try the extension, as they need a relatively high evaluation of the extension in order to try it.

Although there has been found many important success criteria for brand extension, substantial research acknowledge that fit between the parent brand and the extension is the most significant factor (e.g. D. A. Aaker & Keller, 1990; Boush & Loken, 1991; Broniarczyk & Alba, 1994; C. W. Park, Milberg, & Lawson, 1991). However, more recent research stresses the importance of further exploring the concept of fit, and study what really constitutes such fit (Völckner & Sattler, 2006).

2.2.5 Fit in Brand Extension

It is argued that consumers base their perception of fit on several parameters, making fit not only a crucial component of brand extension success, but also a somewhat complex construct. The construct fit used in brand extension, is when new products are judged according to the suitability of its membership in a category that already contains a product or a set of products that have same brand name as its identifiable label (C. W. Park et al., 1991). Beyond C. W. Park et al. (1991)’s definition, there are several explanations regarding the process of how consumers evaluate fit. According to Tauber (1988), fit is a perceptual concept, and a good fit is when consumers accept the new product and would expect it from the brand. Tauber (1988)’s statement is supported by Völckner and Sattler (2006), which argue that perception of fit emerges from consumer’s perception of how natural the extension seems to be in comparison to the brand’s current product portfolio.

More recent researchers have defined brand extension fit as the perceived similarity (e.g. product category, usage situation) and relevance of the parent brand associations (i.e. attributes or benefits) for the extension product (e.g. Boush & Loken, 1991; Broniarczyk & Alba, 1994). These dimensions coexist in brand extension literature and should positively influence consumer attitudes towards the brand extension. Spiggle et al. (2012) suggest that both relevance and similarity rest on cognitive categorization theory, which assumes that brands are cognitive categories formed by a network of associations organized in people’s memory. The associations may be based on shared features, attributes, benefits, or other common linkages, such as user imagery and usage situations, that may be specific to the

**Similarity**
Many researchers have argued that when it is similarity between the parent brand and the extended product, consumers have a positive evaluation of the extension (D. A. Aaker & Keller, 1990; Boush & Loken, 1991; Dawar, 1996; Spiggle et al., 2012). The basis for such similarity occurs when the parent brand and the extended product share the same associations in form of common 1) features, e.g. kitchen appliance-maker extending to home laundry appliances, 2) substitutability, to what extent one product can replace the other in satisfying the same need or, 3) complementarity, to what extent the extension and the existing products share the same usage context (Herr et al., 1996; C. W. Park et al., 1991).

If the parent brand is highly valued by customers, and the parent brand and the extended product are similar, customers commonly transfer their positive associations to the extended product (Spiggle et al., 2012). Moreover, the similarity dimension suggests that brands should extend into similar product categories, because similarity promotes an affect transfer process, and thus drives a positive evaluation of the extension (Spiggle et al., 2012).

**Relevance**
Before the term relevance was presented in brand extension theory, C. W. Park et al. (1991), among others, applied the dimension as “brand concept consistency”, and suggested that the concept needed to be considered along with similarity. Brand concept consistency is the firm-selected value associations contained in the brands (C. W. Park et al., 1991). Moreover, some products may not be perceived as similar, even though they fit together on the basis of a conceptual label. The authors further explained that whether an extended product is seen as consistent with the brand concept depends on how easily it accommodates a certain brand-name concept. This in turn depends on consumers’ perceptions of whether the brand-concept associations are relevant in connection with a particular product.
According to Spiggle et al. (2012), the relevance dimension argues that brand-specific associations (BSA) is what drives customers’ perception of fit. BSA is defined as attributes not shared by brands in the same product category, and includes benefits such as flavor or concepts, such as prestige (Broniarczyk & Alba, 1994; Spiggle et al., 2012). For example, Apple is associated with user-friendliness, but this association is not strongly associated with other computers sold in the same market. Another example is that BSA for Häagen-Dazs are “rich” and “expensive”, which is not associated with other brands in the ice cream category (Chakravarti et al., 1990). Furthermore, Spiggle et al. (2012) argue that if BSA is transmitted from the parent brand to the extended product, consumers’ extension responses enhance. These responses include overall attitude towards the new product, purchase intention, and willingness to recommend.

Broniarczyk and Alba (1994) investigated the importance of the brand itself in an extension, and discovered that BSA have greater impact on an extension than brand affect or product category similarity, when the consumer have high knowledge of the brand. Broniarczyk and Alba (1994)'s research showed that when the brand extends into a new category and consumers perceive the same benefits for the new product as for the parent brand, consumers’ associations with the brand name can be strengthened. Hence, an extension can also increase the brand’s value in the original category. However, Broniarczyk and Alba (1994) explained that they did not use real brands in their research, and that further research should test real conditions.

Overall, both brand concept consistency and relevance in the extension category have been found, together with the perceived similarity of the extension to the parent brand, to affect consumers’ brand extension evaluation within the relationship between the parent brand and the brand extension. However, Spiggle et al. (2012), argue that as long as consumers find BSA relevant for the extension, it will enhance perception of fit even in the absence of similarity.

2.3 Consumer Packaged Goods Consumption

Most research done on brand extensions, is done on CPG (Ambler & Styles, 1997; Broniarczyk & Alba, 1994; Völkner & Sattler, 2006). CPG is defined as “goods
that developed world consumers aim to replace frequently at a relatively low cost. These include items such as food, soft drinks and toiletries” (Times, 2017). One can roughly divide CPG into two categories; edible and inedible goods.

In general, one important factor that determines purchase intention for CPG is market share (Fader & Schmittlein, 1993). Fader and Schmittlein (1993) state that high-share brands tend to be chosen over low-share brands. This is because consumers tend to consider only a small subset of available alternatives when making a brand choice, and thus most likely to consider well-known brands with high market share (Fader & Schmittlein, 1993). In addition, (Ataman, Heerde, & Mela, 2010) found that distribution and line-length were the two factors in the marketing mix with greatest impact on purchase intention behavior for CPG in the long run. This means that the brand with the greatest line-length or distributions channels often is consumers’ first choice in a decision situation. Even if the general purchase intention behavior for CPG is described above, the buying behavior for edible and inedible goods differs in several ways.

2.3.1 Edible CPG Consumption

Food plays a central role in consumers’ life because it is a source to nutrition and hedonic experiences, as well as having a social or cultural function (Steenkamp, 1993). From a marketing perspective, research on food consumption behavior is of high importance in order to develop and produce foods that consumers will buy, and to create successful advertising and promotional campaigns to generate higher sales of food products (Glanz et al., 1998). Steenkamp (1993)’s taxonomy lists three factors that determine food consumption behavior; properties of the food, personal factors, and the environment. Furthermore, Steenkamp (1993) states that all comprehensive analyses on food consumption behavior should consider all three determinations as well as their interactions, since the boundaries between them are fuzzy, and that mutual influences may occur.

Properties of food

The properties of the food include physical and chemical properties, as well as nutrient content such as salt, sugar, seasoning etc. These properties affect food consumption behavior through physiological effects such as hunger, satiation and
appetite, as well as people’s sensory perception effects. Regarding sensory perception, people for example tend to perceive the same sweetness, but their liking of the amount of sweetness is individual. How people perceive sensory can both be due to physical characteristics of the food, or cognitive cues such as brand name and price (Steenkamp, 1993). However, according to a study done by Glanz et al. (1998), taste has the highest influence on food choices. Since people are most likely to consume food they evaluate as tasty, taste can be considered a minimum standard for food consumption (Glanz et al., 1998).

Worth mentioning is taste being closely related to smell. When we chew food, a part of the food evaporates and move up through the mouth and into the nose and thus connect our taste and smell sensories. This connection is referred to as a retronasal smell of food. In fact, a large part of our taste experience is in retronasal smell (Stevenson, 2012). Taste and smell are defined as chemical sensory (Dodd & Castellucci, 2000). While traditional food quality aspects, including sensory attributes such as taste and smell, are significant to most consumers, past research suggest that package elements, especially package labels, also can influence how consumers evaluate a food product as well as how much they consume (Lee, Shimizu, Kniffin, & Wansink, 2013).

**Personal factors**

Personal factors include age, sex and body weight, and has been identified as the major biological factors affecting food consumption behavior (Steenkamp, 1993). Interactions between the senses of taste and smell, enhance our perceptions of the foods we eat, and these senses are highly adaptable throughout life. For example, the gradual decline in olfactory sensitivity with age is one of the reasons why many elderly perceive food to be less tasty. Thus, food preference acquisition can be seen as a lifelong process (Steenkamp, 1993). Further, Blundell, Hill, and Rogers (1988) have found that obese people have greater appetite than lean people, and that the response of smell and sight of food are four times greater for obese than for lean people.

Rozin and Vollmecke (1986) argue that foods that generate positive sensory perception are highly affected by a person’s culture, and that individual differences in sensory perception probably is due to variation in food preferences within a
culture. Further, Steenkamp (1993) states that some foods are rejected primarily due to consequences of the consumption. These consequences can be nausea, feeling of guilt, dieting, or social rejection. Furthermore, some foods are also rejected due to consumers’ ideas or knowledge of what they are or where they come from. For example, some people are vegetarian and do not find it appropriate to eat meat, and other do not eat pork as they are Muslims (Steenkamp, 1993). Furthermore, many people are willing to pay more for higher quality food. However, quality perception is again influenced by the perception of the sensory and health-related attributes of the food product, which is a subjective matter (Steenkamp, 1993). Another personal variable which influences food consumption behavior is variety seeking. First and foremost, diversity in food intake is necessary for survival, but the preference for variety is so dominant that the attractiveness for a favorable dish declines if it is present at each meal (Steenkamp, 1993).

Environment
The environmental factors are related to sociocultural, economic, and marketing factors. Fishbein and Middlestadt (1995) argues that what we eat, how we prepare the food, and all other aspect of food consumption practices are based on sociocultural matters. Further, Steenkamp (1993) states that differences in food consumption behavior within a society are largely based on social class. For example, he argues that consumption of fatty food decreases with social class, because sensory effects are more important for lower-class people, than for higher-class people. Income and price are two variables which also affect quantities and types of food bought by consumers (Deaton & Muellbauer, 1980). In general, food consumption has been found to be rather price inelastic since food is both a necessary and saturation good (Tangermann, 1986). However, the income elasticity of food consumption will vary considerably between different foods. For example, consumption of “inferior goods” will decrease with increasing income. Examples of inferior foods are basic foodstuffs like potatoes and cereals (Ritson, 1977). This is similar to Glanz et al. (1998)’s research, where they found that demographic factors, such as age, gender, income and race, were important predictors of the importance of taste, nutrition, cost, convenience and weight control for consumers in regards to food choice.
2.3.2 Inedible CPG Consumption

As evidenced in the previous section, the chemical sensories taste and smell, are two important factors for edible CPG consumption. However, most inedible CPG do not have these properties, making marketers focusing on other attributes in their marketing communication (e.g. Broniarczyk & Alba, 1994; Carter & Curry, 2013; Mao & Krishnan, 2006; Sing et al., 2012; Swaminathan et al., 2001). According to Hultén, Broweus, and Dijk (2009), of the five human senses, sight has so far dominated marketing practice. Product packaging is vital to the CPG market as it is an essential element for proper positioning of the product. Packaging allows effective communication between consumers and brand owners through logos, color, graphics, product information and images (Silayoi & Speece, 2004). Package design includes changing the way consumers visually perceive the package and the product, often with the goal of increasing consumption. Visual sensory attributes can be used to create expectations and can serve as benchmarks when consumers actually consume a product (Krishna, 2013). Further, according to Krishna (2013), one of the simplest and most identifiable visual sensory signature is the logo, which is an essential instrument in brand extension strategy. Other types of visual sensory attributes that play an important role includes colors, patterns, shapes, and symbols.

After examining the brand extension literature, we noticed that most inedible CPG used in previous research was extended with BSA in terms of non-chemical sensory, such as visual attributes (e.g. Broniarczyk & Alba, 1994; Carter & Curry, 2013; Mao & Krishnan, 2006; Sing et al., 2012; Swaminathan et al., 2001). To exemplify, in Broniarczyk and Alba (1994)’s paper “The importance of Brand Specific Associations in brand extension”, two soap brands were extended using different BSA, where one extension focused on skin softening, whereas the other focused on smell. The results indicated that an extension with focus on the visual attribute in terms of claiming skin softening on the package, was most successful.

Other research including inedible CPG, also indicate a higher extension success when transferring the BSA in terms of visual attributes (Carter & Curry, 2013; Mao & Krishnan, 2006; Sing et al., 2012; Swaminathan et al., 2001). Carter and Curry (2013) extended Oral B, a brand of oral hygiene products, into a cloth that was induced with toothpaste and was to be placed on the finger and used to brush teeth.
Mao and Krishnan (2006) extended a shampoo brand into bath wash, where both categories shared the same user situation, physical features and covered the same customer need. All examples mentioned above showed successful extensions, which indicates a good fit between the parent brand and the extended category (e.g. D. A. Aaker & Keller, 1990; Boush & Loken, 1991; Broniarczyk & Alba, 1994; C. W. Park et al., 1991). In these examples, the extended product and corresponding parent brands shared the same BSA in form of visual attributes. To sum up, most research show a successful extension for inedible CPG when the parent brand and the extended product share the same BSA in terms of visual attributes.

Lastly, when transmitting BSA it can be done by communication either as search, credence or experience claims. A search claim is defined as “attributes of a brand that the consumer can determine by inspecting prior purchase” (Nelson, 1974), whereas credence claims is “certain qualities that never can be verified by the average consumer, because the consumer do not have the technical expertise to assess the product’s true performance” (Darby & Karni, 1973). Nelson (1974) also defines the term experience claim, which refers to the qualities of a product consumers cannot determine before a purchase. An example of an experience claim is the taste of a brand of canned tuna fish (Nelson, 1974).
3.0 Research Model and Hypotheses

In this section, an explanation of the proposed model will be given, and hypotheses will be presented. In addition, theory is included as a foundation for the development of the hypotheses.

3.1 Proposed Model

According to Spiggle et al. (2012), the success of an extension can be measured with three responses. Spiggle et al. (2012), propose a relationship between brand extension fit and the following brand extension responses; “brand extension attitudes”, “purchase intentions” and “willingness to recommend”. This relationship can be seen in figure 1. As previously mentioned, brand extension fit consists of two dimensions “similarity” and “relevance”, and the central interest in this paper is to explain the role of BSA linked to the relevance dimension.

The figure below shows the overall model, where the marked area will be the focus in this paper.

Figure 1: Conceptual framework of brand extension (Spiggle et al. 2012)

3.2 Research Hypotheses

Much research have been done on brand extension and brand equity, and it is found that extending a product portfolio is a common action for firms to grow and to gain brand equity. Gaining brand equity is important for all firms, as brand equity is what drives consumers’ decision making (D. A. Aaker, 1992; Keller, 1993). When
consumers choose between two or more brands in the CPG market, they normally
elect the brand with highest brand equity, and according to Ambler and Styles
(1997) high valued brands are those who extend most successfully. Many firms
choose to use a brand extension strategy, rather than developing brand new
products, as the latter strategy is both costly and risky.

As previously mentioned, fit has been determined by many to be one of the most
important factors for brand extension success (e.g. D. A. Aaker & Keller, 1990;
consumers perceive similarity between the parent brand and the extended product.
More recent research state that consumers also have to perceive relevance between
the parent brand associations and the extended product. Hence, for consumers to
feel that there is fit between the parent brand and the extended product there must
be similarity and consistency of the brand concept between the two products. The
common understanding is that higher perceived fit between the parent brand and
the extended product results in higher probability of extension success. In other
words, the more a consumer perceive two product categories to belong together in
some way, the more likely it is that he/she will form favorable attitudes towards the
extended product (C. W. Park et al., 1991).

According to Spiggle et al. (2012) this extension success can be measured with
brand extension attitudes, purchase intention, and willingness to recommend. If
consumers do not perceive a fit between the parent brand and the extended product
category, the extension may fail, and in worst case potentially hurt the parent brand
(Keller, 2013).

Even if fit consists of two dimensions, similarity and relevance, some researchers
argue that relevance is the dominant dimension (Broniarczyk & Alba, 1994; Spiggle
et al., 2012). Spiggle et al. (2012) state that relevance occurs when consumers infer
that parent brand associations are relevant for the extended product. Consumers
perceive parent brand associations as relevant for the extended product when the
associations signal benefits that are pertinent to the new product. When consumers
have high knowledge of a brand, Broniarczyk and Alba (1994) argue that BSA is
what drives consumers’ perception of fit. Hence, a high equity brand should transfer
its BSA to the extended product in order to have a successful extension.
Furthermore, as some products do not appear to be similar even if they fit together in terms of conceptual label, consumers will perceive a fit between the parent brand and the extended product as long as the extension shares the same BSA.

As mentioned, most research on brand extension are done on CPG. However, these researches do not distinguish edible and inedible goods. In order to understand how consumers judge the goodness of fit between the parent brand and the extended product, one must know which aspects of the new and existing product they will compare (Spiggle et al., 2012). According to Glanz et al. (1998) chemical sensory attributes such as taste and smell have the highest influence on food choices, and thus what consumers primarily evaluate when they choose one food product over another. Hence, there is reason to believe that when an edible brand extends, the extended product should share the same chemical attributes as the parent brand in order to have a successful extension. For inedible CPG, we have examined previous research and observed that for successful extensions, the BSA shared between the parent brand and the extended category were primarily non-chemical. Hence, it is reason to believe that in order for inedible CPG to have a successful extension, the parent brand and the extended category most share the same BSA in form of visual sensory attributes. Consequently, we find it interesting to examine if shared BSA in terms of chemical sensory attributes are more important for edible CPG than for inedible CPG for a successful brand extension.

An obvious reason why many inedible CPG do not depend on chemical sensory attributes to have successful extensions, is because they simply do not have any smell or taste. Such CPG include toilet paper, cloths, dish brush, aluminum foil, tooth brush, and matches among others. Therefore, there is not logical to compare the impact of chemical sensory attributes for such products. However, there are many inedible CPG which do have a smell, including deodorant, toothpaste, soap, shaving cream etc. In order to make a comparison we will therefore include this type of CPG in the study. Further in this paper when referring to inedible CPG, we refer to those having smell. Additionally, as these CPG do not have any taste, the chemical sensory attribute that will be compared in this paper is smell.

As described in Spiggle et al. (2012)’s model, a good brand extension fit enhances brand extension responses. Further, the model shows how brand extension
responses can be measured with brand extension attitude, purchase intention and willingness to recommend. These three measurement constructs are linked together as all of them measure how consumers respond to a brand extension. However, they also differ in several ways. For example, intentions are different from attitudes in the way that attitudes are summary evaluations, whereas intentions represent the “person’s motivation in the sense of his or her conscious plan to exert effort to carry out a behavior” (Eagly, 1992). In addition, a customer may have a positive attitude towards an extension, but chose not to recommend the new product further. Due to these differences, we find it necessary to test all three constructs, and thus develop hypotheses regarding all extension responses.

**Attitude**

Before a company introduces a brand extension in a given category, consumers already have established attitudes both towards the parent brand and the extension category. These attitudes are composed of cognitive and affective dimensions (Eagly, 1992; Fishbein & Middlestadt, 1995). The cognitive dimension concerns consumers’ brand knowledge, and can be both product-related and non-product-related associations (Keller, 1993). The affective dimension refers to feelings associated with the brand name or a product category (Boush & Loken, 1991). When the new extension is launched, consumers evaluate it based on their existing attitude towards the parent brand and the extension category. If consumers are not familiar with the extension category, they will evaluate the extension based on their attitudes towards the parent brand (Czellar, 2003). Based on previous literature, the two first research hypotheses are defined as following:

**H1a:** For edible goods, a brand extension with shared BSA in terms of chemical sensory attributes will have a stronger positive effect on brand extension attitudes, than an extension with shared BSA in terms of visual attributes.

**H1b:** For inedible goods, a brand extension with shared BSA in terms of visual sensory attributes will have a stronger positive effect on brand extension attitudes, than an extension with shared BSA in terms of chemical attributes.
**Purchase intention**

Purchase intention is a central and popular construct that has been commonly used by advertising scholars and practitioners (Spears & Singh, 2004). It has been defined as "personal action tendencies relating to the brand" (Bagozzi, 1981; Ostrom, 1969). As previously mentioned, intentions represent the motivation of a person’s attentive plan to act out a behavior, and based on this, purchase intention can be described as an individual’s conscious plan to make an effort to purchase a brand. In context of brand extensions, (Miniard, Bhatla, & Rose, 1990) state that “purchase intention is conceived as the likelihood of purchasing the extension in the event that the consumer planned a purchase in the extension product category”. Based on previous research we believe the following:

**H2a:** For edible goods, a brand extension with shared BSA in terms of chemical sensory attributes will have a stronger positive effect on purchase intention, than an extension with shared BSA in terms of visual attributes.

**H2b:** For inedible goods, a brand extension with shared BSA in terms of visual sensory attributes will have a stronger positive effect on purchase intention, than an extension with shared BSA in terms of chemical attributes.

**Willingness to recommend**

As with brand attitudes and purchase intention, willingness to recommend is a well-used metric related to customer satisfaction. Generally, a concise description can be when a customer is satisfied with a product, he or she might recommend it to friends, relatives and colleagues. Hence, willingness to recommend is relevant in word of mouth (WOM) marketing. WOM marketing is a growing trend for many companies and recommendation intention is the most popular and widespread metric used to predict such WOM activities, due to its measurement simplicity (Aksoy et al., 2011). According to Aksoy et al. (2011), there is a stronger link between recommendation intention for brand extensions than for completely new products or services. Willingness to recommend can be a powerful marketing advantage, and is a good indicator of how likely it is that the firm’s customers will make further purchases in the future. Additionally, according to Hutton (1997) the construct can lead customers to give special consideration to another product with the same brand name. Based on previous research we believe the following:
**H3a:** For edible goods, a brand extension with shared BSA in terms of chemical sensory attributes will have a stronger positive effect on willingness to recommend, than an extension with shared BSA in terms of visual attributes.

**H3b:** For inedible goods, a brand extension with shared BSA in terms of visual sensory attributes will have a stronger positive effect on willingness to recommend, than an extension with shared BSA in terms of chemical attributes.

### 4.0 Methodology

Based on an evaluation of our research question, research objectives, and the resources available to us, we decided to use a quantitative method (Gripsrud, Olsson, & Silkoset, 2004). This type of research method is both a measurable and conclusive type of research, that makes it possible to generalize the results due to a broader number of responders (Silverman, 2009). In addition, a quantitative method can measure the degree to which a feature is present by using statistical techniques and focusing on correlations between two or more variables (Frankfort-Nachmias, Cava, & Nachmias, 2007).

### 4.1 Research Design

A survey-based experiment will be used to carry out the study. An experiment aims to identify cause and effect relationship, and will thus enable us to elaborate on the link between different types of BSA for different CPG and brand extension responses. The experiment will include three independent variables; one indicating the product type being either edible or inedible, a dummy variable indicating BSA vs. non-BSA, and a variable indicating chemical sensory attribute vs. visual sensory attribute.

Threats to validity must be minimized, and when designing the experiment we kept in mind issues that might threaten the experiment. Especially internal validity is an important objective when cause and effect relationship is of interest, and not controlling for a number of variables may lead to issues of alternative explanations for the effects found. According to (Mitchell & Jolley, 2004), experimental design
provides good control and therefore it is a preferred choice when internal validity is of great importance.

We characterize the design as factorial since the design consists of several factors, each with discrete levels, and since the experiment assesses different combinations of these levels across both factors (Malhotra & Birks, 2007). Moreover, we test whether the presence or absence of BSA has different impact on brand extension responses for different product categories. The design is a 2x2x2 factorial design: 2 (inedible vs. edible) x 2 (BSA vs. non-BSA) x 2 (chemical attributes vs. visual attributes). The dependent variables include brand extension attitudes, purchase intention and willingness to recommend, and are closely linked together (Spiggle et al., 2012).

<table>
<thead>
<tr>
<th></th>
<th>BSA (high fit)</th>
<th>Non-BSA (low fit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>Condition 1</td>
<td>Condition 2</td>
</tr>
<tr>
<td>Visual</td>
<td>Condition 3</td>
<td>Condition 4</td>
</tr>
</tbody>
</table>

*Table 1: Study design for edible CPG*

<table>
<thead>
<tr>
<th></th>
<th>BSA (high fit)</th>
<th>Non-BSA (low fit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>Condition 5</td>
<td>Condition 6</td>
</tr>
<tr>
<td>Visual</td>
<td>Condition 7</td>
<td>Condition 8</td>
</tr>
</tbody>
</table>

*Table 2: Study design for inedible CPG*

The eight conditions in tables 1 and 2 represent eight hypothetical brand extensions which will be created later, where two levels of brand extension fit and two levels of sensory attribute will be manipulated. In general, all eight extensions will be based on two basic extensions from each product category; inedible and edible CPG. The eight new products will vary by level of fit and sensory attribute, applying to either high fit or low fit to the parent brand. Moreover, one extension of an edible product, and one extension of an inedible product, will form the basis for the total eight extensions, including either a visual or chemical approach, and either have BSA or not. This will be elaborated further in the section of the actual developing process.
4.2 Selecting Brands

4.2.1 Pretest 1

A preliminary study is presented with regards to selection of brands to use further in the study. Some criteria for brand selection was found necessary. Firstly, the brands needed to be categorized as CPG in order to suit the research question. Next, two important qualifications for the target brands to possess were high awareness and average preferences. This was because respondents were supposed to answer questions regarding their attitude towards an extension, and thus needed to have some knowledge about the parent brand. Hence, it was necessary to use existing brands rather than create hypothetical. Additionally, it was preferable that the participants neither had too strong or too weak feelings towards the brands. According to J.-W. Park, Kim, and Kim (2002), consumers that have a strong brand relationship tend to accept proposed extensions, regardless of extension category similarity and brand benefit typicality. Hence, respondents that have too strong feelings towards a brand can accept an extended product without a representative consideration. Another requirement was that each brand was primarily limited to few categories, as companies that seem to expand into everything (e.g. Virgin) can be perceived by consumers to be of high fit with most categories.

The purpose of the first pretest was to decide on which two brands that later would be used to create brand extension scenarios. The pretest was conducted among 40 respondents recruited randomly assigned through the internet (Facebook), where they answered an online-based questionnaire with four questions.

Participants were asked to list their top five edible CPG brands, and their top five inedible CPG brands including a smell. As mentioned, inedible goods have no taste, thus inedible products with smell were included to enable comparison of sensory perception for different CPG product categories. Additionally, the respondents were asked to list related association, including their overall brand attitudes and perceptions, related to the brands they listed. This was in order to get an impression of which two brands would be most suitable for the study.

The results showed that for the edible product category, the brand Jarlsberg was top-of-mind, mentioned 24 times. Top-of-mind awareness refers to the first brand
that comes to mind when a customer is asked an unprompted question about a category (Farris, Bendle, Pfeifer, & Reibstein, 2010). The inedible brand listed most times was Jif, with as many as 21 mentions. Thus, both brands were listed by more than half of the respondents. Answers regarding related associations for the two brands were consistently fairly positive, indicating that the average preference for both brands are acceptable. Consequently, Jarlsberg and Jif were chosen as study objects based on top awareness in the Norwegian CPG market, with average good preferences. Next, a brief presentation of the two brands is presented.

**Jarlsberg**

Jarlsberg is a cheese with large regular holes, originating from Norway. It was first registered as a trademark by Tine SA in 1972, and the formula for the process of making Jarlsberg cheese is still a trade secret. Its unique taste and secret formula have become strong BSA for Jarlsberg, and is frequently used in marketing of the brand in Norway. Furthermore, the distinctive flavor is enjoyed by cheese connoisseurs and epicures worldwide. Globally, 25,000 tons of cheese are sold under the trademark Jarlsberg each year, and around half is sold in the international market. The largest producer of Jarlsberg cheese is Tine SA, which is also Norway’s largest cooperative of dairy products. In Norway, the product portfolio consists of five variants including the original, where the others are a light version, a well-aged variant with crust, shredded and sliced. Jarlsberg’s biggest competitors are Norvegia, also owned by Tine, and Synnøve Finden, another producer and seller of white and brown cheese. Another competitor is Kavli, a producer of sliced cheese and cheese in tube. Jarlsberg’s audience is basically all Norwegians buying cheese, preferably those wanting a more premium cheese (Tine.no, 2017).

**Jif**

Jif is Norway's largest detergent brand and is widely represented in both traditional and new cleaning methods. The international brand, originally named Cif, provides easy-to-use and effective cleaning equipment. Jif is a French brand, named Cif in most parts of the world. In Norway, Jif is a part of Lilleborg, which is the leader in the markets for detergents and personal care products. Jif launched its first product in 1978, and has since developed in line with time, and currently they have a product range that reflects all types of home cleaning. Their Norwegian product portfolio consists of products for different surfaces and materials found in traditional
Norwegian homes, such as windows, bathroom, oven and grill, and in various consistency like liquid, spray, wipes, scouring cream. According to Jif.no, Jif is one of Norway’s 10 most famous brands, and their products are used in all Norwegian households. Their target group consists of Norwegians, more specifically women, men, and youths who live alone and are responsible for cleaning. Their biggest competitor is Ajax, an international brand of cleaning products. Jif is the leader in the Norwegian detergent market (Jifrent.no, 2017).

4.3 Selecting Brand Extensions

After deciding on the two brands, relevant brand extensions were to be selected. First, one basic brand extension was chosen for each brand, which later would form the basis for the eight final extensions. We created four extensions per brand, which will vary by level of fit and sensory attribute. Despite the fact that Jarlsberg and Jif have existing line extensions, an overlook of the respective product categories shows that there is potential for more development. When selecting the basic brand extensions for Jarlsberg and Jif, it was important that the extensions were understandable and suitable for Norwegian consumption, in order for consumers to have a motive to buy the products. According to Dacin and Smith (1994), another key consideration should be that respondents must perceive the new products as plausible extensions of the parent brands.

The brand extensions that were found appropriate to use were based on online research, brand characters, a competitor analysis as well as stimulating creative thinking. For Jarlsberg, the hypothetical extension will be to extend from solid cheese to cheese in tube. For Jif, the hypothetical extension will be to extend from oven and grill cleaning spray to disposable wipes. Both extensions will be applied in both the chemical and visual conditions. We argue that both extensions are realistic and appropriate, because they are rather similar to competitors’ existing products available in Norway, and will thus be products that Norwegian consumers are familiar with.
4.3.1 Pretest 2

After deciding on the two basic brand extensions, a more thorough association-test was conducted in order to decide what BSA to base the eight variations of the two extensions on. Hence, before deciding low-fit and high-fit extension categories, it was important to know the strongest associations to each brand.

Additionally, it was important to assure that the chosen extension categories were developed on the basis of consumers’ associations, and not the authors’, even though it became clear that the two were not very distinct. The second pretest was conducted by asking two groups of business students at BI about their associations to Jarlsberg and Jif. The respondents were recruited by orally inviting available students to a focus group. The first group included 10 participants, who were asked the following question: “What are your strongest associations to the brand Jarlsberg?“ After having a discussion in approximately 15 minutes, we had a good overview of the strongest associations to Jarlsberg. Then we carried out the same procedure for Jif with another group of different students. The second group also included 10 participants who were asked the same question, but aimed at Jif.

According to Coulter and Zaltman (1994), using a small sample size can provide useful developmental threads for a larger study, in addition to rule out the population projectability. Using only 10 participants to uncover the associations is therefore considered sufficient. An overview of the most mentioned associations for Jarlsberg and Jif are presented below (figure 2 and 3).
The associations from figure 2 and 3 were then used to determine the high fit/low fit conditions. First, the high fit conditions were developed by selecting the associations that participants mentioned most frequently. For both brands, we selected one chemical association as well as one visual association. The chemical
association referred to the brand’s taste or smell, and the visual association referred to the brand’s area of application. The most mentioned associations to Jarlsberg were “the original good taste” as the chemical, and “topping” as the visual. For Jif the most mentioned associations were “clean scent” as the chemical, and “effective” as the visual. Hence, these associations determined the high fit conditions for the two brands, and are characterized as chemical and visual sensory attributes.

When we determined the low fit conditions (non-BSA), the authors in collaboration with the supervisor, discussed and came up with suggestions that were opposites to the BSA presented in figures 2 and 3. It was important that the low fit conditions were adequately realistic, but at the same time rather irrelevant for the parent brand. Hence, the attributes should not be completely implausible, in order to still be credible as new potential products. As for the high fit conditions, one chemical and one visual sensory attribute was selected for each brand. After an evaluation of the suggestions, the attributes found suitable to determine the low fit conditions for Jarlsberg were “brown cheese flavor” as the chemical sensory attribute, and “cheese to use in sauces” as the visual sensory attribute. For Jif, it was decided that the chemical sensory attribute was “vanilla scent”, and the visual attribute was “never dries out”.

As mentioned, the basis for the eight variations of the brand extensions are Jarlsberg cheese in tube and Jif oven and grill disposable wipes. Implementing the chosen product categories and brand extensions, provides the following detailed research design:

<table>
<thead>
<tr>
<th></th>
<th>BSA (high fit)</th>
<th>Non-BSA (low fit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual</td>
<td>Jarlsberg cheese in tube</td>
<td>Jarlsberg cheese in tube</td>
</tr>
<tr>
<td></td>
<td>- in a new convenient pack for topping</td>
<td>- practical in sauces</td>
</tr>
<tr>
<td>Chemical</td>
<td>Jarlsberg cheese in tube</td>
<td>Jarlsberg cheese in tube</td>
</tr>
<tr>
<td></td>
<td>- spread with the same great taste</td>
<td>- with the taste of brown cheese</td>
</tr>
</tbody>
</table>

*Table 3: Product categories and brand extensions inserted for Jarlsberg*
<table>
<thead>
<tr>
<th></th>
<th>BSA (high fit)</th>
<th>Non-BSA (low fit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual</td>
<td>Jif disposable wipes</td>
<td>Jif disposable wipes</td>
</tr>
<tr>
<td></td>
<td>- effective disposable cloths</td>
<td>- never dries out</td>
</tr>
<tr>
<td>Chemical</td>
<td>Jif disposable wipes</td>
<td>Jif disposable wipes</td>
</tr>
<tr>
<td></td>
<td>- same clean scent</td>
<td>- with vanilla scent</td>
</tr>
</tbody>
</table>

*Table 4: Product categories and brand extensions inserted for Jif*

### 4.4 Developing Questionnaire

As it was decided to have a survey-based experiment, a questionnaire needed to be created. Before developing a questionnaire, it was important to ensure that the measurements gave valid results that represented the questions. As the questions were duplicated from existing literature (Spiggle et al., 2012), this was ensured to a much greater extent than if one should developed the questions from scratch. Nevertheless, some questions were excluded as they did not measure fit, but rather brand knowledge and self-brand connection, and the authors did therefore not find them relevant for the analysis.

To create the questionnaire, we used an online tool called Qualtrics. Using an online tool such as Qualtrics did not only make it easier to collect data, but also enhanced internal validity because it denies the possibility to flip backwards. In addition, by using Qualtrics there was no need to manually transfer the data into statistical software (e.g. SPSS), as this was done automatically. Hence, the transfer became both safer and more efficient. On the other hand, by using an online tool to gather data, we had no control of the environment that surrounded the respondents when they answered the questionnaire. A lab experiment may have reduced this limitation, but due to time constraints an online survey was considered as both more convenient and efficient. As mentioned, it was decided to use a survey based sampling. This was due to the fact that the study was conducted over a short period of time, and because such sample surveys are efficient, easy and a standardized way to gather data. See the survey in appendix 2.
4.5 Manipulation of Independent Variables

The purpose of the manipulations was to ensure that the respondents perceived the different extensions as intended. This was done by exposing the respondents to both products, first with one level of BSA and one sensory attribute, and then with the other level of BSA and the other sensory attribute. Thus, all respondents were exposed to both products, but with inversed conditions. This was done in two separate ways, one by showing the extended product with an experience claim, and another way by showing an advertising/sales poster with a text and a visual cue. Visual representations of the manipulations are presented in appendix 1, and below are four examples:

![Visual Representation 1](image1)
![Visual Representation 2](image2)

For the visual conditions, respondents were showed a picture of a cheese in tube product, and a pack of disposable wipes. The level of BSA was manipulated by altering the packaging with different experience claims. No other elements nor text than what was visible on the product pack was included in the visual manipulations,
in order to ensure respondents to solely evaluate the visual factor and the claim on the product packages.

Regarding the chemical conditions, it was important to prevent respondents from forming attitudes based on the look and appearance of the new product, since it was their opinion about the claim, in terms of the chemical attribute and level of BSA, that was of interest. Therefore, when respondents were exposed to the chemical conditions, the original product was showed rather than the extended product. Hence, when respondents answered questions about the Jarlsberg extensions in the chemical conditions, the chemical attribute and level of BSA were manipulated as a descriptive text on a sales poster, with the original Jarlsberg product as a visual cue. The visual cue was shown to relate respondents to the correct brand and product line. The same practice was applied to respondents of the Jif extensions in the chemical condition.

4.6 Measurement of Dependent Variables

The dependent variables in the study were all brand extension responses. According to Spiggle et al. (2012), brand extension responses are measured by analyzing the different aspects of attitude, purchase intention and willingness to recommend. Accordingly, we developed items that specifically targeted these variables.

The items regarding attitude were adopted from Hauhtvedt and Wegener (1994). Three traditional seven-point bipolar semantic differential scales were used, see items 1-3 in table 5. Purchase intention was measured by a single item (item 4 in table 5) asking specifically whether respondents were likely to buy the product if it was available at a reasonable price (Grewal, Krishnan, Baker, & Borin, 1998). A single item regarding willingness to recommend (item 5 in table 5) was adopted by Spiggle et al. (2012), measuring a respondent's likelihood of recommending the product extension to others who were considering similar products.
<table>
<thead>
<tr>
<th>Item no.</th>
<th>Text</th>
<th>Scale width</th>
<th>Anchor points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is your impression of Jif oven cleaner wipes with vanilla scent?</td>
<td>1-7</td>
<td>Bad/Good</td>
</tr>
<tr>
<td>2</td>
<td>What is your impression of Jif oven cleaner wipes with vanilla scent?</td>
<td>1-7</td>
<td>Negative/Positive</td>
</tr>
<tr>
<td>3</td>
<td>What is your impression of Jif oven cleaning wipes with vanilla scent?</td>
<td>1-7</td>
<td>Unfavorable/Favorable</td>
</tr>
<tr>
<td>4</td>
<td>How likely is it that you would buy the product when it enters the market at a competitive price?</td>
<td>1-7</td>
<td>Very unlikely/Very likely</td>
</tr>
<tr>
<td>5</td>
<td>How likely is it that you would recommend this extension to others who were considering oven cleaning wipes?</td>
<td>1-7</td>
<td>Very unlikely/Very likely</td>
</tr>
</tbody>
</table>

Table 5: Dependent variable measurement, Condition 1

4.7 Manipulation Check

A manipulation check was also included in the experiment, in order to verify if the effect of the manipulation worked as intended (Mitchell & Jolley, 2004). According to Ladouceura, Gosselina, and Dugas (2000), it is important to include a manipulation check as it refers to certain kinds of secondary evaluations of an experiment, which in this case applies to whether the independent variables varies in expected ways. Hence, it was tested if there was a fit between the parent brand and the extended product.

In order for the manipulation to produce the hypothesized effects, the respondents had to perceive the Jarlsberg extension as “spread with the same great taste”, and “in a new convenient pack for topping”, as high fit to the Jarlsberg brand. While “cheese in tube with the taste of brown cheese”, and “cheese in tube as practical in sauces”, had to be perceived as low fit to the Jarlsberg brand. For the Jif brand, the respondents had to perceive “disposable wipes as efficient cloths” and “disposable wipes with same clean scent” as high fit. Whereas “disposable wipes that never dries out” and “disposable wipes with vanilla scent” as low fit to the Jif brand.
Moreover, a high fit represented inclusion of BSA, whereas low fit represented non-BSA.

The questions used to test perceived fit between the products, sensory attributes and levels of BSA were adopted from Spiggle et al. (2012), (table 6). 7 seven-point item scales were implemented and translated into Norwegian to accommodate the participants. Each respondent answered to the low fit condition for one product, and the high fit condition for the other product.

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Text</th>
<th>Scale width</th>
<th>Anchor points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The new product fits well with existing (X) products</td>
<td>1-7</td>
<td>Strongly disagree/ Strongly agree</td>
</tr>
<tr>
<td>2</td>
<td>The new product is similar to other (X) products</td>
<td>1-7</td>
<td>Strongly disagree/ Strongly agree</td>
</tr>
<tr>
<td>3</td>
<td>The new product is representative of (X)</td>
<td>1-7</td>
<td>Strongly disagree/ Strongly agree</td>
</tr>
<tr>
<td>4</td>
<td>It is likely that I will use the new product in the same situation as I use other (X) products</td>
<td>1-7</td>
<td>Strongly disagree/ Strongly agree</td>
</tr>
<tr>
<td>5</td>
<td>The properties I associate with (X) are relevant to the new product</td>
<td>1-7</td>
<td>Strongly disagree/ Strongly agree</td>
</tr>
<tr>
<td>6</td>
<td>The benefits I associate with (X) are relevant to the new product</td>
<td>1-7</td>
<td>Strongly disagree/ Strongly agree</td>
</tr>
<tr>
<td>7</td>
<td>It is important that the new product has the same associations I have with other (X) products</td>
<td>1-7</td>
<td>Strongly disagree/ Strongly agree</td>
</tr>
</tbody>
</table>

Table 6: Fit items

4.8 Participants

Hair et. al (2012) argue that there should be at least 25-50 respondents for each condition, and with 8 conditions at least 200 respondents were required. Overall, a total of 220 valid answers were acquired (440 extensions rated, with each respondent rating two cases). In terms of gender, 65% of the respondents were
females and 35% were males, in which the division between men and women were approximately equal for all conditions. Average age of the respondents was 30 years old. It was important that all participants either was responsible for, or participating in, the household's grocery shopping in order for their answers to be valid. In Norway it is common for young adults to move away from their parents when they are approximately 18 years old (SSB, 2009), and thus become responsible for their own grocery shopping. The youngest respondent who completed the survey was 18 years old, which allowed us to include all respondents in the analysis.

A total number of 319 respondents clicked on the link. Of these 220 completed the study, resulting in a completion rate of 69%. A reason why the response rate was relatively high, may be due to the reward the respondents could receive by completing the survey (Johansson, Solvoll, Opdahl, Bjørneboe, & Drevon, 1997). All participants who finished the survey, and entered their email in the last box, were automatically contesting for a reward of 500 NOK. Due to time restrictions, it was also important to recruit respondents quickly, hence we found a reward system sufficient.

The link to the questionnaire was distributed to acquaintances, friends and family mainly through Facebook. In order to reach a greater audience, as well as create bigger variations in respondents, we also asked friends and family to re-post and share the link to the questionnaire with their friends. However, since the respondents mainly are acquaintances and friends with the authors, the sample size can be characterized as a convenience sample. This may in turn reduce the external validity as the sample do not represent the whole population.

4.9 Procedure

When participants first clicked on the link leading to the survey, a welcoming page was showed. In the first page, participants were thanked for participating, some instructions were given, along with some simple rules. On the next page participants were asked to evaluate their pre-attitude towards Jif and Jarlsberg, along with other typically cheese- and detergent brands. Internal validity could be affected if respondents had a specific attitude towards one of the brands, hence such a filter question was asked in the beginning of the questionnaire in order to screen the
questions for outliers. This screening question was asked before the manipulation, to see if pre-attitude towards the brands could be an explanation of extremely negative/positive response towards the extensions. A seven-point bipolar differential scale (good/bad) was used (Haugtvedt & Wegener, 1994).

After these questions, participants were randomly assigned to two of the eight conditions. The first page after the grouping of respondents provided a cover story of the explanation of what they were supposed to evaluate. This was done in order to stimulate cognition before they were exposed to the manipulation (Harmon-Jones, Amodio, & Zinner, 2007). Each participant was exposed to one Jarlsberg- and one Jif extension, but the order in which these were shown was randomized. Furthermore, each participant was randomly exposed to one extension with BSA and one without BSA, as well as one extension with a chemical sensory attribute and one with a visual sensory attribute. With these combinations we avoided that perception of the first extension had an impact on the perception of the second extension. We assume that no participants were aware that other manipulations existed, except the two they were acquired. Even if the extensions in each condition were relatively different in terms of product, they were identically designed, and the questions in each condition were the same.

Next, questions regarding perception of fit, attitude towards the new product, purchase intention, and willingness to recommend were asked. All measured on a seven-point Likert scale to constitute the dependent variables.

Lastly, after answering questions regarding both conditions, participants were asked questions regarding their demographics, included age, education and gender. Participants who wanted to attend the competition, was then asked to fill in their email address, before a thank you page was presented.
5.0 Data Analysis and Results

In the next section, results of the study will be presented. Data preparation, a manipulation check and tests of hypotheses will all be discussed.

5.1 Data Preparation

All data collected was extracted and transformed into IBM SPSS Statistics 24, which is the statistical program used for all subsequent analyses.

After the questionnaire was developed, we found it necessary to pretest the survey in order to check if it worked as intended, and to determine an expected duration time of completion. The testing was done by asking 10 students to carry out the survey, and the outcome showed that it worked as expected. Furthermore, it showed an average duration time of completion of 4.2 minutes, while the shortest duration time was approximately 1 minute. Hence, we set the threshold rate to be 1 minute in order to exclude respondents who completed the survey in a too short time to seem real. This was done to eliminate respondents who might just have “clicked through” the survey, and thus may have given biased answers. By eliminating these respondents we also may have avoided reduced quality of responses and, potentially, accuracy of survey estimates (Conrad, Couper, Tourangeau, & Zhang, 2017). We found 12 respondents who finished the survey in less than 1 minute and these were excluded from further analysis.

5.1.1 Reliability

Reliability is of importance since it displays the consistency of a set of measurements that appear to measure the same thing (Pedhazur & Schmelkin, 1991). It refers to the degree to which the observed variable measures the true value and is error free (Hair et. al 2010). Therefore, as the variable “perception of fit” was measured by several items, it was necessary to test whether these items were interrelated, and could be collapsed into one construct. To do so, a Cronbach’s Alpha test was carried out. Hair et. al (2010), argue that the coefficient alpha should not be lower than .7 for a set of items measuring the same underlying construct.
The test showed a satisfying interrelation of .96>.7, and an elimination of one of the seven items was unnecessary. By following Darren and Mallery (2003)’s rule of thumb, we can in fact state that the Cronbach's Alpha was excellent.

Additionally, a factor analysis with principal component extraction was conducted for the items measuring “perception of fit”. The test showed a one-factor solution, explaining 86.25% of the total variance, with one eigenvalue. This also indicated that the items should be collapsed into one variable. Thus, based on calculated Cronbach’s Alpha and the factor analysis, we created one variable for perception of fit called Fit.

5.1.2 Normality

Normality refers to the shape of the data distribution for an individual metric variable, and how it corresponds to the normal distribution (Hair et al. 2010). We included a normality analysis since the technique used in this research requires normal distributed variables. The “Kolmogorov-Smirnov” test, as well as the “Shapiro Wilk” test, determined if the null hypotheses for normality should be rejected or not (Janssens, Wijnen, Pelsmacker, & Kenhove, 2008). Since both tests showed a significant level less than .05 (0.00< 0.05) for all variables, the null hypotheses are rejected. Therefore, the dependent variables attitude, purchase intention and willingness to recommend are all normally distributed, and we can continue to work with the variables as they are. A kurtosis test measures the peakedness/flatness of the distribution, and a Kurtosis score near zero indicates a shape close to a normal distribution. A positive Kurtosis value indicates a peaked distribution, whereas a negative value indicates a flat distribution (Hair et al. 2010). A value between ±1 is considered excellent, while a value between ± 2 is often considered acceptable (Darren & Mallery, 2003). From the test, the variables attitude and purchase intention both have excellent values, respectively -.83 and .09. Whereas, the variable willingness to recommend has an acceptable value of -1.03. See Appendix 3 for the Kurtosis values.

According to Hair et al (2010), skewness describes the balance of the distribution, meaning that it measures the extent to which the distribution of values deviates from symmetry around the mean. A value of zero indicates a symmetric balanced...
distribution (Hair et. al 2010). A skewness value between ± 1 is considered excellent, whereas a value between ± 2 is considered acceptable (Darren & Mallery, 2003). The test showed an excellent value for all dependent variables, with a ranking between .16 and .69. See appendix 3 for the skewness values.

5.2 Test of Manipulation Check

A manipulation check was performed to see if the manipulations worked as intended. Thus, to investigate whether respondents reacted differently to extensions that included and excluded BSA. After participants were presented with a manipulation in the survey, they were asked questions regarding fit between the parent brand and the new extension.

An ANOVA analysis was conducted to investigate if there were significant differences in means for the conditions including BSA and those excluding BSA. In this particular analysis, the variable fit worked as the dependent variable, and the variable BSA was used as the independent variable, measured on two levels including and excluding. BSA was the only independent variable included in this test, since the purpose was solely to ensure that the fit between the parent brand and the new extension was perceived as envisioned, in order to conduct further analysis including sensory attribute as a variable.

The results from the F-test showed significant differences between groups (F=7.15, \( p= .008 \)). Moreover, people who got conditions including BSA perceived a higher fit between the original brand and the extended product \( M_{\text{includingBSA}}= 4.26 \), than people who did not get a condition including BSA \( M_{\text{excludingBSA}}= 3.81 \). These results confirmed that right BSA were chosen for the different products. As the second pretest was carried out in order to determine appropriate BSA, the results from the manipulation check were as expected.

The test confirmed our prediction that when including BSA in brand extensions the perception of fit is higher, compared to brand extensions not including BSA, where perceived fit is lower. Subsequently, the manipulation deemed appropriate for further testing the hypotheses.
5.3 Test of Hypotheses and Results

Before testing the hypotheses, we investigated whether including BSA had an effect on the brand extension favorability. All hypotheses predict a main effect of BSA, and it was predicted that an extension including BSA would generate more favorable extension responses than one excluding BSA. To test this, we conducted three linear regression analyses, with BSA as the independent variable, and attitude, purchase intention and willingness to recommend as the dependent variables.

The findings in the coefficient table showed significant main effects for attitude ($t=4.98$, $p=.000$), purchase intention ($t=2.45$, $p=.014$), and willingness to recommend ($t=4.24$, $p=.000$). The standardized beta in all models were of positive values, which confirms that a change of one standard deviation in the independent variable increases the brand extension responses with respectively 2.93, 3.08 and 2.90 standard deviations. The standard deviation for the three variables were respectively $\text{St.dev}_{\text{Att}}=1.70$, $\text{St.dev}_{\text{PI}}=1.62$, and $\text{St.dev}_{\text{WTR}}=1.90$. The model summaries showed respectively $R^2$ values of 8.6%, 1.4% and 4.0%, which indicates how much of the models are explained of the variance in the dependent variables. Consequently, it was showed that participants had a significantly more positive reaction towards the extended product if the extension included BSA, regardless of which dependent variable controlled for. The participants showed more favorable attitudes toward, expressed higher purchase intention, and were more likely to recommend brand extensions with high fit (including BSA).

Next, in order to test our hypotheses, we examined the role of including a sensory attribute as a second predictor in the models. We performed a full factorial ANCOVA to test for interaction effects. More specifically, we examined whether including a sensory attribute affected the relationship between high fit extensions (including BSA) and brand extension responses. BSA and sensory attributes were used as the independent variables, product was used as a random variable, while attitude, purchase intention and willingness to recommend acted as the dependent variables. The variable “order” acted as the covariate, to see if the order the extensions were presented in had an impact on the extension responses. The analysis was run three times, one for each dependent variable.
5.3.1 Attitude

First, we tested H1a and H1b, which predict that when extending edible goods, the new edible products with BSA in terms of a chemical sensory attribute will have the greatest effect on attitude. On the other hand, new inedible products, including BSA in terms of a visual attribute will have the best effect on attitude. Support for these hypotheses will be found if there are any significant differences between groups, and if the interaction affects the relationship between fit and brand extension attitude in a positive direction. To test H1a and H1b, we performed a full factorial ANCOVA, more specifically an overall F-test for model fit, comparing differences in means for the eight conditions was carried out.

The findings revealed a significant interaction effect between fit (including BSA) and the sensory attributes, and attitude towards the extended product (F=14.99, \( p=0.000 \)). From table 7 and 8, one can see that there are differences in means for chemical and visual sensory attributes when including BSA for both Jarlsberg and Jif. For Jarlsberg \( M_{\text{BSA,chemical}} = 5.88 \), while \( M_{\text{BSA,visual}} = 3.40 \). For Jif \( M_{\text{BSA,chemical}} = 3.47 \) and \( M_{\text{BSA,visual}} = 3.87 \).

<table>
<thead>
<tr>
<th></th>
<th>BSA</th>
<th>Non-BSA</th>
<th>Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>5.88</td>
<td>3.32</td>
<td>4.60</td>
</tr>
<tr>
<td></td>
<td>(1.50)</td>
<td>(1.96)</td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td>3.40</td>
<td>3.071</td>
<td>3.23</td>
</tr>
<tr>
<td></td>
<td>(1.75)</td>
<td>(1.67)</td>
<td></td>
</tr>
<tr>
<td>Marginal Means</td>
<td>4.64</td>
<td>3.19</td>
<td></td>
</tr>
</tbody>
</table>

*Table 7: Mean values and Std.dev, Jarlsberg attitude*
### Table 8: Mean values and Std.dev, Jif attitude

<table>
<thead>
<tr>
<th></th>
<th>BSA</th>
<th>Non-BSA</th>
<th>Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>3.47</td>
<td>3.38</td>
<td>3.43</td>
</tr>
<tr>
<td></td>
<td>(1.39)</td>
<td>(1.93)</td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td>3.87</td>
<td>3.67</td>
<td>3.77</td>
</tr>
<tr>
<td></td>
<td>(1.24)</td>
<td>(0.98)</td>
<td></td>
</tr>
<tr>
<td>Marginal Means</td>
<td>3.67</td>
<td>3.53</td>
<td></td>
</tr>
</tbody>
</table>

Hence, the results suggest that including BSA and a chemical sensory attribute for Jarlsberg offers a greater attitude towards the product extension, than including a visual sensory attribute. On the contrary, for Jif, including BSA and a visual sensory attribute offers a greater attitude towards the product extension, than including a chemical sensory attribute. The findings therefore support H1a and H1b.

Order was included as covariate, and showed an insignificant impact on the attitude towards the extended product ($F=0.127$, $p=0.722$). Hence, the attitude towards the brand extension was evaluated regardless of whether the respondents were exposed to the Jarlsberg extension or the Jif extension first. This is a noteworthy observation and it is in line with our assumptions.

Lastly, it is worth mentioning that when the Jarlsberg extensions did not include BSA, the means decreased, and the differences between the extensions including chemical and those including visual sensory attributes became smaller, $M_{\text{Non-BSA chemical}}=3.32$ and $M_{\text{Non-BSA visual}}=3.07$. On the other hand, as for Jif, the means only had a minimum decline when excluding BSA, $M_{\text{Non-BSA chemical}}=3.38$ and $M_{\text{Non-BSA visual}}=3.67$.

#### 5.3.2 Purchase Intention

A new full factorial ANCOVA was performed to test H2a and H2b, comparing differences in means for the eight conditions with regards to purchase intention. Support for these hypotheses will be found if there are any significant differences.
between groups, and if the interaction affects the relationship between fit and purchase intention.

The analysis revealed a significant interaction effect between fit (including BSA) and the sensory attributes, and purchase intention ($F=6.75$, $p=.010$). From table 9 and 10, one can see that there are differences in means for chemical and visual sensory attributes when including BSA for both Jarlsberg and Jif. For Jarlsberg $M_{\text{BSA chemical}} = 4.01$, while $M_{\text{BSA visual}} = 3.17$. For Jif $M_{\text{BSA chemical}} = 3.07$ and $M_{\text{BSA visual}} = 3.56$.

<table>
<thead>
<tr>
<th></th>
<th>BSA</th>
<th>Non-BSA</th>
<th>Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>4.01 (1.70)</td>
<td>3.28 (1.79)</td>
<td>3.65</td>
</tr>
<tr>
<td>Visual</td>
<td>3.17 (1.63)</td>
<td>3.62 (1.99)</td>
<td>3.40</td>
</tr>
<tr>
<td>Marginal Means</td>
<td>3.59</td>
<td>3.45</td>
<td></td>
</tr>
</tbody>
</table>

*Table 9: Mean values and Std.dev, Jarlsberg purchase intention*

<table>
<thead>
<tr>
<th></th>
<th>BSA</th>
<th>Non-BSA</th>
<th>Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>3.07 (1.22)</td>
<td>2.60 (1.09)</td>
<td>2.84</td>
</tr>
<tr>
<td>Visual</td>
<td>3.56 (1.59)</td>
<td>2.70 (1.38)</td>
<td>3.13</td>
</tr>
<tr>
<td>Marginal Means</td>
<td>3.32</td>
<td>2.70</td>
<td></td>
</tr>
</tbody>
</table>

*Table 10: Mean and Std.dev, Jif purchase intention*

Hence, the results suggest that including BSA and a chemical sensory attribute for Jarlsberg offers a greater purchase intention of the product extension, than including a visual sensory attribute. On the contrary, for Jif, including BSA and a visual sensory attribute offers a greater purchase intention of the product extension, than including a chemical sensory attribute. Therefore, H2a and H2b are confirmed.
Again, order was included as covariate, and showed an insignificant impact on the purchase intention of the extended product \((F=.29, p=.585)\). Hence, the purchase intention of the brand extension was evaluated regardless of whether the respondents viewed the Jarlsberg extension or the Jif extension first. Consequently, based on our findings from the ANCOVA, H2a and H2b are confirmed. As for attitude, when the extensions did not include BSA, the means for Jarlsberg did not only decreased, but the values for the two conditions were reversed, \(M_{\text{Non-BSA chemical}} = 3.28\) and \(M_{\text{Non-BSA visual}} = 3.62\). For Jif, the mean values had a moderate decline in both condition, whereas the visual condition still kept the highest value, \(M_{\text{Non-BSA chemical}} = 2.60\) and \(M_{\text{Non-BSA visual}} = 2.70\).

### 5.3.3 Willingness to Recommend

The last full factorial ANCOVA was also performed to test H3a and H3b, comparing differences in means for the eight conditions with regards to willingness to recommend. Support for these hypotheses will be found if there are any significant differences in means between groups, and if the interaction affects the relationship between fit and willingness to recommend.

As for attitude and purchase intention, the F-test revealed a significant interaction effect between fit (including BSA) and the sensory attributes, and willingness to recommend \((F=12.79, p=.000)\). From table 11 and 12, one can see that there are differences in means for chemical and visual sensory attributes when including BSA for both Jarlsberg and Jif. For Jarlsberg \(M_{\text{BSA chemical}} = 4.33\), while \(M_{\text{BSA visual}} = 2.72\). For Jif \(M_{\text{BSA chemical}} = 3.28\) and \(M_{\text{BSA visual}} = 4.24\). Hence, the results suggest that including BSA and a chemical sensory attribute for Jarlsberg offers a greater willingness to recommend the extended product, than including a visual sensory attribute. On the contrary, for Jif, including BSA and a visual sensory attribute offers a greater willingness to recommend the extended product, than including a chemical sensory attribute. Due to these results, we accept H3a and H3b.

Once more, order was included as covariate, and showed an insignificant impact on the willingness to recommend the extended product \((F=1.69, p=.194)\). Hence, the willingness to recommend the brand extension was evaluated regardless of whether the respondents viewed the Jarlsberg extension or the Jif extension first.
It is worth noting that when the extensions did not include BSA, the mean for Jarlsberg in the chemical condition decreased as expected $M_{\text{Non-BSA chemical}} = 2.58$, while in the visual condition the mean remained unchanged $M_{\text{Non-BSA visual}} = 2.71$. For Jif, the mean values had an expected decline in both the chemical and the visual condition, respectively, $M_{\text{Non-BSA chemical}} = 3.09$ and $M_{\text{Non-BSA visual}} = 3.25$.

<table>
<thead>
<tr>
<th></th>
<th>BSA</th>
<th>Non-BSA</th>
<th>Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>4.33 (1.75)</td>
<td>2.58 (1.77)</td>
<td><strong>3.46</strong></td>
</tr>
<tr>
<td>Visual</td>
<td>2.72 (1.70)</td>
<td>2.71 (2.00)</td>
<td><strong>2.72</strong></td>
</tr>
<tr>
<td>Marginal Means</td>
<td><strong>3.53</strong></td>
<td><strong>2.65</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Table 11: Mean values and Std.dev, Jarlsberg willingness to recommend*

<table>
<thead>
<tr>
<th></th>
<th>BSA</th>
<th>Non-BSA</th>
<th>Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>3.28 (2.05)</td>
<td>3.09 (1.90)</td>
<td><strong>3.19</strong></td>
</tr>
<tr>
<td>Visual</td>
<td>4.24 (1.98)</td>
<td>3.25 (1.52)</td>
<td><strong>3.75</strong></td>
</tr>
<tr>
<td>Marginal Means</td>
<td><strong>3.76</strong></td>
<td><strong>3.17</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Table 12: Mean values and Std.dev, Jif willingness to recommend*
As the prediction of positive main effects between BSA and brand extension responses were confirmed, a comparison of means for conditions including BSA is of interest. Figure 4 illustrates how the cell means for the Jarlsberg extension including BSA and a chemical attribute, are consistently larger than the other conditions across all three analyses (M Jarlsberg chemical Att= 5.88 > M Jarlsberg visual Att =3.40, M Jif chemical Att =3.47, M Jif visual Att =3.87. M Jarlsberg chemical PI =4.01 > M Jarlsberg visual PI =3.17, M Jif chemical PI =3.07, M Jif visual PI =3.56. M Jarlsberg chemical WTR= 4.33 > M Jarlsberg visual WTR =2.72, M Jif chemical WTR =3.28, M Jif visual WTR= 4.24).

Lastly, in all three ANCOVA analyses, the results show higher standard deviation for Jarlsberg extensions than for Jif extensions. Std.dev Jarlsberg Att= 2.07>Std.dev Jif Att= 1.40, Std.dev Jarlsberg PI= 1.81> Std.dev Jif PI=1.38, and Std.dev Jarlsberg WTR= 1.95>Std.dev Jif WTR= 1.91. This indicates a higher dispersion when evaluating Jarlsberg extensions, than when evaluating Jif extensions. Hence, consumers tend to be more disagreeable in their evaluation of Jarlsberg extensions.
Below is an overview of the hypotheses:

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Supported/Not supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a For edible goods, a brand extension with shared BSA in terms of chemical sensory attributes will have a stronger positive effect on brand extension attitudes, than an extension with shared BSA in terms of visual attributes.</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b For inedible goods, a brand extension with shared BSA in terms of visual sensory attributes will have a stronger positive effect on brand extension attitudes, than an extension with shared BSA in terms of chemical attributes.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2a For edible goods, a brand extension with shared BSA in terms of chemical sensory attributes will have a stronger positive effect on purchase intention, than an extension with shared BSA in terms of visual attributes.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2b For inedible goods, a brand extension with shared BSA in terms of visual sensory attributes will have a stronger positive effect on purchase intention, than an extension with shared BSA in terms of chemical attributes.</td>
<td>Supported</td>
</tr>
<tr>
<td>H3a For edible goods, a brand extension with shared BSA in terms of chemical sensory attributes will have a stronger positive effect on willingness to recommend, than an extension with shared BSA in terms of visual attributes.</td>
<td>Supported</td>
</tr>
<tr>
<td>H3b For inedible goods, a brand extension with shared BSA in terms of visual sensory attributes will have a stronger positive effect on willingness to recommend, than for an extension with shared BSA in terms of chemical attributes.</td>
<td>Supported</td>
</tr>
</tbody>
</table>

*Table 13: Overview of hypotheses*
6.0 Discussion

In this section we will discuss the results from the analysis in relation to the following research question: “How will BSA in terms of different sensory attributes affect brand extension responses?” The study was conducted in order to test the six hypotheses, which concern how a sensory attribute moderates the effect between fit and brand extension responses for CPG.

Even though there has been done substantial research on brand extensions and CPG, previous research in this area has not made a distinction between edible and inedible goods, and examined how CPG brands can use BSA in terms of sensory attributes to impact the relationship between fit and brand extension responses. Prior studies have shown that it is important for managers to include BSA when extending an original product, in order to enhance consumers’ perception of fit, and thus extension responses (Broniarczyk & Alba, 1994; Spiggle et al., 2012). However, this study extends existing literature by investigating if BSA in terms of chemical and visual sensory attributes have different impact on perceived fit for edible and inedible CPG. To investigate this, hypothetical brand extensions were made for the Norwegian CPG brands Jarlsberg and Jif, where four included and the other four excluded BSA, and four included chemical attributes whereas the other four included visual attributes. The responses towards the extended product were measured by observing consumers’ attitudes towards the extended product, their purchase intentions, as well as their willingness to recommend the new product. The findings show that it is important for managers to emphasize a BSA in terms of a sensory attribute when introducing a CPG extension.

Both H1a and H1b examined the research question with regards to brand extension attitude. The main finding from investigating these hypotheses was that for edible goods, brand extension attitude enhanced the most when the extended product included BSA in terms of a chemical attribute. When consumers see a new edible product from a high equity brand, their attitude towards the new product enhances if the new product share equal BSA with the parent brand. More interesting, participants’ attitude is more positive when the BSA included is a chemical sensory attribute such as a taste or smell. For managers, this implies that an extension of food or drinks in the CPG market should include chemical attributes associated with
the parent brand. This could be a distinct sweetness, a special aftertaste, or singular smell.

On the other side, for inedible goods the brand extension attitude was enhanced the most when the extended product included a BSA in terms of a visual attribute. When consumers see a new product from a high equity brand, and this product is inedible but still have a smell, their attitude towards the new product enhances. However, unlike for edible goods, the attitude enhances even further if the BSA is a visual attribute, such as usage situation. Furthermore, there are clear tendencies that when emphasizing BSA in terms of sensory attributes the evaluation of the brand extension attitude is higher. H1a and H1b were thus confirmed.

Regarding H2a and H2b, the authors found that for edible goods, the purchase intention was enhanced the most when the extended product included a BSA in terms of a chemical attribute. When consumers see a new product from a high equity brand, and this product is edible, their purchase intention enhance if the new product share the same BSA as the original brand. However, the purchase intention enhances even more if the BSA is a chemical attribute such as taste and smell.

Opposed from edible goods, for inedible goods the purchase intention was enhanced the most when the extended product included a BSA in terms of a visual attribute. When consumers see a new product from a high equity brand, and this product is inedible but still have a smell, their purchase intention enhances. However, unlike for edible goods, the purchase intention enhances even further if the BSA is a visual attribute, such as usage situation. Consequently, there are clear tendencies that when emphasizing BSA in terms of a sensory attribute the evaluation of the purchase intention is higher. H2a and H2b were thus confirmed.

From the data analysis, it was found that the hypotheses regarding willingness to recommend, H3a and H3b were supported. In other words, for edible goods the willingness to recommend the new product was enhanced the most when the extended product included a BSA in terms of a chemical attribute. When consumers see a new product from a high equity brand, and this product is edible, their willingness to recommend the new product enhances if the extension share the same
BSA as the original brand. However, the willingness to recommend enhances even more if the BSA is a chemical attribute such as taste and smell.

Same as for the attitude and purchase intentions, participants’ willingness to recommend an inedible product enhanced more when the extended product included BSA in terms of a visual sensory attribute. When consumers see a new product from a high equity brand, and this product is inedible but still have a smell, their willingness to recommend the new product enhance. However, unlike for edible goods, the willingness to recommend enhances even further if the BSA is a visual attribute, such as usage situation. There are tendencies that when emphasizing BSA in terms of sensory attributes, the evaluation of the willingness to recommend is higher.

As mentioned in the previous section, a tendency showing greater brand extension responses for edible goods than for inedible goods when including a sensory attribute to brand extensions. A plausible explanation may be that the participants did not see the visual sensory attribute in itself as relevant, and did not consider it when evaluating edible products. This pattern is in line with prior research, which state that taste and smell are the most important factors for food choices (Glanz et al., 1998).

Further, we noted that in general there was greater variance in the data for Jarlsberg extensions than for Jif extensions. We believe that this difference may be due to the fact that people in general are more disagreed with their attitude towards cheese in tube, than their attitude towards detergents. This reflection is also in line with previous research, which states that consumers have individual perception of what tastes sweet or salty, good or bad etc. (Glanz et al., 1998; Steenkamp, 1993). Therefore, it was somewhat expected that the consumers would have more divergent perceptions of a new Jarlsberg product than a new Jif product.

Lastly, it is noteworthy that even if including different sensory attributes for different products give enhanced extension responses, the enhancement is not considerable. Hence, if marketing managers do not include these sensory attributes when extending their products, this will most likely not be decisive for the extension responses.
7.0 Managerial Implications

An extension strategy is often used by managers to leverage a brand’s existing equity in new categories. Managers can choose to do line extensions, brand extensions, or something as simple as an incremental change. Regardless of what kind of extensions managers choose to implement, it is important that there is a fit between the original brand and the extended product. Hence, managers need to transfer BSA to a new product in order for extensions to be successful. As it is becoming increasingly difficult to gain shelf-space for new products, it is important to develop the habitual thinking to enhance brand extension responses even further. Additionally, companies are expanding faster than the time it takes for consumers to adopt. This creates an overflow of new unwanted products, which at the end are withdrawn and stamped as failures. Since the failure-rate of extensions is high, the need of new solutions is undoubtedly present.

The current research has presented a new area of importance in brand extension literature for CPG. As of today, the importance of including BSA in new brand extensions is clearly emphasized. This research acknowledges how managers can take modest actions in order to improve brand extensions for CPG even further. Managers need to identify chemical BSA for edible CPG, and visual BSA for inedible CPG that have a smell. Additionally, they must be able to transfer these BSA to the extended product. By doing so, manufacturers may be able to gain competitive advantages by developing even better brand extensions.

In the vast majority of cases, BSA as a sensory attribute is included in brand extensions of CPG. On what basis these decisions have been made, or whether it all were conscious choices, are beyond the knowledge of the authors. What should be noted is that managers may not be aware of the actual effect of including these types of BSA. If a manager extends an edible good and apply a visual attribute, it will not have a negative impact on consumers’ brand extension responses, but with a chemical attribute the chance of success enhances. Hence, managers should be aware of these effects in order to maximize the chance of success.

As the effect of including a sensory attribute had minimal differences across products and brand extension responses, our study gives no clear guidelines for what kind of response managers should aim for in the process of launching a new
extension. The lack of such guidance is not critical in any way, because the three responses are so closely linked together (Spiggle et al., 2012). However, if managers aim to enhance the attitude towards an extended edible product, our findings show that including a chemical attribute have the greatest impact on this particular extension response (see figure 4). Further, if the aim is to get consumers to recommend a new inedible product, the findings also show that including a visual attribute have the greatest impact on this response (see figure 4).

None of the low fit cases, those excluding BSA, showed any effect of including a chemical or visual sensory attribute. This indicates that new products having low perceived fit does not enhance brand extensions attitude, purchase intention, nor willingness to recommend even if they include a chemical or visual sensory attribute. Thus, an inclusion of BSA in terms of a chemical sensory attribute for edible CPG, and BSA in terms of a visual sensory attribute for inedible CPG does not compensate for a low fit between the parent brand and the extension.

8.0 Limitations and Future Research

The study has some limitations that must be taken into account. These limitations can also act as a starting point for future researchers in the field of brand extension and CPG.

Firstly, the study is limited as it solely included two Norwegian brands, as well as two hypothetical brand extensions, one per product category. Therefore, it can be hard to foresee whether the findings in this study can be comparable, and one may ask if the results would be different if more brands and brand extensions had been included. The study should also be replicated with other products and in other countries to validate the results further. Hence, future research should investigate the use of BSA in terms of sensory attributes for a wider range of product categories, in which it might operate differently, and then measure the effects of product categories on BSA in terms of sensory attributes, and its impact on reactions to brand extensions.

Our research used hypothetical extensions of two well-known CPG brands, Jarlsberg and Jif. Even though we presented realistic extensions that were
thoroughly developed, using real extensions could have provided more accurate results. This would in turn require a long-term cooperation with the brands, thus a longer research process and more resources, in which we did not have access to. Future research with more capabilities and resources should however study the impact of BSA in terms of different sensory attributes for real extensions and investigate if this has different impact on extension responses.

Next, using Facebook (social media) as the channel for distributing the main survey, and using Norwegian students with similar demographics as the authors, are two other possible limitations. The sample may have skewed the results, as many of the respondents might have the same attitudes towards the products, making the results either too positive or too negative. However, the use of screening questions has minimized these effects and made the study more reliable.

Another potential influencer could be that the presentation of the extended products differed between the conditions. When participants were exposed to a chemical condition, an advertisement poster including the original product and a written claim was shown, whereas the exposure of the visual condition consisted of the actual new, extended product with a written claim on the product pack. As explained earlier, this was done in order to prevent respondents from forming an attitude based on the look of the new products, when their opinion of the chemical attribute and level of BSA was of interest. However, new products are usually launched in advertisement campaigns that also include a slogan or benefit explanation. For future research, it would be interesting to see what the results would have been if both exposures were exactly alike. Furthermore, nor did the respondents receive multiple exposures to brand extension stimuli, which also is a factor that may enhance brand extension responses (Dodd & Castellucci, 2000).

Although Steenkamp (1993) states that all comprehensive analyses on food consumption behavior should consider the properties of the food, environmental factors, as well as personal factors, the authors chose to omit some relevant questions in the survey regarding personal and environmental factors. This was in order avoid too personal questions such as body weight, social class, eating disorders, and religion. Even though the survey was anonymous, some people do not feel like answering too personal questions, and thus give biased answers.
(Feldman, 1995). However, as Steenkamp argues that these factors have mutual influence on consumption behavior, the exclusion of these questions may have resulted in a somewhat weaker analysis.

The perceived fit between the high-fit extensions (including BSA) and low-fit extensions (non-BSA) was not pretested. This was left undone as an attempt to limit the comprehensiveness of the study. However, the perceived fit was based on the positive associations found in the second pretest, and the low fit was based on these associations’ opposites, and further what would seem as potential and realistic new products from the manufacturers’ standpoints. One consequence of this could be that effects could be caused by reasons not accounted for in the model.

Consequently, although the results of this study are consistent with the theoretical expectations, it is necessary for future research to replicate and extend the findings. In addition, as Rozin and Vollmecke (1986) argue that sensory perception differs from cultures, this research should also be implemented in more countries. Hopefully, this study has provided greater insight, knowledge and understanding of how BSA in terms of various sensory attributes can affect brand extension responses for CPG through attitude, purchase intentions and willingness to recommend. Intentionally, this will increase managers’ ability to implement successful brand extensions of CPG, and encourage researchers to investigate further in this area.


Coulter, & Zaltman. (1994). The ZMET Technique: A New Paradigm For Improving Marketing And Marketing Research Maria M. van Dessel, Queensland University of Technology.


