



Brand Extensions: Influences of Perceived Fit and Communication of Explanatory Links

Is a hybrid extension of an American pony car feasible?

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Abstract

This study investigates the influences of perceived fit and communication of explanatory links on brand extension success, as well as the moderating effects of consumer innovativeness, category involvement and environmental consciousness. The case used in the study is a fictitious pony car brand called Stallion that launches two different line extensions: the Stallion 500 S and the Stallion Hybrid, each with a different degree of fit with the parent brand.

The effects of the research variables were assessed by employing a 2x2 factorial design experiment, and an online questionnaire was conducted with a sample of 142 current students at the Norwegian School of Economics. The results showed that the intended high fit extension was perceived as having low fit with the parent brand, and vice versa. A high degree of perceived fit had a positive direct effect on attitudes towards the extension, but no effects on purchase intentions or the parent brand were found. The explanatory links, which were hypothesized to have a direct effect on brand extension success, as well as a moderating effect on perceived fit, had no significant effects. As for the moderating factors, consumer innovativeness was found to moderate the effect of perceived fit on attitudes towards the brand extension. Amongst the implications of the results is the notion that perceived fit by itself is not necessarily sufficient for an extension to do well in the marketplace. Also, firms and consumers might not perceive fit similarly.

Preface

This study constitutes a master thesis in the Master of Science in Economics and Business Administration program at the Norwegian School of Economics (NHH). It is a mandatory requirement of the major in Marketing and Brand Management and accounts for 30 credits. The purpose of the study is to investigate whether a hybrid-powered pony car is too far of a stretch from a performance-oriented parent brand, and if so, whether establishing explanatory links may help increase the feasibility of such an extension.

In the field of marketing research, brand extensions have been the focal point for an extensive list of prominent researchers. Nonetheless, there appears to be no previous studies where brand extension theory has been used to investigate the relationship between consumers and pony cars. The rationale for using this case is a strong personal interest for American automotive culture as well as the technological development in this industry. Being able to spend an entire semester covering contemporary challenges for this niche category has undoubtedly been a tremendous motivating factor.

Several individuals deserve to be acknowledged for their contribution to this work. First and foremost, I have had the pleasure of being supervised by Professor Herbjørn Nysveen. He has provided excellent supervision and invaluable feedback throughout the entire semester. Also, I would like to thank the students at NHH who engaged in the experiment and provided me with valuable data for my analysis. Lastly, Arild Schanke at the Section for Analysis and Quality Assurance at NHH was a highly appreciated contributor to the design and distribution of the online survey.

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1. Introduction

1.1 Background

In the first decade of the 21st century, the American pony car market rose from its ashes as the “Big Three” introduced a new generation of vehicles inspired by their predecessors from the 1960s. From 2005 to 2010, Ford, General Motors and Chrysler introduced revitalized models of the Mustang, Camaro and Challenger, respectively (Stewart, 2009). What these cars had in common was the fact that after years of declining images and halting production, they were reborn as American icons with high-performance engines and designs that closely resembled their golden era.

To meet the challenges of rising gas prices and demands for more sustainable transportation, even these performance cars have had to adapt. Today, they are all available with relatively efficient engines rated at or above 30 mpg (78L/100km or less) on highway driving, something one could only have dreamed about 50 years ago (Joseph, 2014). Just like tight emissions regulations following the 1973 oil crisis forced American automakers to downsize their engines in the 70s, it seems like history is currently repeating itself (Parment, 2014). In fact, the 2015 Ford Mustang is now available with a 4-cylinder engine option for the first time since 1993 (Voelcker, 2013).

One may ask how far the downsizing trend can possibly go within this product category before the products lose their original meaning and detach from their heritage. This study will analyze the effects of coupling a fictitious American pony car with modern-day hybrid technology. There is no such product available today, yet it is something that the Big Three will most likely have to take a stance on within the next few years. The choice between staying true to their heritage and adapting to sustainable powertrain technology could literally mean life or death to the modern pony car as we know it today. As Robert Fascetti, vice president of Powertrain Engineering at The Ford Motor Company, said about the Mustang’s future: “[...] given where we need to go with fuel consumption we are

looking at all our options. And diesel is one of those options, along with hybrids and electric.” (Mathioudakis, 2013)

This debate is of high importance mainly because of two reasons. Firstly, the automotive industry is currently going through the biggest revolution since the birth of the combustion engine. The idea of running a vehicle on electricity is not new. In 1899, Ferdinand Porsche developed the first vehicle to ever be powered by a hybrid system, utilizing both fossil fuel and electricity (Bearce, 2009). The mass production of plug-in hybrids and fully electric vehicles (EVs), however, has skyrocketed during the last few years (United States Department of Energy, 2014). After Tesla introduced their Model S in 2012 things got serious for the EVs, and many global automakers have followed suit (Tesla Motors, 2015). Where the EVs are currently constrained by their limited range, hybrid vehicles have emerged as a substitute to conventional gas- and diesel-fueled vehicles.

Secondly, hybrid technology seems to be employed in most automotive product categories today except for American performance cars (DeMorro, 2014). There are a variety of hybrid versions of commercial vehicles, SUVs and smaller personal vehicles on the market, and even trucks, semi trailers and motorcycles are being developed utilizing the same technology (HybridCars.com). Are pony cars immune to sustainable fuel technology?

Some might suggest that the only purpose of environmentally friendly vehicles is to maximize fuel economy and that the technology has nothing to do with performance. Ironically, the BMW i8, Ferrari LaFerrari and Porsche 918 Spyder have clearly proven that hybrid technology has in fact everything to do with performance, as they can outrun most conventional vehicles by far (Bell, 2014). Why have we not seen anything similar be developed by their American competitors?

1.2 Positioning and purpose

This study will investigate brand extensions in the context of a subgroup of personal vehicles, namely American pony cars. This is an important research area for the industry because automakers are rapidly expanding their current product lines in the fight for higher market share (Priddle, 2013). There is some research on automobile brand extensions. Both Hem and Iversen (2003) and Zhang (2013) studied the effects that horizontal category extensions had on brand equity, while Kim et al. (2001) focused their study on vertical extensions. There seems to be a vacuum, however, in the field of research on horizontal automobile product line extensions.

Furthermore, there is an abundance of literature on the effects of brand extensions in general, and the current study will employ previous research on both evaluations of brand extensions and feedback effects on the parent brand. Aaker and Keller (1990) conducted one of the most prominent studies on brand extension success factors and laid the foundation for a series of replica studies. Additionally, Buil et al. (2009) investigated the effects of brand extensions on parent brand image, while Swaminathan et al. (2001) focused on the implications for parent brand purchase rates. Despite somewhat ambiguous findings in the extension literature, most researchers agree that the fit between the parent brand and its extension is crucial to its success (Bottomley & Holden, 2001; Völckner & Sattler, 2006).

The current study also seeks to investigate the impact of marketing communicating on the success of a seemingly incongruent brand extension. Both Aaker and Keller (1990) and a series of other studies have acknowledged the fact that ads and other communication tools can alter consumers' evaluations of brand extensions. Bridges et al. (2000), for example, suggest that firms can reduce the perceived distance between two dissimilar objects by establishing some explanatory links between them. The current study will test whether the previously documented effects of such explanatory links also hold for more capital-intensive goods than FMCG.

In addition to the implications of fit and marketing communication, a range of other factors has been suggested to affect evaluations of brand extensions. Some of these relate to characteristics of the category or the brand, while others depend on consumers' personality traits. As a consequence, the study will account for differences within consumers' consumption patterns and beliefs. Based on previous findings, the role of consumer innovativeness and product category involvement will be taken into account (Klink & Smith, 2001; Broniarczyk & Alba, 1994). Also, the effect of environmental consciousness, which has been found to have affect consumers' attitudes and behavior, will be explored (Marell, Davidson, Garling, & Laitila, 2004; Flamm, 2009).

The overall objective of this study is to identify the causal effects that perceived fit and communication of explanatory links have on brand extension success. The moderating effect of the explanatory links will also be investigated, as will the moderating effects of consumer innovativeness, category involvement and environmental consciousness. The purpose is to investigate whether a hybrid-powered pony car is too far of a stretch from a performance-oriented parent brand, and if so, whether establishing explanatory links may help increase the feasibility of such an extension.

1.2.1 Research questions

Based on the purpose of the study, three research questions will be investigated.

- 1. How does perceived fit affect the success of a hybrid pony car extension?**
- 2. a) How does communication of explanatory links affect the success of a hybrid pony car extension and b) how does it interact with perceived fit in explaining the success of a hybrid pony car extension?**
- 3. How do consumer innovativeness, product category involvement and environmental consciousness moderate the relationship between perceived fit and brand extension success?**

1.3 Contribution

Studying the effects of a hybrid-powered pony car in the Norwegian market is relevant for the auto industry due to two reasons. Firstly, because a new, downsized generation of a pony car, specifically the Ford Mustang EcoBoost, is being launched in the country for the first time in over 40 years, and secondly because Norway has been one of the pioneer countries in the facilitation of sustainable transportation (Abrahamsen, 2015; Holtmark & Skonhoft, 2014).

The matter is highly relevant for corporate decision makers because they will most likely have to consider such a product in the near future. Chances are pony car manufacturers will face two possible outcomes in the long run. Either, their products must adapt some form of environmentally friendly powertrain technology, or this niche category might eventually fade out. Even though some groups of devoted customers will continue to buy these vehicles, it is simply not feasible to produce low volumes of a mid-scale automobile due to the absence of economies of scale (Husan, 1997). Thus, this study intends to provide some indications to American automakers on the feasibility of a hybrid pony car in the Norwegian market and whether communication can purposely be used to increase the change of success. Also, academic studies on attitudes and purchase intentions towards pony cars, as well as extensions of these, are virtually non-existent. Therefore, this study sheds light on a niche category that is currently receiving increasingly more attention in its country of origin and globally, with the new 2015 Ford Mustang leading the way.

As for theoretical contributions, the research model will include three moderating variables, namely product category involvement, consumer innovativeness and environmental consciousness. The combination of these three seems to be absent in previous extension literature. As sustainable products become increasingly more important, there is a need to know how consumers evaluate them and why they do so (BusinessGreen, 2012). Also, it is crucial to explore how environmental attitudes affect purchase intentions since attitudes alone is not sufficient to predict behavior (Spears & Singh, 2004). Lastly, it appears that a significant proportion of the extension literature focuses on the

FMCG industry (Thamaraiselvan & Raja, 2008). Despite the significant importance of line extensions in the automobile industry, this research area has received relatively sparse attention (Kirmani, Sood, & Bridges, 1999; Keaveney, Herrmann, Befurt, & Landwehr, 2012). Thus, focusing on durable goods in favor of FMCG, this study broadens the scope of the existing brand extension literature.

Although several studies have explored the effects that perceived fit (e.g. Boush & Loken, 1991; Aaker & Keller, 1990; Park, Milberg, & Lawson, 1991) and marketing communication (e.g. Keller, 1993; Bridges, Keller, & Sood, 2000) have on attitudes towards brand extensions, there seems to be a vacuum in the research of the interaction between these two variables. The current study seeks to fill this vacuum by not only focusing on the isolated effects of perceived fit and communication of explanatory links, but also the interactive affect between them. The rationale behind this is to investigate how an incongruity in a product line extension affects extension success, and whether marketing communication has the ability to increase the chance of success.

1.4 Outline of the thesis

Chapter two includes a contextual description of the case that will be used in the study. Here, pony cars are defined and explained, and the role of sustainable transportation in Norway is discussed. Chapter 3 constitutes the theoretical foundation of the thesis, and will also present the hypotheses. The literature review is based on the structural relationships in the research model, which is also presented here. Thereafter, the constructs of brand attitudes and purchase intentions are elaborated on. These make up the dependent variables in the research model. Thereafter, existing literature behind the independent variables, namely perceived fit and communication of explanatory links, is discussed. Lastly, existing research on the three moderating variables is presented. Chapter 4 introduces the methodological framework, including the research design and the applied research procedures. In chapter 5, the results are presented, before the findings and their implications are discussed in chapter 6. This last chapter will also cover validity considerations and future research.

2. Context

2.1 About pony cars

According to the online Merriam-Webster dictionary (2015, p. 1), pony cars are *“...a group of 2-door hardtops of different makes that are similar in sporty styling, high performance characteristics and price range”*. Although the distinction between muscle cars and pony cars might appear somewhat diffuse, pony cars tend to be somewhat smaller, cheaper and more agile than muscle cars (Vogel, 2014).

When The Ford Motor Company introduced the Mustang in 1964, they essentially created the prototype of a new product category. Ford's expectations of selling 100 000 units during the first year were exceeded by far, as 22 000 vehicles were sold the first day, and one million within the next two years (Damian, 2006; Rigney, 2009). Shortly after, GM and Chrysler launched the Chevrolet Camaro and Dodge Challenger as head-on competitors (CarsDirect, 2013). Other automakers also joined the competition with cars such as the AMC AMX and the Plymouth Barracuda, but these vehicles never made it to the 21st century (Heacock Classic, 2014). Despite the early years of success for the pony cars, sales started to drop in the late 60's (Sfetcu, 2014). While pony cars sales peaked at 13% of the total US market in 1967, this number dropped to 9% by 1969. In the 70's, many previous buyers disregarded the product category in favor of smaller compact cars or larger and more exclusive vehicles. Also, the performance of many pony cars decreased due to increasing emissions control and added weight from mandatory safety features.

The category regained some popularity in the 80's and 90's, although several automakers offered 4-cylinder options, making these pony cars less purebred than their predecessors. The significant impact of emissions control on pony cars performance is illustrated by the Ford Mustang's maximum available horsepower per year in Figure 1. Increased competition from foreign automakers also threatened the pony cars' position. At the turn of the millennium, new consumer trends developed, and the popularity of light-duty

trucks and sport utility vehicles increased. This eventually led to the withdrawal of the iconic Chevrolet Camaro and Pontiac Firebird, leaving the Ford Mustang as the only surviving pony car in the market. Nonetheless, the category has regained some attention during the last decade, as retro-inspired versions of the Ford Mustang, Chevrolet Camaro and Dodge Challenger have been introduced, all with a heavy emphasis on nostalgia and power (Patel, 2014). Looking at the Mustang's US sales development in Figure 2, however, the long-term development in sales has gradually been declining.

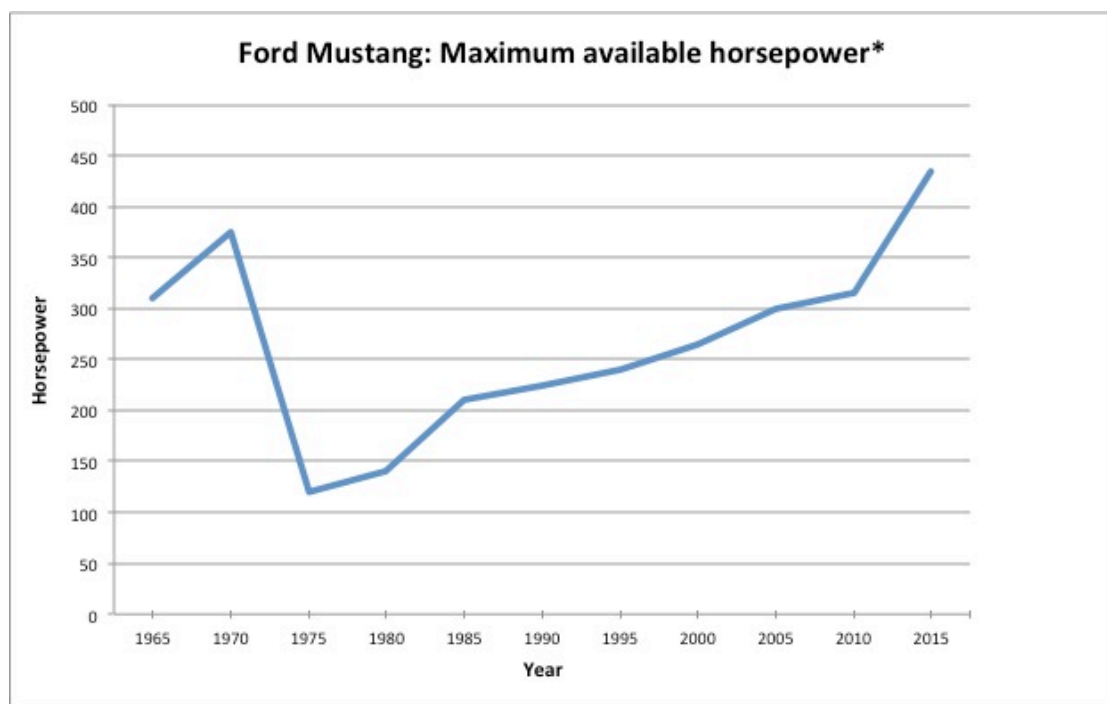


Figure 1: **Excluding Shelby performance models*
(C) Pony Parts, 2014; Ford Motor Company, 2015)

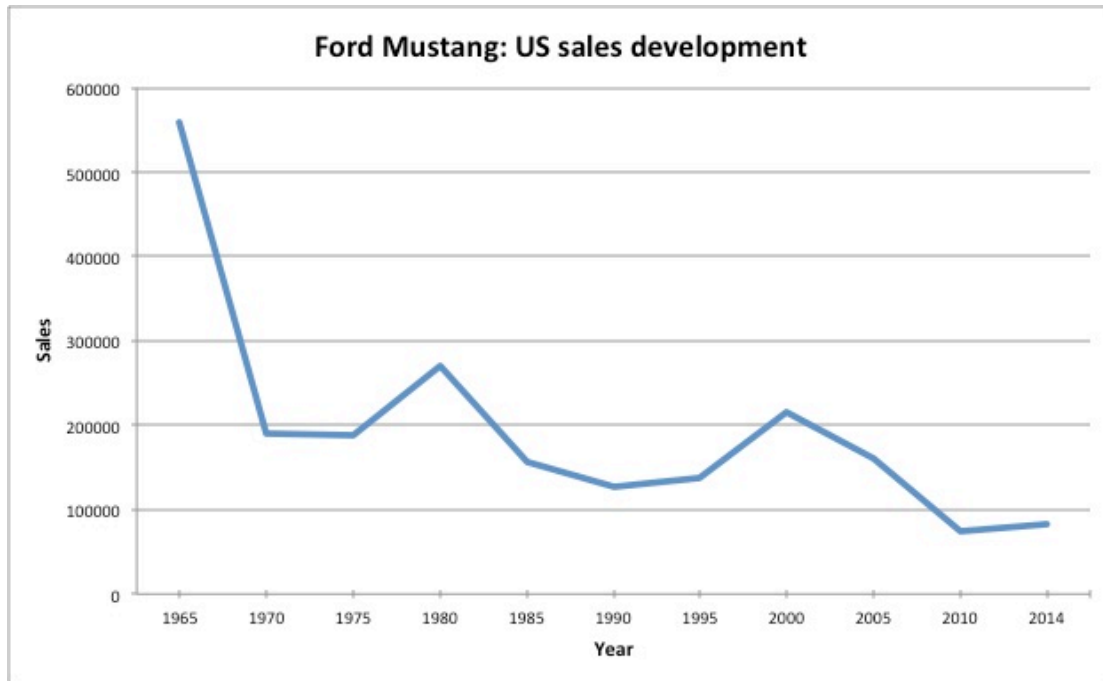


Figure 2

(MustangAttitude, N/A)

Pony cars have traditionally been an American phenomenon, but in 1969 Ford launched their Capri in Europe, which was heavily inspired by the Mustang's style and image (Patel, 2014). The American gas-guzzlers also inspired a generation of Japanese performance vehicles, starting with the Toyota Celica, which was almost a blueprint of the Mustang (Jordan, 2013). During the last 50 years, popularity of pony cars has also spread globally thanks to American popular culture. Songs like *Mustang Sally* and movies like *Gone in 60 Seconds*, *Fast and Furious*, *Transformers* and *Smokey and the Bandit* have all been important in pony cars' quest across the American border (Ladaga, 2014; Whitney, 2014). Although the Norwegian tax regime does not favor American cars, there is a large community of American car owners in Norway with more than 100 local clubs (American Car Club of Norway, 2015). The popularity is expected to increase with the introduction of the 2015 Ford Mustang, a model that has not been available through Norwegian dealerships since 1970 (Abrahamsen, 2013).

Traditionally, the pony car category has been associated with loud V6- and V8- engines that deliver great straight-line performance. Some might say that adding an electric engine to these cars' existing combustion engines is counterintuitive because they are supposed to be loud and brutal instead of eco-friendly and efficient. In an Autoblog.com poll, 23.8% of the respondents said they were only interested in the V8 option, while 23% agreed that the new 4-cylinder turbo engine was as far as downsizing should go (Joseph, 2013). More interestingly, 24.6% of the respondents said that the Mustang should be offered with a hybrid or electric engine option. With the 2015 Mustang, which is being launched in 120 countries, Ford proves that downsized pony cars can offer better overall performance than former V6 and V8 engines at an affordable price, which is exactly why a hybrid option would not be as radical as it might first seem (The Ford Motor Company, 2014).

A hybrid-powered pony car could potentially offer better performance than any of the models currently offered. Electric engines have superior characteristics with regards to torque delivery, which is crucial in pony cars, and implementing them into conventional powertrains can also improve fuel mileage significantly (Borrás, 2013). Additionally, more efficient powertrains are not only beneficial where gas prices are high, but also in countries where a vehicle's retail price is heavily dependent on its environmental profile, such as Norway (NAF, 2015). Thus, a hybrid engine model would serve the purpose of the pony car category perfectly.

2.2 Environmentally friendly transportation in Norway

During the last few years, EV sales in Norway have soared due to favorable legislation and the introduction of EVs from several prominent automakers. In 2014, EVs contributed to 13% of accumulated personal vehicle sales, which is sensational in a global perspective (Svendsen, 2015). Since hybrid vehicles have not enjoyed the same user benefits and tax exemptions as EVs, their sales numbers have not been as significant. Due to high registration taxes that depend

on a vehicle's curb weight, power output and emissions, hybrids have obviously been unable to compete with EVs on price (NAF, 2015). Nonetheless, as automakers are combining electric technology with combustion engines to reduce CO2 emissions, hybrids have the potential to achieve a cost advantage over fossil fuel vehicles in Norway. Additionally, the weight component in hybrid vehicles' registration tax was reduced in the 2015 state budget, which has boosted the popularity of this technology (Stensrud, 2014).

With gradually decreasing retail prices and an obvious range advantage over EVs, the sales of plug-in hybrids in Norway is expected to grow throughout the next years. The government has shown willingness to facilitate the infrastructure needed for environmentally friendly vehicles, for instance through building more than 5000 public charging stations nationwide as well as hosting an EU-initiated pilot project for hydrogen cars in Oslo (Nobil, 2015). On the consumer level, 64% of Norwegians think the government should facilitate more renewable energy, while 43% believe it is important to invest in R&D of eco-friendly technology (TNS Gallup, 2014). These numbers reflect the environmental consciousness of the general population and indicate a bright future for less carbon-intensive vehicles.

3. Theory and hypotheses

The following literature review is structured around this study's research model, as shown in Figure 3.

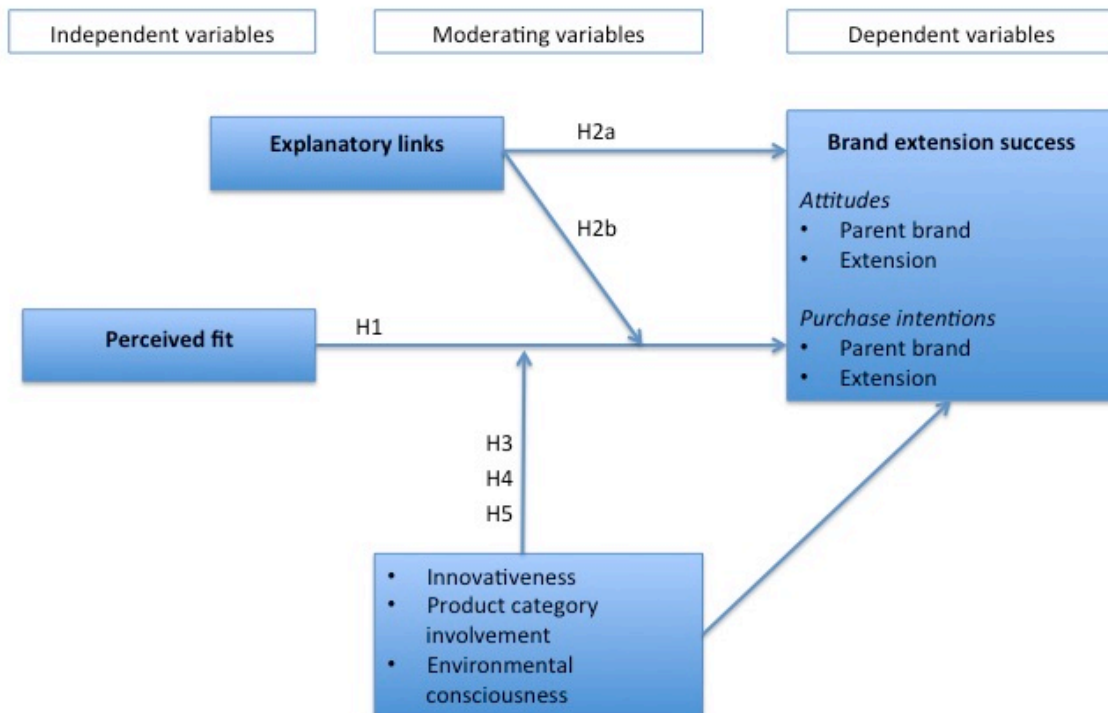


Figure 3

Perceived fit is hypothesized to have a positive direct effect on brand extension success (H1). Communication of explanatory links is also expected to have a positive direct effect on brand extension success (H2a), in addition to moderating the effect of perceived fit (H2b). Lastly, consumer innovativeness, (H4), product category involvement (H5) and environmental consciousness (H6) are expected to moderate the causal effect that perceived fit has on brand extension success.

3.1 Brand extension success

3.1.1 Brand equity and attitudes

At the heart of marketing and brand management is the concept of *brand equity*. Keller (1993, p. 2) defines customer-based brand equity as “*the differential effect of brand knowledge on consumer response to the marketing of the brand*”. Positive brand equity is present when consumers react more favorably to a marketing mix element of a given brand than to the same element of a fictitious brand. Also, brand equity is present when consumers are familiar with a brand and hold some strong, favorable and unique associations towards it. According to the author, there are two primary reasons for studying brand equity. The first is a desire to estimate the value of brands for accounting purposes. Simon and Sullivan (1990), for example, define brand equity as the incremental discounted cash flows that result from applying a brand name to a product in contrast to marketing the same product without a brand name at all. The second reason is the goal of increasing the productivity of marketing efforts. Consumers’ brand knowledge that is derived from previous marketing programs is suggested to be the most valuable asset for improving marketing productivity. When marketers understand consumers’ behavior, they are able to make more informed decisions about target markets and product positioning. Additionally, this knowledge facilitates better understanding of which combination of marketing mix elements to employ.

Obviously, consumers’ reactions to marketing mix elements are a function of their knowledge of the brand. This knowledge, in turn, is a result of their experiences with the brand over time (Keller, 2008). Thus, while firms have the ability to alter consumers’ knowledge, brand equity is all about what resides in the minds of consumers. Consumers’ memory structures can furthermore be conceptualized as associative networks (Wyer & Srull, 1989; Anderson, 1983). The associative network memory model describes semantic memory as a network consisting of nodes and links (Keller, 2008). The nodes contain information about the brand and connect to other nodes through links of varying

strength. When one node is activated, the spreading activation to other nodes determines consumers' retrieval of information (Collins & Loftus, 1975; Raaijmakers & Shiffrin, 1981; Ratcliff & McKoon, 1988).

As shown in Figure 4, brand knowledge consists of two elements, namely *brand awareness* and *brand image*. Brand awareness describes the strength of the nodes in memory, and relates to consumers' ability to identify the brand in different situations (Rossiter & Percy, 1987). Brand awareness can further be divided into *brand recognition* and *brand recall*. Recognition relates to how consumers can remember prior exposure to the brand when encountering a brand relevant cue, such as e.g. a logo or a jingle. Brand recall, on the other hand, relates to consumers' ability to retrieve the brand when presented with a category-relevant cue, for example thinking of Nike when shopping for sports apparel. When awareness about a brand has been established, a brand image can be developed.

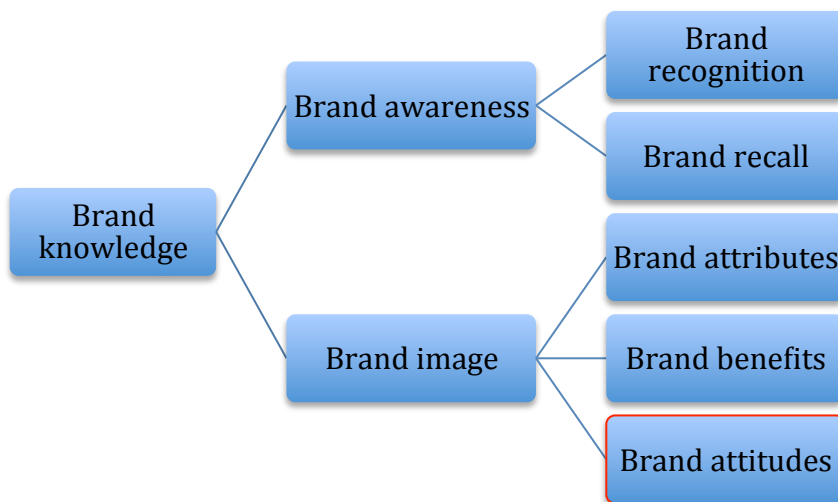


Figure 4: The components of brand knowledge

Keller (1993, p. 3) defines brand image as “*perceptions about a brand as reflected by the brand associations held in consumer memory*”. Brand image is stored as associations in the nodes of a consumer's memory and is linked to the brand node, forming an associative network. Brand associations vary in their degree of strength, uniqueness and favorability, and play a crucial role in high involvement

settings. Brand awareness, on the other hand, can determine the outcome in low involvement settings where consumers have either low motivation or ability to engage in decision-making (Petty & Cacioppo, 1986). In such situations, consumers might simply choose a brand that is familiar and well established (Jacoby & Busato-Schach, 1977; Roselius, 1971).

Brand associations consist of *attributes*, *benefits* and *attitudes* (Keller, 1993). Brand attributes are the descriptive features of a product and benefits are its values and meanings to consumers. According to Mitchell and Olson (1981, p. 320), brand attitudes refer to "*beliefs about attributes of the advertised brand*". In their expectancy-value model, Fishbein and Ajzen (1975) describe attitudes as a multiplicative function of a consumer's salient brand beliefs and the favorability of those beliefs. Brand belief salience can be measured by asking consumers to rate the probability that a brand has a certain attribute or benefit. Likewise, favorability can be measured by asking whether this attribute or benefit is a positive or negative trait. Thus, overall attitude is found by summarizing each attribute belief's strength multiplied by its favorability.

3.1.2 Purchase intentions

Cobb-Walgren et al. (1995) demonstrated that brand equity influences consumer preferences as well as *purchase intentions*, which ultimately affect their brand choice in the marketplace. While attitudes represent an overall liking of an object, consumers' purchase intentions can be defined as "*the person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior*" (Eagly & Chaiken, 1993, p. 168).

To conceptualize the link between attitudes, intention and behavior, Fishbein and Ajzen (1975) developed a model called *Theory of Reasoned Action* (TRA). This framework suggests that attitudes towards behavior as well as subjective norms affect an individual's behavioral intention, which in turn determines the individual's behavior. One of the major weaknesses of this model, however, is the fact that even though one intends to perform a given behavior, this does not

always translate to actual behavior in the real world. Ajzen (1991) proposed that this was due to factors that limit individuals' control over performing the behavior, and the author therefore revised the original model. A new variable, perceived behavioral control, was added to the existing framework, resulting in the *Theory of Planned Behavior* (TPB). According to Fishbein and Ajzen (2005, p. 193), perceived behavioral control is derived from "*beliefs concerning the presence or absence of factors that make performance of a behavior easier or more difficult*".

While the TRA and TPB frameworks focus on attitudes towards a certain behavior, other researchers have conducted studies on attitudes towards objects. Spears and Singh (2004), for example, investigated the relationship between attitudes towards a brand and consumers' purchase intentions. Their results confirmed previous findings in that the two constructs are separate, but correlated, dimensions.

In a meta-analysis of ten other meta-analyses, Sheeran (2002) found that on average, intentions explained 28% of the variance in behavior, confirming that there is a correlative relationship between the two constructs. Mauro (1990), however, stresses the fact that correlational studies do not eliminate the possibility that a third variable is accountable for the variance. Consequently, Webb and Sheeran (2006) conducted another meta-analysis and found that intention does have a significant causal effect on behavior, although this effect is weaker than initially suggested by correlational tests. As a conclusion, since intentions alone cannot perfectly predict consumer behavior, the current study measures success in terms of both attitudes and intentions.

3.2 Brand extensions

According to the American Marketing Association (2014, p. 1), a brand extension "*is usually aimed at another segment of the general market for the overall brand*". Thus, brand extensions are a tool to tap into new segments and expand a firm's market share. Contrary to developing a new brand, extensions leverage existing

brand equity, allowing consumers to make inferences about the new product based on their experience with the parent brand (Kim & Sullivan, 1995).

There are various reasons why existing brand names are applied to new products. For example, DelVecchio and Smith (2005) found that brand extension price premiums are facilitated when a familiar brand name reduces consumers' perceived risk when making purchases. This illustrates the apparent advantage of signaling the quality of a new product through shared associations with an existing brand.

There might also be a financial rationale behind extension strategies. In line with the example above, firms obviously don't need to devote as much resources to the introduction of a brand extension as they would normally have to. Adding a link between a new product and an existing brand is generally less demanding than first establishing awareness of a brand and then linking it to a new product (Aaker & Carmon, 1992). This enables firms to devote more resources to communication of the new product and not the brand as well.

Brand extensions may be vertical or horizontal, meaning that the new product can be positioned in a new price range or the same as the parent brand.

Extensions can also be based on a new line or a new category (Keller, 2008). In a *category* extension, sometimes just referred to as a brand extension, the firm uses its current brand to enter into a new product category, much like Caterpillar did when they started manufacturing boots. On the other hand, a line extension leverages an existing brand name in order to supply a new product in the existing category. A line extension is usually a slightly modified version of the original brand and can be targeted at the same customer segment or a completely new one (Aaker & Keller, 1990). The current study adopts Keller's (2008) terminology where the author distinguishes between *category* and *line extensions*, and uses the collective term *brand extensions* when referring to either.

While many researchers have focused their studies on category extensions, line extensions have received considerably less attention. Given that as much as 90% of extensions are based on existing product lines in certain categories, this paradox creates a vacuum in the existing literature (Kotler & Keller, 2009). Thus

far, most research has focused on line extensions' cannibalization effects and the effects of product-line stretches (Keaveney, Herrmann, Befurt, & Landwehr, 2012). Researchers have suggested that there is a need for more knowledge about consumers' responses to line extensions and their critical success factors, as well as need for managerial guidelines (Kirmani, Sood, & Bridges, 1999; Reddy, Holak, & Bhat, 1994).

Similar to category extensions, line extensions are evaluated based on their fit with the parent brand. While brand extension fit can be conceptualized on several different dimensions, line extension fit has been proposed to be based merely on category membership (Fiske & Taylor, 1984; Rosch, 1978). The more features a product shares with other product category members, the more likely it will be perceived as a member as well. Yet again, category membership is a relative concept, and consumers may define a brand's category on a range of different levels. Some consumers might categorize products according to their attributes and features, and others might consider two products to belong in the same category as long as they fulfill the same need or goal (Barsalou, 1985).

Blichfeldt (2005) distinguishes between line extensions that stimulate growth in the existing product category and those that don't. According to Kotler and Keller (Kotler & Keller, 2009), brand growth may be limited if the extension cannibalizes sales of existing products. Nonetheless, this effect is not necessarily a counterintuitive. If the alternative is to lose customers to a competing brand, a cannibalizing brand extension can be an effective way to retain customers and avoid brand switching.

3.2.1 Brand extension fit

Despite the convenience and apparent advantages of brand extensions, there is always an element of uncertainty involved in the marketing of a new brand. While brand extensions can account for over 90% of new product launches in certain categories, a large proportion of these eventually fail (Keller, 2003). Success rates vary according to factors such as market and product category

characteristics, but Chogle (2012) estimates that about 50% of brand extensions survive, compared to 10% of new product launches in general. In addition to the mediocre success rate, extensions also have the potential to create negative and potentially irreversible associations towards the parent brand (Keller & Sood, 2003). Therefore, the determinants of extension success have been the focus of much academic research, helping marketing managers avoid typical pitfalls and to position their extensions appropriately.

3.2.1.1 Perceived fit

In their widely acknowledged exploratory research, Aaker and Keller (1990) conducted two studies to obtain insights into how consumers evaluate brand extensions. By measuring respondents' reactions to 20 brand extensions derived from six well-known brands, their first study showed that respondents evaluated the extension based on:

1. *The extent to which the business is able to use their existing skills and assets in manufacturing the extension.*
2. *The interaction of parent brand quality with the degree to which the original brand and its extension are complements or substitutes.*
3. *The perceived difficulty of manufacturing the extension product.*

All of these success determinants relate to some type of fit between the parent brand and its extension, and they were tested for effects on attitudes towards the brand extensions. The authors defined perceived fit using three different dimensions: *Transferability, complementarity* and *substitutability*.

Transferability refers to the firm's ability to use their existing skills and assets in making the product extension, and was the only dimension found to have a direct effect on attitudes towards an extension. Complementarity is the degree to which the two products fulfill each other's functions, and substitutability describes the degree to which one product can be replaced by another while providing the same performance. Complementarity and substitutability were found to have a significant effect on attitudes when coupled with a high quality

product. Thus, whenever this interaction effect was absent, the presence of either of these two variables was insufficient.

The authors also hypothesized that quality would have a direct effect on attitudes towards the extension, but their findings didn't support this. Lastly, they found that perceived difficulty of manufacturing an extension had a significant effect on attitudes. This can be a consequence of two different reasons. Firstly, consumers may perceive that a high quality brand does not fit into a low quality product category. Secondly, the association of a high quality brand name with a product that is easy to make may infer that the product is overpriced.

Several additional studies have found a similar positive effect of fit (e.g. Boush and Loken, 1991; Park et al., 1991), while others have found this effect to be less straightforward. Smith and Andrews (1995), for example, found that the transferability dimension of fit had no direct effect on consumer evaluations of brand extensions. Instead, they suggest that the relationship is mediated by what they call *customer certainty* – a certainty that a given company can in fact deliver what is expected from the extension. Furthermore, Broniarczyk and Alba (1994) found that a brand's ability to extend to other product categories is moderated by brand-specific associations, which are attributes that separate a brand from its competitors. While Park et al. (1991) concluded that extension evaluations are enhanced when a brand and its extension share some broad and common associations, Broniarczyk and Alba (1994) narrowed these associations down from concept-related associations to more specific ones. The authors concluded that brand-specific associations were actually more important than both brand affect and category similarity in predicting extension evaluations.

Although early studies on brand extension evaluations, including Aaker and Keller's (1990) seminal study, generally had high internal validity, several researchers have raised concerns about their generalizability (Bottomley & Holden, 2001; Klink & Smith, 2001; Czellar, 2003). Due to various replication studies yielding different results, Bottomley and Holden (2001) conducted a meta-analysis of previous research to investigate the generalizability of Aaker and Keller's (1990) model. Despite a series of replication studies that only

supported some of their hypotheses, the authors found support for the full original model. Furthermore, their main conclusion was that brand extensions are evaluated primarily on the bases of:

1. *Parent brand quality.*
2. *The fit between the product categories of the original brand and the extension*

Contrary to what Aaker and Keller (1990) found, however, the authors concluded that parent brand quality had a direct effect on consumers' evaluation of the extension. They also found that among the three dimensions of fit, transferability and complementarity seemed to be relatively more important than substitutability. They suggest that this observation may be due to the fact that few category extensions are true substitutes.

Another study aimed at testing the empirical generalizability of previous extension research was conducted by Völkner and Sattler (2007). They suggest that since Bottomley and Holden's (2001) research was based on Aaker and Keller's (1990) data, they had failed to account for a variety of success factors that were identified during the 90s. Through two large-scale empirical studies the authors tested the generalizability of 17 success factors in five broad categories: 1) Brand name effects, 2) similarity effects, 3) manufacturing difficulty and product class quality effects, 4) consumer involvement effects and 5) parent brand marketing power effects. The areas of generalizability were: 1) Beyond lab conditions to real settings, 2) across FMCG categories and brands, 3) across respondent demographics and 4) across success measures.

Despite some minor differences across these categories, the authors concluded that generally, the results from previous brand extension research could be applied to a broad range of circumstances. With regards to generalizability beyond lab settings, the results indicated that findings from research based on fictitious brand extensions are also relevant for real-world extensions. This is in line with Anderson et al.'s (1999) suggestion that researchers tend to underestimate the external validity of lab studies and also the internal validity of field studies. Through a meta-analysis of previous psychological research, these

authors found that generally, hypothetical stimuli tend to have the same effects as real stimuli. Völkner and Sattler (2007) also found that extension success factors generalize across categories within the FMCG industry. On the other hand, they found that there are significant differences between different types of brands; especially with regards to brand concept and that success factors are not necessarily identical across prestige and functional-oriented brands. In the case of differences between samples, the results showed that there are few differences between students and non-student samples when assessing the significance and relative importance of the extension success factors in question. Although a range of factors, such as market characteristics and competitive forces, may affect the chance of success for any given brand extension, the authors found support for a strong link between consumer evaluations and financial performance.

Perceived brand extension fit has been addressed through various approaches, and can be generalized as the proximity between the parent brand and its extension (Buil, de Chernatony, & Hem, 2009; Bridges, Keller, & Sood, 2000). While some researchers refer to *perceived fit*, others simply use the term *fit*. As these terms at times appear to be used somewhat interchangeably, a clarification seems appropriate. After all, the firm's *intention* might not be equal to the consumer's *perception*. The acceptance of a new brand extension in the market relies on the consumer's perception of fit, and not on the intended fit, which is why this conceptualization is adopted in current study.

3.2.1.2 Brand concept consistency

The definition and measurement of extension fit can be divided into four broad categories: product features, usage, brand concept and goals (Martin & Stewart, 2001; Klink & Smith, 2001). While Aaker and Keller's (1990) study and the succeeding replications primarily accounted for product feature- and usage similarity, Park et al. (1991) suggest that brand concept consistency plays a vital role in consumers' evaluations of brand extensions. According to Murphy and

Medin (1985), people may form their own theories, other than attribute-based fit, about why different entities belong in the same category. They suggest that to understand category coherence, one must take conceptual relationships amongst objects into account. In the case of commercial products, brand concepts enable firms to position their products in the minds of consumers and provide a potential for competitive differentiation (Park, Jaworski, & MacInnis, 1986).

Product features include attributes such as engine displacement and features like fuel economy, and can be more or less concrete or abstract (Johnson M., 1984; Johnson M., 1988). Brand concepts, on the other hand, are brand-unique abstract associations that are derived from a product's attributes, benefits and the firm's effort to translate these into higher-order meanings (Park, Milberg, & Lawson, 1991). Park et al. (1986) found that evaluations of brand extensions are a function of perceived product feature fit and brand concept consistency. Accordingly, the most favorable evaluations occur when fit is high on both product features and brand concept.

3.2.1.3 Goal consistency

As far as goal-derived categorization is concerned, Murphy and Medin (1985) found that perceived similarity depends on the context and task, while Barsalou (1985) proposed that judgment of similarity differs according to which goals are salient in any given situation. Consequently, the perceived fit of an extension may depend on its consistency with the parent brand goals.

Transfer of knowledge and attitudes is also stimulated when consumers are able to establish a link between two products and their ability to accomplish the same goals (Barsalou, 1985). In case the consumer can't establish this link, he must cognitively construct a new category that makes sense. According to Mandler (2014, p. 14), "*incongruity may lead to the activation of a new schema that "fits" the new information.*" This schema, or network, will consist of whatever shared characteristics the consumer can recall and will be poorer organized than if the

link was more obvious. Hence, transfer of knowledge and attitudes will be weakened.

In line with goal-derived categorization theory (Barsalou, 1985), Martin et al. (2005) reinforced the theory that consumers' information about and attitudes towards brands are organized around goals. Their research demonstrated that availability of goal-derived categories associated with a brand enables consumers to assess similarity. This organizing framework thus facilitates transfer of knowledge and attitudes to extensions of the parent brand.

3.2.2 Effects of high fit

Aaker and Keller (1990) found that one of the most important effects of high fit is that consumers evaluate brand extensions more favorably since the extension gains credibility. The effect of fit on attitudes has also been found in a series of other brand extension studies (e.g. Boush & Loken, 1991; Bottomley & Holden, 2001) and attitudes have been widely used as a dependent variable in the literature. Buil et al. (2009), for example, found that the higher the perceived fit, the more beliefs and attitudes will be transferred from the parent brand to the extension. This, in turn, will enable consumers to develop favorable attitudes towards the brand extension.

Buil et al. (2009) also propose that in the marketplace, a high degree of perceived fit translates to higher credibility for the firm and higher willingness to purchase by consumers. This is in line with Martin et al.'s (2005) study, where not only attitudes, but also purchase intentions, were found to be higher when goal consistency was perceived as high. In another study, Goh et al. (2014) tested the effects of product-brand fit (PBF) and product-category fit (PCF) on attitudes and purchase intentions towards brand extensions. The authors defined PBF as the degree to which the extension design fits the parent brand image, and PCF as the degree to which the extension design fits the product category in general. They found that both fit dimensions had a significant direct effect on attitudes, which in turn influenced purchase intentions. While these studies focused on

specific dimensions of fit between the parent brand and the extension, Hansen and Hem (2004) found that general product similarity did have a positive direct effect on purchase intentions towards the brand extension.

With regards to financial implications of perceived fit, Del Vecchio and Smith (2005) found that price premiums for brand extensions are positively correlated with fit between the brand and the extension category. Their results also indicated that the relationship between the two variables is strongly influenced by the risk associated with the product category, both in terms of financial and social risk.

Perceived fit is not only an important factor in the evaluation of an extension, but it also affects the influence that the extension has on the parent brand image, commonly referred to as *feedback effects* (Buil, de Chernatony, & Hem, 2009). Research has shown that when consumers perceive an extension as similar to the parent brand, they form more favorable associations towards the parent brand image (Keller & Aaker, 1992). When perceived fit is high, consumers also transfer quality beliefs alongside other associations towards the new brand, which reinforces previous beliefs of quality and attitudes towards the parent brand (Martínez & de Chernatony, 2004; Aaker, 1990). Additionally, high fit has been found to increase purchase rate of the brand (Swaminathan, Fox, & Reddy, 2001), make categorization of the brand easier (Morrin, 1999) as well as increase brand awareness because the extension makes the brand more visible to consumers (Aaker, 1991).

As for negative feedback effects, unsuccessful extensions have the potential to severely dilute brand equity. This dilution effect may occur, for example, when the extension product causes confusion amongst consumers and thus undermines the brand's core values (Tauber, 1981; Roedder John, Loken, & Joiner, 1998). Based on previous research on dilution effects of brand extensions, Keller and Sood (2003) propose that brand dilution is a function of three distinct factors. Firstly, the strength of the extension experience affects the degree of brand dilution. This strength is based on whether the experience is salient (attention-getting) and its level of ambiguity (objectively interpretable).

Secondly, the relevance of the extension to the parent brand, i.e. how indicative the performance of the extension is to the parent brand's quality, affects dilution. Lastly, extensions that are inconsistent with the parent brand image may also cause dilution. The authors argue, however, that highly incongruent extensions might be discounted as irrelevant to the parent brand and therefore not affect its brand equity at all. Nonetheless, this last factor should be considered carefully, since distant extensions may hurt the extension itself instead of the parent brand image. Dawar (1996), for example, suggests that consumers may perceive distant extensions as questionable. Ultimately, this can be an obstacle to success for the extension.

Summed up, these studies provide strong evidence of the impact of perceived fit on brand extension success. Figure 5 shows the theoretical foundation for the effects on each success measure and constitutes the background for Hypothesis 1.

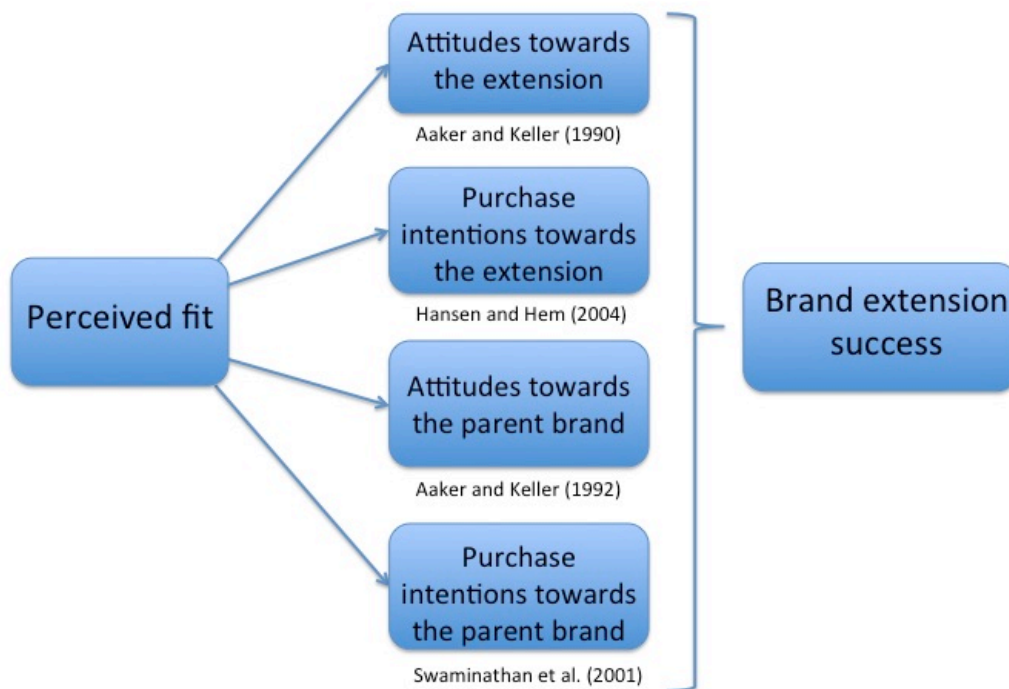


Figure 5

H1: A high degree of perceived fit between the parent brand and its extension will have a positive direct effect on brand extension success

3.2.3 Communication of explanatory links

One of the most important tasks for marketers is to develop marketing mix elements that maximize brand equity (Keller, 2008). For brand extensions, this includes designing an effective communication strategy. Keller (1993) suggests that the most effective communication strategy for brand extensions is that which identifies the parent brand's most salient associations and highlights extension associations that could possibly be overlooked or misinterpreted by consumers.

In the second part of their seminal study, Aaker and Keller (1990) explored how different types of information affect brand extension evaluations. This research topic was triggered by the choices that firms face when launching an extension, whereby consumers' perceptions of the extension can be altered by information provided by the firm. The results showed that when elaborating on extension attributes that consumers may be uncertain about, and that may hurt the performance of the extension, consumers perceive higher quality and are more likely to try the extension.

With regards to feedback effects on the parent brand, Ahluwalia and Gürhan-Canli (2000) found that the accessibility of information is one of the main predictors of brand extension success. Their results showed that when information about the extension was high, negative information about the extension diluted the parent brand image, while positive information enhanced the image. Positivity and negativity was operationalized as information about the extension's success in the market. Thus, explicitly informing consumers about how the extension performed in the market had positive effects on attitudes towards the parent brand. These findings support a range of other studies (e.g. Keller, 1993; John, Loken, & Joiner, 1998; Morrin, 1999), where information provided by an extension has been found to alter consumers' associations to the parent brand.

In dealing with communication strategies that are intended to bridge the gap between brands and their extensions, the current study adopts Bridges et al.'s

(2000) definition of *explanatory links*. Explanatory links refer to cues that communicate how two seemingly dissimilar objects are related by some common traits. While there appears to be a lack of studies that investigate the direct effect of explanatory links on purchase intentions, it seems reasonable to assume that altered attitudes will have implications for purchase intentions as well (Spears & Singh, 2004).

The abovementioned findings form the basis for Hypothesis 2a, whereby communication of explanatory links is hypothesized to have a positive direct effect on brand extension success. The theoretical rationale for the direct effect on attitudes and the indirect effects on purchase intentions is illustrated in Figure 6.

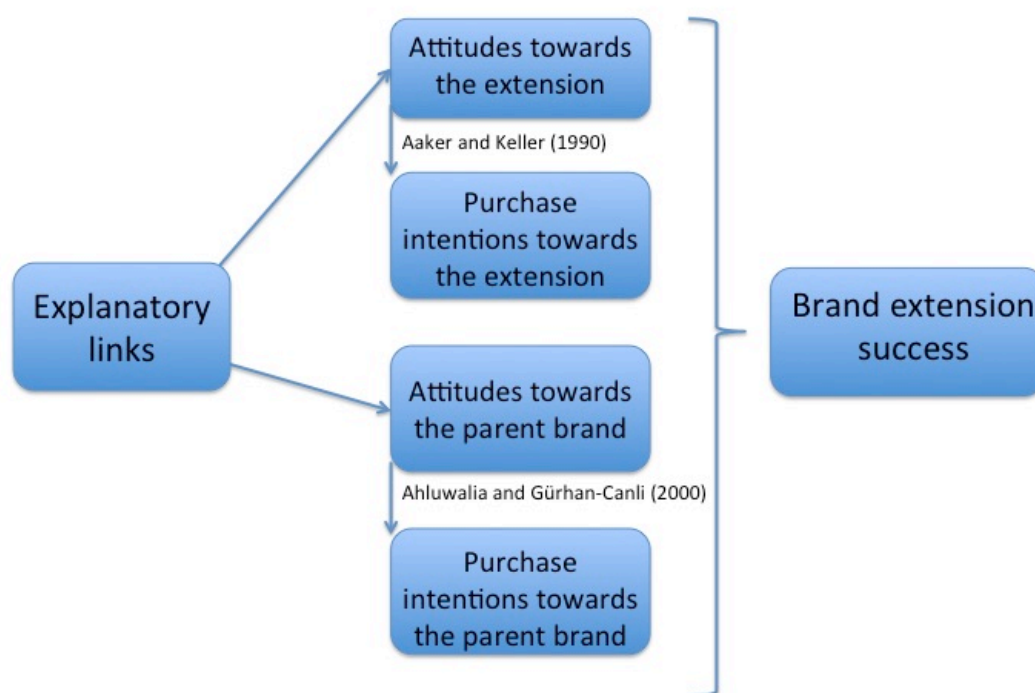


Figure 6

H2a: Communication of explanatory links will have a positive direct effect on brand extension success

Martin et al. (2005) explored how extensions should be communicated, based on the fact that associations between a parent brand and an extension can be learned through marketing communication (Ratneshwar, Barsalou, Pechmann, & Moore, 2001). While the role of communication has received relatively sparse attention in the extension literature, the authors highlight its importance and suggest that firms should frame similarity in terms of common goals between parent brands and their extensions. Furthermore, they state that even if an extension does not appear consistent with the parent brand's goals at first, advertising may establish a goal-oriented link that otherwise would not be accessible immediately. These findings build on previous research that has advocated that advertising should remind consumers of which goals are salient (Simonson & Tversky, 1992) and that communication can resolve beliefs of incongruity between products (Batra, Aaker, & Myers, 1995).

Also, Bridges et al. (2000) stress the importance of establishing communalities between the parent brand and the extension. The authors suggest that by communicating explanatory links, consumers' perceptions of fit might increase. They argue that the explanatory links can be derived from any salient parent brand association that is relevant for the extension. Building on the findings of Keller (1993), brands can be extended beyond categories that are consistent with their most salient associations as long as credible explanatory links are established.

In another study focusing on communication strategies for brand extensions, Kim (2003) reported several interesting findings. Firstly, subjects evaluated closeness on the basis of perceived fit between the *parent brand essence* and the extension. The author defined brand essence as the most salient brand associations. Secondly, the effect of using a brand essence cue was positive for close extensions, but not sufficient for more distant ones. Thirdly, for close extensions, communicating only attribute cues produced the most positive effect. When information beyond this was given, subjects seemed to perceive this as over-communication. Lastly, for remote extensions, using all relevant cues yielded stronger effects on attitudes. This means that subjects required as much information as possible to improve their attitudes. This last finding could be

explained by the fact that as available information about the extension increases, the effects of fit on extension evaluations are reduced (Klink & Smith, 2001). Therefore, Hypothesis 2b is based on the expectance that when explanatory links are communicated, the effect of fit on brand extension success is moderated.

H2b: Communication of explanatory links moderates the effect of perceived fit on brand extension success

3.3 Moderating variables

While perceived fit and communication of explanatory links are expected to have direct effects on brand extension success, there are several moderating factors that also need to be taken into account. The following chapter explains the rationale behind the hypothesized moderating effects of consumer innovativeness and product category involvement. In addition, the moderating role of environmental consciousness is explored. Figure 7 shows how these variables are expected to moderate the effect of perceived fit on brand extension success.

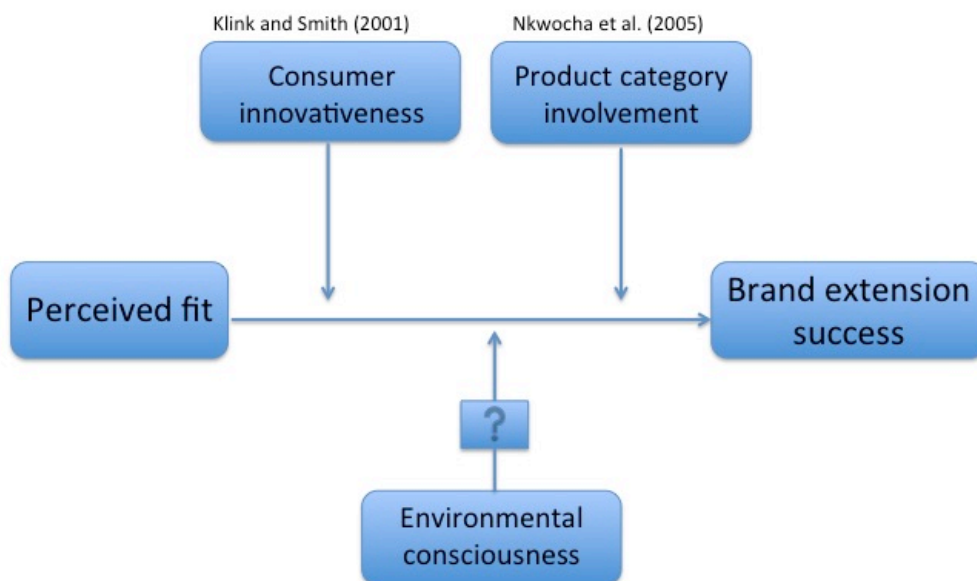


Figure 7

3.3.1 Consumer innovativeness

Obviously, various findings in the extension literature indicate that a brand's extendibility is limited by its perceived fit with potential extensions. Still, there are numerous examples of brands that have successfully extended into product categories with a low degree of fit (Klink & Smith, 2001). There are three factors that can explain the difference between the literature and empirical findings. The first two are related to methodological shortcomings; limited extension information and single exposure to extensions. The last factor, however, can be explained by the researchers' failure to account for consumers' new product adoption tendencies. According to Klink and Smith (2001), this is a major threat to the external validity of previous research. They use the term *innovativeness* to refer to consumers' approach to product adoption, which has been defined as the desire or willingness to try new and different experiences (Hirschman, 1980).

Smith and Andrews (1995) found that when consumers perceive fit between a brand and its extension to be low, perceived risk tends to be high, which affects evaluations of the extension negatively. The different adoption patterns between earlier and later adopters reflect this difference in willingness to take risks (Rogers, 1983). In general, early adopters tend to be more risk seeking than others, and may therefore have more favorable evaluations of low-fitting extensions. Klink and Smith (2001) suggest that although most research on consumer innovativeness has been focused around discontinuous innovation, risk-taking propensity should also be relevant for continuous innovation. Their research showed that as consumer innovativeness increases, the effect of fit on extension evaluations decreases.

H3: Consumer innovativeness moderates the effect of perceived fit on brand extension success

3.3.2 Product category involvement

Another variable that might alter the importance of the fit dimension in certain product categories is consumers' involvement. Aaker and Keller (1990) suggested that the role of involvement in brand extension evaluations should be investigated in future research. This factor seems plausible to consider because the success of brand extension strategies vary across different product categories and consumer segments (Nkwocha & Johnson, 1999). Also, Broniarczyk and Alba (1994) found that consumer expertise moderated the relationship between perceived fit and attitude towards the extension. Referring back to the Autoblog.com (2013) poll, almost half of the respondents did not like the idea of a hybrid Ford Mustang. What one needs to take into account, however, is that the readers of an American automotive blog are likely to be more involved with and have higher knowledge about the product category than the general population. Hence, the poll is likely to be dominated by car enthusiasts from the US, where the pony car has its roots and environmental concerns are not as strong as e.g. in Europe (Watts, 2009). If the poll were conducted amongst less involved respondents, the result could have turned out differently.

Day (1970, p. 45) defines product involvement as *"the general level of interest in the object or the centrality of the object to the person's ego structure"*, while other researchers (DeBruicker, 1979; Houston & Rothschild, 1978; Lastovicka & Gardner, 1979) have focused on the product's relation to important values, needs or self-concept. In addition to variation across product categories (Robertson, 1976), involvement has been proposed to vary between consumers (Houston & Rothschild, 1978; Lastovicka & Gardner, 1979; Tyebjee, 1979). In one study, Bloch (1981) developed a scale measuring consumers' degree of interest in automobiles. The author explains that this particular product category was chosen because there seems to be wide variation in the level of involvement amongst car owners. For example, those with low involvement utilize their vehicle as merely a means of transportation, while those who are highly involved may spend substantial amounts of time and effort on their cars. Also Maoz and Tybout (2002) used an automobile brand when investigating the moderating

role of involvement. Amongst their findings was the observation that when the extension was moderately incongruent, high levels of involvement triggered respondents to elaborate more deeply and resolve the incongruity, which yielded higher attitudes towards the extension.

While many researchers have used only one brand or product category in their studies, Nkwocha et al. (2005) used several brands and categories ranging from low cost and low involvement to high cost and high involvement. In their experimental study they found that in the case of complementarity between the parent brand and its extension, product involvement discounted the effect of fit on brand extension evaluations. Nonetheless, their study was based solely on FMCG products, and Hypothesis 4 therefore seeks to test the generalizability of their findings to a more capital-intensive product category, namely personal vehicles.

H4: Product category involvement moderates the effect of perceived fit on brand extension success

3.3.3 Environmental consciousness

One final moderating factor that has not yet been studied in the context of extensions is consumers' environmental consciousness. In the academic literature, however, several researchers have investigated this variable's role in consumers' attitudes and purchase intentions towards personal vehicles. Marell et al. (2004), for instance, found that environmental concern, alongside three other factors, had a direct effect on consumers' motivation when shopping for a new car. Also, Flamm (2009) revealed that environmental attitudes and knowledge had a significant effect on vehicle ownership and use. The author argues that attitudes and knowledge are strongly related, which could imply that those with high environmental consciousness have a higher understanding of e.g. hybrid vehicle's low fuel consumption and its implications for the environment. Furthermore, in studying consumers' travel mode of choice, Johansson et al.

(2005) found that those with high levels of environmental consciousness preferred to travel with environmentally friendly transportation.

Obviously, attitudinal factors have a strong impact on consumers' purchase intentions. According to Oliver and Lee (2010), self-image congruence and propensity to seek information has a strong relationship with consumers' intention to purchase environmentally friendly products. Their study focused on hybrid cars, which is also the area of interest in the current study. Furthermore, Heffner et al. (2007) conducted a qualitative study where they found that many owners of hybrids were motivated by their vehicles' advanced technology. This could indicate that there is a link between the innovativeness and environmental consciousness traits.

Since there doesn't seem to be any research on the moderating effect of environmental consciousness on the perceived fit of brand extensions, the inclusion of this variable is of exploratory nature. While previous research has focused mainly on the direct effects of environmental attitudes, it seems reasonable to assume that consumers who are environmentally friendly will perceive a higher inconsistency between a performance-oriented brand and its sustainability-oriented extension.

H5: Environmental consciousness moderates the effect of perceived fit on brand extension success

4. Methodology

This chapter elaborates on the methodological framework that will be applied to answer the research questions presented in the previous chapter. In order to answer them, a research model (*see Figure 3*) displaying causal and structural relationships was developed. These relationships were all drawn from previous research on brand extensions, as well as consumer behavior literature in general.

In the field of research methodology, research design “*provides a plan or a framework for data collection and its analysis*” (Ghauri & Grønhaug, 2010, p. 54). Taking time, budgetary and skill constraints into consideration, the primary objective of any research design is to effectively produce relevant information to answer the research questions. In the field of quantitative research, *causal research* is concerned with cause-and-effect relationships, and is used to isolate one or several causes and reveal the extent to which they result in an effect. Due to the fact that this study investigates whether and/or how two independent factors influence brand extension success, a causal design is employed. Causal research designs require that the researcher collects quantitative data and analyze these statistically (Johannessen, Christoffersen, & Tufte, 2011).

Quantitative research can take on three different types of design; *Experimental*, *quasi-experimental* or *non-experimental* (Pedhazur & Schmelkin, 1991). These can be distinguished based on the presence of randomization and manipulation of independent variables. The current research design will include both, and is therefore experimental in nature. The most obvious advantage of experimental research is that it enables a great deal of control so that the observed effects may be attributed to the cause with high certainty (Zikmund, Babin, Carr, & Griffin, 2009). Since there are two independent variables, namely perceived fit and communication of explanatory links, the experiment will have a *factorial design*, which allows for the testing of several variables, or *treatments*, at the same time. Furthermore, these treatments may contain more than one level. In this experiment, there will be two treatments with two levels each; this is commonly referred to as a 2x2 factorial design.

		Explanatory links	
		No	Yes
Perceived fit	High	O ₁	O ₂
	Low	O ₃	O ₄

Figure 8: Experiment design

As Figure 8 illustrates, the experiment consists of four individual experimental cells, or *conditions*. These are illustrated by the letter O, which represents the observation of each experimental treatment. Since each respondent, also called *subject*, will only receive one treatment combination, the experiment has a *between-subjects design* (Zikmund, Babin, Carr, & Griffin, 2009). The advantage of this design is that the intention of the research becomes less obvious to the subjects because they don't see the big picture. Thus, they don't know what responses are more or less favorable, which reduces the threat of demand effects. The experiment design also minimizes respondent fatigue due to the fact that time usage per individual is considerably reduced.

4.1 Procedure

4.1.1 Pre-tests

Two pre-tests were conducted to ensure that the experiment instruments were understandable and to assess the *face validity* of the experiment. Face validity reflects the degree to which the items in the questionnaire correspond with the constructs that are being measured (Hair, Black, Babin, & Anderson, 2010). In the pre-tests, it was crucial to confirm that the independent variables were properly designed and that they had an effect on the dependent variable. Both pre-tests used a sample of the target population. A within-subjects design was chosen, since a between-subject design would require a double-digit amount of

respondents for each pre-test. Consequently, each subject was exposed to all four surveys, representing the four different treatment conditions.

In the *first pre-test*, four students at the Norwegian School of Economics (NHH) were recruited to answer and assess the surveys. They worked individually and did not have the opportunity to communicate throughout the session. All four subjects said that the survey was understandable and straightforward. Despite being subject to four surveys each, none of them were able to understand what was being tested. This kept demand effects at a minimum. While two of the respondents thought there were too many questions about environmental attitudes, all four found it difficult to distinguish the degrees of fit between the pony car extensions and the parent brand. In fact, the intended high fit condition was on average rated as lower fitting than the low fit condition, which revealed a weakness in the stimuli design. This may be attributed to the fact that the parent brand was labeled *Stallion 500* and the high fit extension *Stallion 250*. Thus, subjects may unintentionally have been led to believe that the high fit extension had a significantly smaller engine (250 vs. 500), which was not the case. Therefore, the pre-test was terminated at this stage and no more subjects were recruited. On the other hand, communication of explanatory links had the desired effect, as the respondents expressed more favorable attitudes and higher purchase intentions whenever this communication was present in the ad.

Before the *second pre-test*, the questions intended to measure respondents' environmental consciousness were reduced from six to four. Also, measures were taken to increase the distance between the high and low fit conditions. To achieve this, the two brand extensions were presented as *facelifted* extensions instead, i.e. upgraded and modernized versions of the original model. Thus, the high fit condition presented a pony car that was simply a more modern and visually upgraded version of the original model. In contrast, the low fit condition was presented as a facelifted extension where also the previously used gas engine was swapped for a hybrid powertrain, representing a dramatic change in technology and image. At this stage, it was necessary to confirm that respondents were now able to identify the two high and low fit conditions. Although the effects of communicating explanatory links had already been proven, subjects

were exposed to all four experimental conditions to confirm that the previous results were still valid.

Five new students from NHH were recruited to participate in the second pre-test. Again, the test had a within-subjects design, and none of the respondents communicated with each other during the session. The first pre-test took more than twenty minutes to complete per individual, and consequently the measurement of moderating variables was excluded at this stage to reduce fatigue on respondents. Again, the main objective was to test whether the high and low fit conditions had the desired effects. The results confirmed that the intended low fit condition was now perceived as less fitting with the parent brand than the intended high fit condition. The answers also revealed that on average, subjects found the ad to be effective in communicating explanatory links whenever they were present, in line with the results from the first pre-test.

4.1.2 Main study

Designing an appropriate instrument was an important success factor in the experiment, as it needed to reflect the purpose of the study and capture the essence of the research questions. Five components were included in the instrument: 1) The hypothetical brand name *Stallion*, 2) An informative text about the brand and pony cars in general, 3) A still picture advertisement, 4) A short text communicating explanatory links and 5) A survey intended to measure the relevant variables in the research model. All components of the instrument are attached in Appendix 1.

The manipulation was conducted using four different ads corresponding with the four treatment cells. The intended high fit condition displayed a facelifted extension, named *Stallion 500 S*, which closely resembled the brand. On the other hand, the intended low fit condition presented the *Stallion Hybrid*, which was also disruptive with regards to attributes due to its hybrid engine. The four ads are shown in Appendix 1.

The ads were developed using a picture of the Tronatic Everia Concept, a French-made electric muscle car (Todorova, 2012). It was labeled with “500 S” and “Hybrid” emblems covering the original brand, so that no respondents would recognize it. These names were used specifically because the letter “S” is often adopted by performance cars (e.g. Porsche Carrera S, Lotus Elise S), and thus communicates similarity to the parent brand. The “Hybrid” label induces that the vehicle has a hybrid engine, supposedly distancing the vehicle from the sporty nature of the parent brand. Using a hypothetical brand, as suggested by Völkner and Sattler (2006), is beneficial because established brands may cause bias in subjects’ answers, for example if they already have associations to the brand, which can potentially weaken the experimental control and distort the results.

Four unique surveys, reflecting the four experimental cells, were designed using the online survey software Qualtrics. First, the moderating variables were measured by asking subjects to rate their interests and consumption patterns. Thereafter, they were asked to read a brief text about the parent brand, the Stallion 500, where also the concepts of pony cars and hybrid engines were explained. Then, subjects were exposed to one of the four ads, upon which they were asked to rate their attitudes and purchase intentions towards the original model and the extension. Lastly, respondents rated the degree of fit between the original model and the extension, as well as the ability of the ad to communicate this fit. All elements of the survey are attached in Appendix 1.

1000 subjects were invited to participate in the experiment through an invitation sent to their student e-mail addresses, which were acquired through a data set from NHH’s Section for Analysis and Quality Assurance. Since each cell required at least 30 subjects, the goal was to attract more than 120 subjects in total (Hogg & Tanis, 2010). The experiment was programmed to allocate all respondents randomly to one of the four experimental conditions to increase the validity of the results. Table 1 shows the allocation of subjects in the final data set. The respondents were assured that their answers would be confidential and were briefly informed about the objective of the study. Instead of revealing the entire objective, however, subjects were told that the intention was to measure attitudes towards performance cars. This was done to keep demand effects at a

minimum. As an incentive to participate, respondents were invited to participate in a draw for five Peppes Pizza gift cards. These gift cards, valued at 296kr each, or one large pizza, were fully sponsored by Peppes Pizza. It was voluntary to participate in the draw, and upon submission of the questionnaire, those who wanted to participate were transferred to a new page in their Internet browser, where they could leave their e-mail. The e-mails were stored in a separate data set so that the identity of the respondents could not be traced.

Attribute fit	Explanatory links	
	No	Yes
High	37	32
Low	36	37
Total	142	

Table 1

4.2 Sample characteristics

Subjects were recruited from the student body at the NHH. Under ideal circumstances, the sample should have reflected the population as a whole, however this was not feasible given the time, budgetary and skills constraints. Students are often recruited for research experiments, and although they might not perfectly reflect the general population, many of them will become potential car buyers in a few years. Additionally, using a matched and homogenous sample provides higher control over extraneous variables that could potentially distort the results (Callow & Lerman, 2003; Orth, Koenig, & Firbasova, 2007).

The survey was conducted in Norwegian so that only Norwegian students would participate. The reason for this is that cultural differences have the potential to alter the results, as culture has proven to be an important determinant of brand extension success (Buil, de Chernatony, & Hem, 2009). Such differences can be a consequence of varying degrees of uncertainty avoidance, amongst other factors (Hofstede, 1984).

Due to the recruitment process being of voluntary nature, respondents from the target group engaged in the experiment through self-selection. This could potentially distort the result, for example if a majority of students with a high level of car knowledge chose to participate. The moderating variables were designed to account for such variables, however. Ideally, variables such as age, sex and years of college experience should have been included. Unfortunately, these were excluded because the Norwegian Social Science Data Services must approve the collection of personal and sensitive information, which time restrictions did not allow for. Nonetheless, the composition of the student body at NHH is presented in Table 2, which enables making inferences about the sample population. Additionally, the survey was distributed to an equal number of bachelor and master students to reflect the sample population as much as possible.

Target population	
Age	
16 - 20	14%
21 - 25	69%
26 - 30	14%
31 +	3%
Gender	
Male	59%
Female	41%

Table 2

(Selstø, 2014; Norsk samfunnsvitenskaplig datatjeneste , 2015)

4.3 Careless respondents

While the number of careless respondents in social research has traditionally not been considered a major threat, some researchers are concerned that in modern Internet-based research, especially with student samples, this may be a issue (Johnson J., 2005; Meade & Craig, 2012). Even though online survey methods have many advantages, such as low costs and time consumption, the loss of

environmental control has the potential to jeopardize the validity of the results (Buchanan, 2000; Johnson J., 2005). As a consequence, it is crucial to identify and eliminate careless respondents from any data set. Meade and Craig (2012) suggest several methods to cope with this issue, two of which were employed in the current study. In addition, respondents were asked to read carefully through the survey and answer all questions honestly.

Firstly, response times were examined. The mean time consumption was 2h 4min 45sec, and was skewed by some respondents who started the survey on one day and finished on another. The median, however, was 3min 35sec. After previewing the survey a few times and recording time usage, it was considered practically impossible to finish the survey in less than two minutes while paying a reasonable amount of attention. Therefore, eleven responses with time usage between 50sec and 1min 57sec were eliminated from the data set.

Secondly, the data set was scanned for respondents who repeatedly rated items equally. Costa and McCrae (2008) suggest that searching for long strings of consecutive identical responses may identify insufficient effort responding. Also, respondents who employed improbable answer patterns, such as the use of only two scores (e.g. 2-4-2-4-2-4) were considered as careless respondents. After deleting the eleven careless responses with time usage as criterion, no further responses were identified as problematic.

4.4 Measures

When developing questions intended to capture the constructs in the research model, Saunders et al. (2012) suggest these should be considered in the light of the study's conceptual framework. In the present study, items were either drawn directly from existing literature or lightly modified to capture the relevant constructs. For one construct, namely perceived link, no existing measurement scales were found to be applicable, and a customized three-item scale was therefore developed. Due to the nature of the sampling method, where only Norwegian subjects were recruited, existing scales were translated from English

to Norwegian. To verify that the translation was appropriate and captured the relevant constructs, subjects were able to provide feedback on the items during the pre-tests.

Data variables can be classified into three different categories: *Opinion*, *behavior* and *attribute* variables (Dillman, 2007). Opinion variables are intended to measure the degree to which respondents agree with a given statement, behavior variables measure respondents' actions and experiences, while attribute variables capture data about their demographics. The measurement of these types of variables can be further divided into three categories of scales: *Nominal*, *ordinal* and *interval* scales (Ghauri & Grønhaug, 2010). Nominal scales classify objects or observations and assign these to numbers or symbols. Ordinal scales are not only classifiable, but in contrast to nominal items, ordinal items are related to each other, which allows for ranking. Nonetheless, the distance between ordinal items is unknown and makes comparison difficult. Lastly, interval scales are designed so that the distance between each item is known, and they are therefore easily comparable.

In this study, all items were opinion variables where subjects rated the degree to which they agreed with the statements presented. Also, the items were measured on seven-point ordinal Likert scales anchored by 1 ("definitely don't agree") and 7 ("definitely agree"). The measurements, including the items used and the sources from which they were drawn or inspired, are presented in Table 3.

Construct	Items	Source
Perceived fit	<ol style="list-style-type: none"> 1. The new model and the original model are similar 2. The new model seems logical to the parent brand 3. The new model is appropriate for the parent brand 	Taylor and Bearden (2002)
Perceived link	<ol style="list-style-type: none"> 1. The ad communicates how the new model is similar to the old one 2. The ad helps me understand the link between the new and the old models 3. The ad helps me understand that the new model is appropriate for the Stallion brand 	N/A
Brand attitudes	<ol style="list-style-type: none"> 1. This is a good product 2. This is an attractive product 3. I like this product 4. I am positive about this product 	Spears and Singh (2004)
Purchase intentions	<ol style="list-style-type: none"> 1. I am interested in buying the product in the future 2. I will probably purchase this product in the future 3. I intend on buying this product 	Spears and Singh (2004)
Consumer innovativeness	<ol style="list-style-type: none"> 1. In general, whenever a new product is introduced, I do not wait to see how others like it before I buy it 2. Generally, I like purchasing the most recent products 3. I like to buy new products before others 	Klink and Smith (2001)
Product category involvement	<ol style="list-style-type: none"> 1. I enjoy driving and using cars 2. I readily talk to others about cars 3. I am interested in cars 	Bloch (1981)
Environmental consciousness	<ol style="list-style-type: none"> 1. I am an environmentally friendly consumer 2. I am concerned with environmental issues 3. It's embarrassing not to have an environmentally friendly lifestyle 4. I want friends and family to think of me as someone who is concerned about the environment 	Whitmarsh and O'Neill (2010)

Table 3

4.4.1 Independent variables

To reduce the multiple item constructs in the survey into fewer components, principal component analysis (PCA) was performed on all variables (Field, 2013). This procedure enables the examination of the constructs' convergent and discriminant validity. Convergent validity reflects the degree to which related concepts are in fact related, while discriminant represents how unique each measure is; it should not correlate too high with measures of other constructs (Zikmund, Babin, Carr, & Griffin, 2009).

To assess the requirements for performing PCA, Kaiser-Meyer-Olsen's (KMO) measure of sampling adequacy and Bartlett's test for sphericity were employed. According to Field (2013), KMO scores above .6 and Bartlett's scores with significance levels below .05 indicate that the data is suitable for PCA. With a KMO value of .804 and a significant Bartlett's score (.000), as shown in Table 4, these requirements were met for the independent variables.

Kaiser-Meyer-Olsen measure of sampling adequacy		.726
Bartlett's test of sphericity	Approx. Chi-Square	477.635
	df	15
	Sig.	.000

Table 4

As the measures of sampling adequacy and sphericity were satisfactory, the data was subjected to PCA. Items were compressed into factors so that the degree to which they loaded on these factors could be determined. Factors with Eigenvalues above 1 were kept and used in the subsequent analysis (Bryman & Cramer, 2011).

Obviously, perceived fit and explanatory links are the independent variables in the current research model. These were manipulated, meaning that they were altered so that their causal effects could be observed. Across the four different conditions, perceived fit was either high or low and explanatory links were either present or absent. Table 5 shows the extracted factors from the

independent variables. Two factors with Eigenvalues above 1 were identified, and collectively they explained 75,3% of the total variance.

Total variance explained: Independent variables							
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squares Loadings ^a
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.234	53.894	53.894	3.234	53.894	53.894	2.743
2	1.284	21.399	75.294	1.284	21.399	75.294	2.262
3	.800	13.329	88.623				
4	.325	5.423	94.046				
5	.231	3.847	97.893				
6	.126	2.107	100.000				

Table 5

Thereafter, factor rotation was conducted to enable discrimination between the factors. As suggested by Costello and Osborne (2005), oblique rotation was used because it produces interpretable solutions independent of the degree of correlation. In SPSS, oblique rotation was carried out using the direct oblimin method with Kaiser Normalization. Here, factors with loadings above .7 were accepted (Hair, Black, Babin, & Anderson, 2010). Cross-loadings were also accepted as long as the difference between the loadings exceeded .2 (Ferguson & Cox, 1993).

Perceived fit was operationalized using two hypothetical brand extensions that differed in terms of product attributes; one had a conventional combustion engine while the other had a hybrid engine. To differentiate the two extensions from their parent brand, however, they were presented as *facelifted* versions of the original model. The performance of the two cars, alongside other attributes, was held constant since the experiment was intended to test for the mere swap to a hybrid engine and not for e.g. performance characteristics. Due to the same reason, no other dimension of fit than attribute fit was used. If, for instance, brand concept consistency were to be included, the experiment would have had

to be based on a 2x2x2 factorial design because the separate effects of attribute and concept fit would have had to be isolated. This, in turn, would have required even more respondents, and the idea was rejected due to resource and time constraints.

Perceived fit was measured by three items as applied by Taylor and Bearden (2002) (see Table 3). The pattern matrix in Table 6 shows that these three items loaded above .7 on Factor 2. While they also load on Factor 1, this does not affect the analysis since the gap between the loadings exceeds .2.

Pattern Matrix: Independent variables		
	Factor	
	1	2
Perceived fit 1	-.229	.760
Perceived fit 2	.272	.807
Perceived fit 3	.337	.796
Perceived link 1	.819	.023
Perceived link 2	.944	-.142
Perceived link 3	.784	.247

Table 6

Communication of explanatory links was operationalized as brief text in the ad that explained how the facelifted extensions reinforced the image of the parent brand. In accordance with the literature review and hypotheses, the intention of the communicative measure was to increase perceived fit. To increase the experimental control, the explanatory links were similar on all dimensions except the choice of engine technology.

To measure how well the ad actually communicated the link between the parent brand and the extension, a three-item scale was developed due to the lack of an established scale (see Table 3). This scale measured the perceived link, and as shown in Table 6, all three items loaded above .07 on factor 1, and the cross-loadings are not problematic since the gap between the loadings exceeds .2 here as well.

4.4.1.1 Manipulation checks

To test whether the manipulations had the desired effect, it was necessary to conduct a manipulation check. After a few adjustments, the second pre-test revealed that the independent variables worked as intended, but given the differences in sampling and methodology between the pre-tests and the main study, this had to be reconfirmed. More specifically, the manipulation checks tested whether the degree of fit was perceived as intended and how well the ad explained the link between the extension and the parent brand. By running a MANOVA test in SPSS, the tests compared the mean scores of perceived fit and perceived link for the different experimental conditions. The tests were conducted so that the effects of both manipulations on both dependent variables were assessed. This was done to test whether the explanatory links affected perceived fit and vice versa.

The results showed that the subjects who were exposed to the ads with explanatory links rated these higher ($\mu = 4.11$) than those who were exposed to the ads without the explanatory links ($\mu = 3.75$). At a .05 level of significance, however, the difference between the two groups was non-significant ($p = .078$). As for the effect of the explanatory links on perceived fit, the effect was non-significant as well ($p = .750$).

This indicates that the explanatory links did not increase the ad's ability to communicate how the parent brand and the extension were linked, and neither did they increase perceived fit. Therefore, this manipulation did not work as intended. The results are shown in Table 7.

Perceived link						
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
<i>Explanatory links</i>						
Explanatory links	75	4.1067	1.18823	.13721	3.8333	4.3801
No explanatory links	67	3.7512	1.19108	.14551	3.4607	4.0418
<i>Perceived fit</i>						
Explanatory links	75	4.1333	1.10282	.12734	3.8796	4.3871
No explanatory links	67	4.1940	1.16218	.14198	3.9106	4.4775
Comparison						
	Sum of Squares	df	Mean Square	F	p	
<i>Explanatory links</i> Between groups	4.470	1	4.470	3.159	.078	
<i>Perceived fit</i> Between groups	.130	1	.130	.102	.750	

Table 7

As for the levels of fit, the hybrid extension condition was compared to the regular extension condition to see how subjects perceived the extensions' fit in relation to the parent brand. The results showed that those who were exposed to the hybrid extension had a higher perception of fit ($\mu = 4.54$) than those who were exposed to the regular extension ($\mu = 3.76$). The difference between the two groups was significant ($p = .000$) at a .01 significance level. Consequently, the results indicate that the subjects rated fit differently for the two conditions and that they did discriminate between the two extensions. In great contrast to the second pre-test, the hybrid extension with low intended fit was perceived as more similar to the parent brand than the regular extension. Thus, the type of engine technology did affect perceived fit, but this effect was the opposite of what was predicted. The results are presented in Table 8.

Perceived fit						
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
<i>Perceived fit</i>						
High perceived fit	73	4.5434	.90524	.10595	4.3322	4.7546
Low perceived fit	69	3.7585	1.20305	.14483	3.4694	4.0475
<i>Explanatory links</i>						
High perceived fit	73	3.9178	1.21434	.14213	3.6345	4.2011
Low perceived fit	69	3.9614	1.19029	.14329	3.6754	4.2473

Comparison					
	Sum of Squares	df	Mean Square	F	p
<i>Perceived fit</i>					
Between groups	21.854	1	21.854	19.436	.000
<i>Explanatory links</i>					
Between groups	.067	1	.067	.046	.830

Table 8

4.4.2 Dependent variables

After being presented with the stimuli, the success of the brand extension was evaluated. While many previous studies have measured success in terms of either the parent brand or the extension, the current study includes both. Both attitudes and purchase intentions were measured using Spears and Singh's (2004) operationalization of the constructs (*see table 3*). As shown in Table 9, the KMO value for the dependent variables was above the critical threshold and the Bartlett's score was significant ($p = .000$). The variables were therefore subjected to PCA.

Kaiser-Meyer-Olsen measure of sampling adequacy		.793
Bartlett's test of sphericity	Approx. Chi-Square	1963.155
	df	66
	Sig.	.000

Table 9

As shown in in Table 10, the dependent variables were compressed into two components that collectively explained 76.1% of the total variance.

Total variance explained: Dependent variables							
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squares Loadings ^a
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.373	59.805	59.805	8.373	59.805	59.805	7.523
2	2.287	16.333	76.138	2.287	16.333	76.138	6.008
3	.898	6.412	82.550				
4	.607	4.334	86.884				
5	.460	3.286	90.170				
6	.359	2.565	92.735				
7	.294	2.103	94.838				
8	.187	1.335	96.174				
9	.136	.974	97.148				
10	.124	.887	98.035				
11	.103	.734	98.769				
12	.088	.629	99.398				
13	.045	.320	99.718				
14	.039	.282	100.000				

Table 10

The pattern matrix for the dependent variables in Table 11 shows that all items had loadings above the threshold of .512, yet the first items that measured purchase intentions loaded below the threshold of .7 and were therefore excluded in the subsequent analysis.

Pattern Matrix: Dependent variables		
	Factor	
	1	2
Attitudes parent brand 1	.860	
Attitudes parent brand 2	.844	
Attitudes parent brand 3	.862	
Attitudes parent brand 4	.895	
Intentions parent brand 1	.446	.562
Intentions parent brand 2		.878
Intentions parent brand 3		.900
Attitudes extension 1	.876	
Attitudes extension 2	.823	
Attitudes extension 3	.870	
Intentions extension 1	.330	.665
Intentions extension 2		.944
Intentions extension 3		.935

Table 11

4.4.3 Moderating variables

According to Baron and Kenny (1986), moderating variables are those factors that alter the direction and strength of the relationship between the independent and dependent variables in the research model. Before being exposed to the stimuli, the subjects were therefore asked about their product involvement, consumer innovativeness and environmental consciousness (*see Table 3*). In line with the literature review, these variables were expected to moderate the effect of perceived fit on brand extension success.

Product involvement was measured using an automobile involvement scale developed by Bloch (1981). Two of the original questions were eliminated because they required that the respondents owned a vehicle, something that few students in Norway do. Environmental consciousness, on the other hand, was measured with Whitmarsh and O'Neill's (2010) scale originally developed to

capture consumers' pro-environmental self-identity. Lastly, consumer innovativeness was measured using three items from Klink and Smith's (2001) innovativeness scale. As shown in Table 12, the KMO value was above the .6 threshold and the Bartlett's score was significant, and the data was therefore subjected to PCA.

Kaiser-Meyer-Olsen measure of sampling adequacy		.683
Bartlett's test of sphericity	Approx. Chi-Square	847.570
	df	45
	Sig.	.000

Table 12

Table 13 shows that three components were identified for the moderating variables. In total, these explained 75.2% of the total variance.

Total variance explained: Moderating variables							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squares Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.416	34.156	34.156	3.416	34.156	34.156	3.032
2	2.528	25.280	59.436	2.528	25.436	59.436	2.226
3	1.597	15.786	75.222	1.579	15.786	75.222	2.776
4	.771	7.709	82.931				
5	.491	4.908	87.839				
6	.415	4.147	91.986				
7	.317	3.174	95.160				
8	.245	2.452	97.612				
9	.164	1.641	99.252				
10	.748	.748	100.000				

Table 13

As can be seen in the pattern matrix in Table 14, each of the three constructs loaded on separate factors and all loadings were above the .7 threshold. All items were therefore kept and used in the main study.

Pattern Matrix: Moderating variables			
	Factor		
	1	2	3
Innovativeness 1		.729	
Innovativeness 2		.885	
Innovativeness 3		.858	
Product interest 1			.809
Product interest 2			.957
Product interest 3			.943
Environmental concs. 1	-.846		
Environmental concs. 2	-.908		
Environmental concs. 3	-.648		
Environmental concs. 4	-.917		

Table 14

4.5 Reliability analysis

Due to the fact that the survey included constructs that were measured by several items, it was necessary to test these for *internal consistency* (Zikmund, Babin, Carr, & Griffin, 2009). Internal consistency refers to the degree to which each measure of a concept coincides on a common meaning. Cronbach's alpha was used to measure the reliability, and according to Santos (1999), this value should be above .7, although Kline (1999) argues that when measuring psychological constructs, even values under this threshold can be acceptable. Cronbach's alpha has a maximum value of 1, and the higher this value; the higher is the internal consistency of the multiple item constructs (Zikmund, Babin, Carr, & Griffin, 2009). As can be seen in Table 15, the Cronbach's alpha of all constructs exceeded the threshold of .7 and the construct measurements were therefore considered reliable and applicable in the succeeding analysis.

Perceived fit	
Cronbach's alpha	N of items
.755	3

Perceived link	
Cronbach's alpha	N of items
.841	3

Attitudes parent brand	
Cronbach's alpha	N of items
.920	4

Intentions parent brand	
Cronbach's alpha	N of items
.919	2

Attitudes extension	
Cronbach's alpha	N of items
.931	4

Intentions extension	
Cronbach's alpha	N of items
.943	2

Innovativeness	
Cronbach's alpha	N of items
.778	3

Involvement	
Cronbach's alpha	N of items
.894	3

Environmental consciousness	
Cronbach's alpha	N of items
.860	4

Table 15

4.6 Descriptives

The strength of the relationships between the dependent and moderating variables was assessed using Pearson's correlation coefficient. This value ranges from -1 to +1 depending on whether there is a negative or positive correlation between the constructs (Hair, Black, Babin, & Anderson, 2010). The correlation matrix is presented in Table 16.

Correlation Matric							
	1.	2.	3.	4.	5.	6.	7.
1. Attitudes parent brand	1	.452**	.796**	.357**	.135	-.116	.423**
2. Intentions parent brand	.452**	1	.389**	.759**	.098	-.071	.290**
3. Attitudes extension	.796**	.389**	1	.479**	.148	-.065	.292**
4. Intentions extension	.357**	.759**	.479**	1	.015	-.040	.266**
5. Innovativeness	.135	.098	.148	.015	1	.052	.241**
6. Environmental consc.	-.116	-.071	-.065	-.040	.052	1	-.231**
7. Involvement	.423**	.290**	.292**	.266**	.241**	-.231**	1

** Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

Table 16

Using Cohen's (1988) classification of effect size values, attitudes towards the parent brand and attitudes towards the extension are strongly correlated ($r = .796$), as are intentions towards the parent brand and intentions towards the extension ($r = .759$). Taking into consideration the assumptions of the experiment, and the relatively sparse information about both brands given to the subjects, this was as expected. In the case of the moderating variables, neither

innovativeness nor environmental consciousness correlates strongly with any variables except for product involvement, for which the effect is at a *medium* level. Also, involvement correlates with attitudes towards the parent brand at a *strong* level, and with all other variables at a *medium* level.

As for the significance of the correlations, all of the dependent variables are significantly correlated at a .01 significance level. With regards to the moderating variables, innovativeness and environmental consciousness are significantly correlated with product category involvement at a .01 significance level. Lastly, product category involvement is significantly correlated with all moderating and dependent variables at a .01 level of significance.

Skewness and kurtosis are used as measures of the shape of the distribution, and are particularly important to consider in the case of small sample sizes. While skewness refers to whether the distribution is right- or left-centered, kurtosis describes the shape of the peak. Positive and negative values of skewness indicate that the scores are centered on the left- or right-hand side, respectively (Hair, Black, Babin, & Anderson, 2010). On the other hand, positive values of kurtosis mean that the distribution is tall and narrow, while negative values represent a shorter but wider distribution. A perfectly normal distribution will have skewness and kurtosis values of 0, and the further away from this anchor, the less is the probability that the data is not normally distributed (Field, 2013). Furthermore, none of the values should ideally exceed +/- 1.

Descriptives									
Variable	N	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	St. Error	Statistic	St. Error
Attitudes parent brand	-.280	-.557	6.50	4.1901	1.19875	-.280	.203	-.557	.404
Intentions parent brand	1.299	1.003	5.50	1.9225	1.12246	1.299	.203	1.003	.404
Attitudes extension	-.621	.251	7.00	4.6303	1.28159	-.621	.203	.251	.404
Intentions extension	1.295	1.116	6.00	2.1268	1.26524	.1295	.203	1.166	.404
Innovativeness	-.112	-.454	7.00	4.0423	1.34150	-.112	.203	-.454	.404
Environmental consc.	-.128	-.638	6.50	3.8486	1.20060	-.128	.203	-.683	.404
Product involvement	-.198	-.840	7.00	4.3052	1.66808	-.198	.203	-.840	.404

Table 17

As can be seen in Table 17, intentions towards the parent brand and the extension are not normally distributed variables. The skewness and kurtosis values for intentions towards the parent brand indicate that this variable's distribution is tall, narrow and left-centered, and the kurtosis value for intentions towards the extension indicate a tall and narrow distribution. Nonetheless, none of the values exceed the threshold by far, and according to Bulmer (1979), values within +/- 1,5 are only moderately skewed. It should also be noted that purchase intentions are rated lower than attitudes for both the parent brand and the extension. This could be due to e.g. the fictitious nature of the brands, and will be discussed more in depth in Chapter 6.

4.7 Assumptions for MANOVA

Since the data from the experiment requires the comparison of more than two groups simultaneously, factorial MANOVA was employed (Ghuri & Grønhaug, 2010). This is a statistical technique that facilitates the analysis of variance between several experimental groups. Due to the fact that the current study utilizes two independent variables and has a between-subject design, two-way independent MANOVA was used. Before conducting the analysis, some important assumptions must be met (Weinberg & Abramowitz, 2008).

4.7.1 Independence of observations

The first assumption is that the observations are independent. This is the case whenever participants are randomly selected from the target population and also randomly assigned to one of the experimental conditions. Although participation was based on self-selection amongst those who were invited, this was as close to random selection the experiment could get. Additionally, since the subjects were not gathered in e.g. a classroom when they were engaged in the experiment, communication between them is not expected to be a major threat to independence. Taking into consideration that the allocation of individuals to the experimental conditions was also completely randomized, this first assumption of independent observations is considered to be met.

4.7.2 Skewness and kurtosis

The second assumption for performing MANOVA is that the dependent and moderating variables are normally distributed. As discussed in Chapter 4.6, there are two variables for which the distribution is non-normal.

According to Field (2013), the impact of high skewness and kurtosis values decreases as the sample size increases. In the current experiment, the number of subjects per experimental condition exceeds the threshold of 30 as suggested by

Hogg and Tanis (2010). Additionally, the deviations are fairly small and the F-test is also robust against such deviations (Hair, Black, Babin, & Anderson, 2010). Therefore, the skewness and kurtosis values are considered satisfactory.

4.7.3 Homogeneity of variance

The third and last assumption is that of homogeneity of variance, meaning that the samples are derived from populations of similar variances. This is a particularly important assumption whenever an uneven number of subjects are exposed to the different treatments, as is the case in the present study (Parra-Frutos, 2013). To check this assumption, Levene’s test for homogeneity was employed.

Whenever homogeneity is present, the dependent variables will exhibit equal levels of variance across the range of predictor variables. Tables 18 and 19 show the test of homogeneity of variances for the two independent variables. In the case of perceived fit, intentions towards the parent brand ($p = .006$) and the extension ($p = .045$) are significant, meaning that the variance in the constructs is unequal across the experimental groups. The same is true for intentions towards the extension ($p = .047$) with explanatory links as independent variable.

Independent variable: Perceived fit				
	Levene Statistic	df1	df2	Sig.
Attitudes parent brand	.000	1	140	.989
Intentions parent brand	7.799	1	140	.006
Attitudes extension	.394	1	140	.531
Intentions extension	4.068	1	140	.045

Table 18

Independent variable: Explanatory link				
	Levene Statistic	df1	df2	Sig.
Attitudes parent brand	.282	1	140	.596
Intentions parent brand	2.401	1	140	.123
Attitudes extension	.084	1	140	.772
Intentions extension	4.023	1	140	.047

Table 19

As a conclusion, since two of the assumptions are not met for the two purchase intention constructs, there is reduced probability that the subjects' ratings of these two represent the target population on a whole (Field, 2013). Although ANOVA is said to be relatively robust against violations of the aforementioned assumptions, interpretation of causal changes in purchase intentions in the main study should be done more carefully than for the attitude constructs (Weinberg & Abramowitz, 2008).

5. Results

This chapter tests the hypotheses presented in Chapter 3. Multivariate analysis of variance (MANOVA) was employed to assess the direct effects of perceived fit and communication of explanatory links, as well as the moderating effect of the latter. Additionally, the three moderating variables were tested for moderating effects between the independent and dependent variables. The moderating variables were also tested for direct effects on the dependent variables. This was done to maximize the internal validity of the experiment, in case any of the moderating variables were to be directly responsible for any variance in the dependent variables. Lastly, two separate analyses of variance (ANOVA) were conducted to assess the isolated effects of perceived fit and explanatory links. The complete output from SPSS is attached in Appendix 2.

5.1 MANOVA 1: Test of all hypotheses

The first MANOVA test was conducted to test the full research model.

Hypothesis 1 stated that perceived fit between the parent brand and the brand extension has a positive direct effect on brand extension success. The MANOVA test presented in Table 20 showed no significant effect of perceived fit on any of the success measures, and H1 is therefore not supported.

Hypothesis 2a predicted that communication of explanatory links has a positive direct effect on brand extension success. As shown in Table 20, the communication of explanatory links has no significant effect on attitudes or purchase intentions towards neither the parent brand nor the extension, and H2a is therefore rejected.

Hypothesis 2b said that communication of explanatory links moderates the effect of perceived fit on brand extension success. The results in Table 20 show that the interactive effect between the two variables has no significant effect on brand extension success, and H2b is therefore not supported.

Hypotheses 3, 4 and 5 were concerned with the moderating effect on perceived fit by three variables: Innovativeness, involvement and environmental consciousness. As can be seen in Table 20, the only significant effect was the interactive effect between perceived fit and innovativeness on attitudes towards the extension ($p = .015$). H3 is therefore partially supported, while H4 and H5 are not supported.

The moderating variables were also tested for direct effects on the dependent variable. The results in Table 20 show that innovativeness and environmental consciousness had no significant direct effects. Involvement, however, had a significant effect on attitudes towards the parent brand ($p = .000$), intentions towards the parent brand ($p = .005$), attitudes towards the extension ($p = .001$) and intentions towards the extension ($p = .002$). Although these direct effects were not included in the hypotheses, the results indicate that consumers' involvement with the product category has a direct effect on brand extension success. Given that the assumptions of homogeneity of variance are not met for the purchase intention constructs, however, the direct effects of involvement on purchase intentions are lacking validity.

To assess the fit of the model, R^2 adjusted was used. While R^2 is a measure of how much of the variance in the dependent variables is explained by the model, R^2 adjusted controls for the number of variables used in the model (Rumsey, 2007). The R^2 adjusted values range from 0 to 1, and the higher the value, the better the ability of the regression equation to explain the variance in the dependent variables (Christensen, 1996). In the first MANOVA test, the R^2 adjusted values were as follows: Attitudes towards the parent brand (15.1%), attitudes towards the extension (13.6%), purchase intentions towards the parent brand (6.6%) and purchase intentions towards the extension (5.4%). These values can also be found in Appendix 2a.

MANOVA 1		
	<i>F</i>	<i>p</i>
<i>Perceived fit</i>		
Attitudes parent brand	.412	.522
Intentions parent brand	.993	.321
Attitudes extension	1.722	.192
Intentions extension	.437	.510
<i>Explanatory links</i>		
Attitudes parent brand	.291	.590
Intentions parent brand	1.645	.202
Attitudes extension	.000	.997
Intentions extension	.001	.971
<i>Innovativeness</i>		
Attitudes parent brand	.146	.703
Intentions parent brand	.442	.507
Attitudes extension	.217	.642
Intentions extension	.536	.465
<i>Involvement</i>		
Attitudes parent brand	24.657	.000
Intentions parent brand	8.103	.005
Attitudes extension	11.962	.001
Intentions extension	9.989	.002
<i>Environmental consciousness</i>		
Attitudes parent brand	.071	.790
Intentions parent brand	.378	.540
Attitudes extension	.021	.884
Intentions extension	.001	.976
<i>Perceived fit*Explanatory links</i>		
Attitudes parent brand	1.509	.221
Intentions parent brand	.936	.335
Attitudes extension	1.238	.268
Intentions extension	.136	.713

<i>Perceived fit*Innovativeness</i>		
Attitudes parent brand	2.364	.127
Intentions parent brand	.052	.821
Attitudes extension	6.121	.015
Intentions extension	1.657	.200
<i>Perceived fit*Involvement</i>		
Attitudes parent brand	.463	.497
Intentions parent brand	.302	.583
Attitudes extension	.467	.496
Intentions extension	1.263	.263
<i>Perceived fit*Environmental consciousness</i>		
Attitudes parent brand	.010	.921
Intentions parent brand	1.928	.167
Attitudes extension	.497	.482
Intentions extension	2.570	.111

Table 20

5.2 MANOVA 2: Test of H1, H2a and H2b

The second MANOVA test was conducted to test the isolated effects of H1, H2a and H2b, namely the effects of perceived fit and explanatory links, and the interaction between them.

As can be seen in Table 21, perceived fit had a significant effect on attitudes towards the extension ($p = .004$), but not on any other success measures. H1 is therefore partially supported. As for H2a and H2b, this MANOVA test did not find any significant effects. Thus, the results indicate that the level of perceived fit between the parent brand and its extension has a direct effect on attitudes towards the extension.

In the second MANOVA test, the R^2 adjusted values were as follows: Attitudes towards the parent brand (-1.1%), attitudes towards the extension (3.9%), purchase intentions towards the parent brand (0.2%) and purchase intentions towards the extension (-0.8%). These values indicate a poor fit of the model, and are also attached in Appendix 2b.

MANOVA 2		
	<i>F</i>	<i>p</i>
<i>Perceived fit</i>		
Attitudes parent brand	.127	.723
Intentions parent brand	.069	.794
Attitudes extension	8.347	.004
Intentions extension	.491	.485
<i>Explanatory links</i>		
Attitudes parent brand	.375	.541
Intentions parent brand	1.977	.162
Attitudes extension	.045	.832
Intentions extension	.381	.538
<i>Perceived fit*Explanatory links</i>		
Attitudes parent brand	.979	.324
Intentions parent brand	1.209	.273
Attitudes extension	.344	.558
Intentions extension	.892	.347

Table 21

5.3 MANOVA 3: Test of H1, H3, H4 and H5

The third MANOVA tested the isolated effect of perceived fit on brand extension success, as well as the interactive effect between perceived fit and the three moderating variables, namely consumer innovativeness, category involvement and environmental consciousness. Again, the direct effects of the moderating variables were tested as well.

As shown in Table 22, perceived fit was not found to have any significant direct effects. As for the direct effects of the moderating variables, involvement was found to have a direct effect on attitudes towards the parent brand ($p = .000$), intentions towards the parent brand ($p = .003$), attitudes towards the extension ($p = .001$) and intentions towards the extension (.002).

With regards to the moderating effects, consumer innovativeness had a significant interactive effect with perceived fit on attitudes towards the extension ($p = .023$). Additionally, at a .1 level of significance, environmental consciousness moderated the effect of perceived fit on purchase intentions

towards the parent brand and the extension. Since this effect was not significant at a .05 level, however, this finding should be looked more closely into in future research.

In the second MANOVA test, the R² adjusted values were as follows: Attitudes towards the parent brand (15.1%), attitudes towards the extension (14.0%), purchase intentions towards the parent brand (6.4%) and purchase intentions towards the extension (6.7%). These values are also attached in Appendix 2c.

MANOVA 3		
	<i>F</i>	<i>p</i>
<i>Perceived fit</i>		
Attitudes parent brand	.395	.531
Intentions parent brand	1.257	.264
Attitudes extension	1.810	.181
Intentions extension	.461	.198
<i>Innovativeness</i>		
Attitudes parent brand	.121	.728
Intentions parent brand	.101	.751
Attitudes extension	.310	.578
Intentions extension	.630	.429
<i>Involvement</i>		
Attitudes parent brand	25.063	.000
Intentions parent brand	9.158	.003
Attitudes extension	11.893	.001
Intentions extension	10.368	.002
<i>Environmental consciousness</i>		
Attitudes parent brand	.150	.699
Intentions parent brand	.054	.817
Attitudes extension	.118	.731
Intentions extension	.010	.919
<i>Perceived fit*Innovativeness</i>		
Attitudes parent brand	1.773	.185
Intentions parent brand	.300	.585
Attitudes extension	5.269	.023
Intentions extension	2.038	.156

<i>Perceived fit*Involvement</i>		
Attitudes parent brand	.337	.563
Intentions parent brand	.487	.487
Attitudes extension	.332	.565
Intentions extension	1.387	.241
<i>Perceived fit*Environmental consciousness</i>		
Attitudes parent brand	.001	.975
Intentions parent brand	3.371	.069
Attitudes extension	.274	.601
Intentions extension	3.051	.083

Table 22

5.4 ANOVA: Additional analyses

Lastly, an ANOVA was employed to test specifically for the direct effects of perceived fit and explanatory links. Table 23 confirms that perceived fit has a significant direct effect on attitudes towards the extension ($p = .004$), and as expected, Table 24 shows that no significant effects were found for the explanatory links.

As can be seen from Table 23, the subjects expressed higher attitudes towards the hybrid extension ($\mu = 4.94$) than the regular extension ($\mu = 4.34$). Although the subjects perceived the intended high and low fit conditions reversely, the results indicate that high perceived fit has a positive direct effect on attitudes towards brand extensions, and H1 is therefore partially supported.

Comparison across groups: Perceived fit				
	High fit	Low fit	F	p
Attitudes extension	4.94	4.34	8.356	.004
Attitudes parent brand	4.22	4.16	.110	.723
Intentions extension	2.21	2.05	.581	.485
Intentions parent brand	1.96	1.89	.122	.794

Table 23

Comparison across groups: Explanatory links				
	Expl. links	No expl. links	F	p
Attitudes extension	4.66	4.60	.272	.832
Attitudes parent brand	4.25	4.12	.859	.541
Intentions extension	2.19	2.06	.580	.538
Intentions parent brand	2.05	1.79	2.329	.162

Table 24

6. Conclusions and discussion

This study has investigated the influences of perceived fit and communication of explanatory links on brand extension success, as well as the moderating effects of consumer innovativeness, category involvement and environmental consciousness. Going back to the Autoblog.com (Joseph, 2013) poll discussed in Chapter 1, the experiment in the current study has shown quite opposing results. Understanding these results requires a complete analysis of the methodological assumptions, the underlying variables and a thorough discussion of why the sample processed and responded to the stimuli the way it did. Only that way, the feasibility of a hypothesized hybrid pony car can be understood. A summary of the results of the hypotheses is presented in Table 25.

Hypotheses	Support
H1: <i>A high degree of perceived fit between the parent brand and its extension will have a positive direct effect on brand extension success</i>	Partial
H2a: <i>Communication of explanatory links will have a positive direct effect on brand extension success</i>	No
H2b: <i>Communication of explanatory links moderates the effect of perceived fit on brand extension success</i>	No
H3: <i>Consumer innovativeness moderates the effect of perceived fit on brand extension success</i>	Partial
H4: <i>Category involvement moderates the effect of perceived fit on brand extension success</i>	No
H5: <i>Environmental consciousness moderates the effect of perceived fit on brand extension success</i>	No

Table 25

6.1 Conclusions

6.1.1 Manipulation check: Explanatory links

By manipulating the presence of explanatory links in the ad, the intention was to alter the degree to which the ad communicated the link between the parent brand and the extension.

The manipulation check (*see Chapter 4.4.1.1*) indicated that whenever subjects were exposed to the explanatory links, there was no significant change in the perceived link. Thus, this manipulation did not have the intended effect upon the subjects, and did not work as suggested by previous research. The manipulation check also showed that manipulating explanatory links did not affect perceived fit. There are several possible reasons as to why the pre-tests and the main study yielded different results.

Firstly, the pre-tests were based on a small sample ($N = 4$ and $N = 5$), which leaves room for greater error than in the main study ($N = 142$). Also, the pre-tests were conducted using a within-subjects design, whereby all respondents were exposed to all four treatments. This may have increased both respondent fatigue and demand effects, since it enabled subjects to get an overview over the experiment, as opposed to the main study. Additionally, testing effects could have distorted the pre-test results. Testing effects occur when subjects are exposed to similar stimuli and questions repeatedly, and their response to one set of questions leads to bias in the succeeding questions (Cook & Campbell, 1979). Thus, the pre-test design is one of the factors that could have distorted the results.

A second plausible explanation as to why the explanatory links had no significant effect on perceived link is the design of the online survey. In the pre-tests, subjects had the chance to review at the ad and the informative text when answering questions about the parent brand and the extensions. Thus, if they couldn't recall the difference between the Stallion 500 and the Stallion Hybrid, for example, they could simply turn back the page and review the information. In

the main study, subjects did not have this opportunity. Due to the “block design” layout in Qualtrics, the subjects could not return to the stimuli once they proceeded to the questions. Thus, those who paid sparse attention to the stimuli might have had a harder time answering the related questions.

6.1.2 Manipulation check: High and low fit conditions

The fit manipulation was intended to lead to a high perception of fit for those subjects that were exposed to the regular extension, and a low perception of fit for those who were exposed to the hybrid extension. Ironically, the subjects perceived the fit of the two extensions the other way around (*see Chapter 4.4.1.1*). Here as well, the design of the pre-tests may have led to a faulty prediction of how the subjects would perceive the fit between the parent brand and the extension in the main study. Klink and Smith (2001) found that perceived fit increases the more consumers are exposed to an extension. The fact that there was only a single exposure to the stimuli in the main study could have had implications for perceived fit.

Apart from the methodological differences between the pre-tests and the main study, several other factors may help explain why subjects perceived the hybrid extension as a suitable extension of the Stallion brand. Firstly, despite being informed that the automaker had never manufactured such a vehicle before, the target population’s knowledge about this subcategory of American performance cars is likely to be low. While modern pony cars are a big part of the American automotive culture, their availability to Norwegian consumers has been restricted because no dealerships have offered factory new models in decades (Abrahamsen, 2013). If the ad in the experiment had compared the Stallion brand to e.g. the well-known Ford Mustang, it might have been easier for the subjects to imagine the positioning and image of the fictitious brand. Secondly, if the experiment had been based on another target population, e.g. subscribers of an automotive magazine, like the Autoblog.com poll (Joseph, 2013), the fit might have been perceived differently than in the student sample. Thus, low knowledge

about the product category and difficulties in forming associations towards the fictitious Stallion brand could have affected subjects' perception of fit.

Another factor that possibly had major implications for the perception of fit is cultural bias. Due to the EV revolution that Norway has experienced during the last few years, combined with the current wave of plug-in hybrid introductions in the market, Norwegian consumers are frequently exposed to this type of engine technology. With automakers such as BMW launching hybrid sports cars in Norway, the respondents may have found it natural for an American competitor to follow suit. Just like the Stallion Hybrid, the BMW i8 was the German automaker's first hybrid performance car after all (BMW Group, 2014).

Even though the respondents perceived the hybrid extension as a natural extension of the Stallion brand, they did discriminate between the two extensions, which was more important to the analysis of the effects of perceived fit.

6.1.3 The direct effect of perceived fit on brand extension success (H1)

The results showed that those who were exposed to the high fit condition, which appeared to be the hybrid extension, reported significantly higher attitudes towards the extension than those who were exposed to the low fit condition ($p = .004$). This finding supports a range of other studies that have highlighted the positive effect of fit on brand extension evaluations (e.g. Aaker & Keller, 1990; Völckner & Sattler, 2006). Nonetheless, perceived fit was not found to have an effect on purchase intentions towards the extension or attitudes and intentions towards the parent brand. The lack of support for the feedback effects on the parent brand may be explained by several studies where low awareness about the brand has been found to reduce feedback effects (Völckner & Sattler, 2007; Chen & Chen, 2000; Pina, Martinez, de Chernatony, & Drury, 2006). Since the Stallion brand is fictitious, awareness amongst the respondents was non-existent, which could help explain these findings

The results also showed that subjects reported lower purchase intentions than attitudes, which can be due to several factors. For example, assuming that the student sample has little knowledge about this product category, they might like the product, but they may also be hesitant to form purchase intentions towards it due to limited knowledge (Berger, Ratchford, & Haines Jr., 1994). Additionally, though the vehicle's price range was not enclosed in the stimuli, many students might find the product to be out of reach given their financial situation and the general price level of performance cars in Norway. Lastly, when dealing with a hypothetical brand, rating one's purchase intentions may be restricted by a limited set of associations and first-hand experience (Laroche, Kim, & Zhou, 1996; Esch, Langner, Schmitt, & Geus, 2006). Combined, these factors could have given subject a hard time answering questions about purchase intentions.

If measures of purchase intentions and parent brand success had been left out, H1 would have been fully supported. Thus, the results illustrate the importance of taking all of these constructs into consideration when assessing a product's feasibility in the market. These results support several other studies (e.g. Sheeran, 2002; Fishbein & Ajzen, 2005; Spears & Singh, 2004) that have found attitudes and intentions not to be perfectly correlated.

6.1.4 The direct effect of explanatory links on brand extension success (H2a)

The results for Hypothesis 2a indicated that explanatory links have no direct effect on brand extension success. This is not surprising given the results of the manipulation check, where the explanatory links were revealed not to be helping the subjects understand the link between the parent brand and the extension.

6.1.5 The moderating effect of explanatory links on perceived fit (H2b)

Hypothesis H2b is based on the expectance that when subjects are exposed to explanatory links, these will moderate the effect of perceived fit on brand extension success. None of the moderating effects were significant, and this

hypothesis was therefore not supported. The lack of support is likely to be due to the same reasons as discussed in Chapter 6.1.1.

6.1.6 The moderating effect of consumer innovativeness (H3)

The third hypothesis deals with the moderating effect of consumer's innovation adoption tendencies, and was partially supported. Several studies (e.g. Smith & Andrews, 1995; Klink & Smith, 2001) have explored this effect, and found that as consumer innovativeness increases, so do evaluations of the brand extension. The results showed that this variable significantly moderated the effect of perceived fit towards the extension ($p = .015$), but not on any of the other variables.

6.1.7 The moderating effect of product category involvement (H4)

The fourth hypothesis is concerned with the effects of product category involvement, and specifically states that this variable will moderate the effect of perceived fit on brand extension success. The moderating effect was included in the research model based on Broniarczyk and Alba (1994) and Nkwocha et al. (2005), where consumer expertise and product involvement were found to moderate the effect of fit on attitudes towards extensions. Also, Bloch (1981) suggested that amongst car owners, there is great variety in the level of involvement. Since the majority of the target population was assumed not to be in possession of a car, items were chosen accordingly to avoid measurements that required former or current ownership.

The results showed no moderating effects of category involvement, and H4 was therefore not supported. Nonetheless, this variable was found to have a direct causal effect on both attitudes ($p = .001$) and intentions ($p = .002$) towards the extension, as well as attitudes ($p = .000$) and intentions ($p = .005$) towards the parent brand. Thus, subjects who reported a high interest for cars differed in their evaluations of both the parent brand and the extension from those who

expressed a low interest. These results demonstrate the importance of testing for direct effects of hypothesized moderating variables as well.

6.1.8 The moderating effect of environmental consciousness (H5)

The fifth and last hypothesis states that consumers' environmental consciousness will moderate the effect of perceived fit on brand extension success. This variable has been found to affect attitudes and choice in a range of studies (e.g. Marell, Davidson, Garling, & Laitila, 2004; Flamm, 2009; Johansson, Heldt, & Johansson, 2005), but there appear to be no research on its moderating effects on the effects of perceived fit. Thus, the inclusion of this variable in the research model is of exploratory nature.

The results showed that the moderating effect of environmental consciousness had no significant effect on attitudes towards the parent brand or the brand extension. With regards to purchase intentions, there were no significant effects on a .05 level of significance. On a .1 significance level, however, environmental consciousness moderated the effect of fit on intentions towards the brand extension ($p = .083$) and the parent brand ($p = .069$).

6.2 Discussion

6.2.1 Validity, reliability and sensitivity

In experimental research, validity describes the accuracy of a measure (Zikmund, Babin, Carr, & Griffin, 2009). When the experiment measures what is really intended, there is a high degree of validity (Ringdal, 2001). In this chapter, four categories of validity will be elaborated on, specifically *internal*-, *external*-, *construct*-, and *statistical conclusion validity*. In addition, the reliability and sensitivity of the experiment will be discussed.

6.2.1.1 Internal validity

Internal validity refers to the degree to which the experimental variables are truly responsible for the observed variance in the dependent variable (Gripsrud & Olsson, 2000). Consequently, the internal validity of the current study depends on the ability of the two independent variables, perceived fit and explanatory links, to explain changes in brand extension success. According to Zikmund et al. (2009), there are six major threats to internal validity. These are *history-*, *maturation-*, *testing-*, *instrumentation-*, *selection-* and *mortality effects*.

Firstly, *history effects* threaten an experiment's internal validity when the dependent variable is affected by variables other than the experimental treatment during the time that respondents are engaged in the experiment (Zikmund, Babin, Carr, & Griffin, 2009). This is primarily an issue when the experiment is conducted over an extended period of time. Due to the cross-sectional nature of the current experiment, whereby the measurement succeeded the stimuli in a single survey, this is not a major issue. Still, the subjects had the opportunity to exit the study and return at another time, which could alter their responses. On the other hand, the survey was only available for one week, and history effects are therefore not considered a threat to the internal validity.

Secondly, *maturation effects* occur when the survey is time-consuming and respondents experience fatigue (Saunders, Lewis, & Thornill, 2012). In the current experiment, subjects were informed that it would take approximately five minutes to complete the questionnaire, and each page had a forced response option, which prevented subjects from spending excessive time going back and forth between the questions. Thus, maturation effects are not expected to distort the quality of the data.

Thirdly, *testing effects* occur when initial information or measurement affect the subsequent responses in the experiment (Zikmund, Babin, Carr, & Griffin, 2009). Again, due to the cross-sectional execution of the experiment, subjects were only exposed to the stimuli at a single time, and there were no repeated

measurements of the constructs. Participation in both the pre-tests and the main study can lead to testing effects, but all subjects in the two pre-tests were personal acquaintances of the author and were kindly asked not to engage in the main study. Consequently, testing effects should not be an issue.

Furthermore, *instrumentation effects* take place when there are differences in methodology and procedures between the experimental cells, such as changes in the questionnaire or when using different measures (Zikmund, Babin, Carr, & Griffin, 2009). This is not a threat to the current experiment since all subjects were exposed to the exact same procedure.

Selection effects may jeopardize the internal validity whenever there is a bias in the allocation of subjects to the different treatments (Zikmund, Babin, Carr, & Griffin, 2009). Subjects were randomly allocated to the four treatments using Qualtrics' randomization feature, and the four experimental groups were therefore expected to be fairly homogeneous. Closely related to this type of selection effects are *sample selection errors*. These errors have implications for the internal validity whenever the experiment sample does not reflect the target population. As discussed in Chapter 4.2, the experiment was based on self-selection. This was the only feasible sample method, but could also mean that subjects with certain traits volunteered to participate. For instance, students who don't check their inboxes would not have seen the invitation, and those who were heavily occupied with preparations for exams may have been hesitant to participate. Also, since variables such as age and year of study were not recorded, the ratio of students with extensive knowledge in research methodology is not known. Such respondents are more likely to be analytical instead of spontaneous when answering the questionnaire, which could potentially distort the internal validity.

Lastly, *mortality effects* generally pose a threat to the internal validity of an experiment whenever it spans over an extensive time period and respondents eventually drop out (Zikmund, Babin, Carr, & Griffin, 2009). Finishing the experiment in the current study would normally not require more than five minutes, yet there were several participants who withdrew from the survey and

did not return. All non-complete responses were eliminated from the final data set, however, and were therefore not an issue.

As a conclusion, the only threat to the internal validity of this study appears to be sample selection errors. Since the demographics of the sample were not registered and could not be compared to the target population, it is not known to what degree the sample reflects the general student body at NHH. Overall, however, internal validity is considered to be high.

6.2.1.2 External validity

External validity is the degree to which the results from a study can be generalized beyond the experimental setting. According to Trochim and Donnelly (2006), assessment of external validity must take into account the generalizability across individuals, time and place.

As discussed in the previous section, there is no guarantee that the sample in this study perfectly reflects the student body at NHH. Nonetheless, students are a fairly homogenous group, and since NHH consists of business students only, it is likely that the results are applicable to the target population.

With regards to generalizability beyond NHH students, two factors must be taken into account. Firstly, the stimuli in the experiment were based on a hybrid vehicle. Due to its relatively environmental profile, such a pony car would be cheaper and therefore more accessible to the general public in Norway. Compared to a conventional pony car such as the Ford Mustang, which expects to sell less than 200 units a year, the market size for a hybrid pony car is therefore assumed to be larger (Skogstad, 2015). Thus, it would probably be attainable for the student sample in a few years. On the other hand, a hybrid pony car would still be a niche product likely to attract dedicated customers with high knowledge and a strong interest for this sub-category of performance vehicles. Secondly, the variation in disposable income, consumption patterns, personal taste, interests and so forth is likely to be large between this customer segment

and current students. Therefore, generalizations beyond the student sample should be done with great care.

As for generalizability across time, the external validity of the results is relatively low. This is primarily because the rapid technological development in the automotive industry. While modern electrical vehicles have been around for about five years, plug-in hybrids have just recently entered the market to meet consumer demand for longer range. Therefore, the long-term performance and quality of today's hybrid cars are unknown. Additionally, there is a great deal of uncertainty about the future vehicle tax legislation in Norway. Ultimately, new tax regimes might adversely affect the second-hand value of the vehicles. Lastly, due to the fast-paced technological development, the popularity of hybrid vehicles could possibly be jeopardized if e.g. hydrogen cars eventually break through in the market. Summed up, all of these factors are likely to affect attitudes and purchase intentions towards hybrid vehicles in the coming years, and consequently they all pose a threat to the external validity of the results.

Thirdly, generalizability of the results across places is also restricted. The results are most likely applicable to business students across the country, but generalizing them to students beyond Norway is not advocated. As previously discussed, the results are likely to be affected by cultural bias with regards to both brand extension evaluations in general as well as attitudes towards environmentally friendly transportation. As far as generalizability across brands is concerned, the results in this study are restricted to the hypothetical pony car brand Stallion.

One aspect that increases the external validity of this study in comparison to many other brand extension studies is the design of the questionnaire. While subjects often can switch back and forth between the stimulus and the survey questions, subjects in the current study were only exposed to the stimulus once, and did not have the opportunity to go back and review it. Ultimately, this requires higher levels of attention from the subjects and resembles many of those ad exposures that happen in the real world. On the other hand, while exposure to ads in real life settings may be brief, they tend to occur frequently, as

opposed to a controlled experiment where there is only a single exposure (Klink & Smith, 2001). Additionally, consumers in the marketplace have access to considerably more information, and from more sources, than subjects did in this study (Völkner & Sattler, 2007). Therefore, the positive effects of the relatively realistic stimuli exposure are expected to be neutralized.

As a conclusion, the external validity of this study is low. Yet again, the purpose was to uncover the feasibility of a hybrid pony car in the Norwegian market specifically. There are vast differences between countries and regions with regards to how new brands are received by consumers (Keller, 2008). This is not only due to differences in consumer preferences, but also differences in price levels, purchasing power, promotion responsiveness and so forth. Therefore, it was not feasible to test for attitudes towards the extension across countries. Naturally, the external validity would have been higher if the sample reflected the population of potential buyers of hybrid performance cars. Due to the restricted market size, however, searching for, and recruiting, possible buyers would have required extensive resources and time usage.

6.2.1.3 Construct and statistical conclusion validity

According to Saunders et al. (2012), construct validity is the extent to which the measures in the study actually capture what is intended. Almost all of the variables in the research model are based on well-established constructs that have been extensively documented in previous research. The only construct that lacked an establish scale was perceived link. Nonetheless, the PCA for this construct showed satisfactory convergent and discriminant validity, and the reliability analysis yielded a Cronbach's alpha value above the critical threshold. Additionally, the face validity of this construct should not be an issue, as it was developed in collaboration with the supervisor, and the pre-tests indicated that the construct was meaningful.

Statistical conclusion validity is concerned with whether the conclusions about causal effects are reasonable. Violations of the assumptions of the statistical tests

are considered to be the major threat to this type of validity. As shown in Chapter 4, the assumption of homogeneity was not met for the purchase intention constructs. Therefore, the statistical validity of causal effects on purchase intentions is reduced. There were no hypotheses where the effect on purchase intentions was significant, yet the direct effect of category involvement on these measures was significant.

6.2.1.4 Reliability and sensitivity

Reliability refers to how reliable a measure is, and the degree to which it can consistently converge on the same result at different attempts (Zikmund, Babin, Carr, & Griffin, 2009). The objective of any study is to minimize statistical error so that the results reflect what would be observed in the marketplace. Internal reliability is crucial when measuring the same construct through several items and is usually assessed by Cronbach's alpha. The reliability analysis was presented in Chapter 4.5, and showed that all constructs had satisfactory values.

According to Zikmund et al. (2009), *sensitivity* refers to the ability of the item scales to accurately measure the variance in a construct. To ensure high sensitivity, all items were measured on Likert scales anchored by 1 and 7. This provided the subjects with a range of possible answers, as opposed to e.g. a "yes or no" response option. Sensitivity was also increased by measuring each construct with several items instead of relying on single-item scales.

6.2.2 Theoretical implications and future research

Partial support for H1, where perceived fit was found to have a positive direct effect on attitudes towards the extension, provides leverage to an extensive body of research on brand extension evaluations (e.g. Aaker & Keller, 1990; Park, Milberg, & Lawson, 1991; Boush & Loken, 1991). On the other hand, the lack of full support for this hypothesis indicates that fit alone is not necessarily sufficient for an extension to do well in the marketplace. In their review of 45

empirical studies on brand extension success, Völckner and Sattler (Völckner & Sattler, Drivers of Brand Extension Success, 2006) identified consumer evaluations as the most commonly used measure of brand extension success. Thus, the failure of the current study to find full support for H1 calls for a more specific definition of extension success in future research.

Since most of the existing literature seems to be based on brands within the FMCG category, the lack of support for the effects on purchase intentions could also be a consequence of using a durable good as stimulus. This could indicate that perceived fit by itself is not sufficient to stimulate purchase intentions for durable goods. Berger et al. (1994) suggest that purchase intentions towards durable goods to which consumers have low knowledge are restricted due to higher levels of financial risks associated with the purchase. Since brand extensions to a large degree depend on existing knowledge about the parent brand, further research should be conducted to investigate whether this effect can be generalized to brand extensions (Kim & Sullivan, 1995).

The lack of support for H2a and H2b suggests that communicating explanatory links does not alter brand extension success or moderate the effect of perceived fit under the experimental assumptions of this study. This could be due to the information that was communicated or the methodology in the experiment. Therefore, future research should investigate whether there is a need for communication beyond attribute cues in the case of durable extensions with hypothetical brand names. As for the methodology, there was only a single exposure to the ad in the experiment, and the effects of frequency of exposure to hypothetical brands should therefore be investigated further. Although Lane (2000) found that consumers evaluate low fit extensions more favorably with repeated exposure, the stimuli in her study was based on established brands to which the respondents had a high level of knowledge.

The lack of support for the moderating effect of product category involvement and environmental consciousness also has theoretical implications. Since the experiment in this study was based on a hypothetical brand with only a single exposure, research should be conducted to explore what factors moderates the

effect of perceived fit when the same restrictions are applied. Furthermore, the moderating effect of environmental consciousness on purchase intentions was significant at a .1 level of significance. Sunde (2014) found that in ads for electric vehicles, emotional appeals are more effective than rational appeals. As the environmental cues in the ad in this study were only based on product attributes, communicating environmental benefits beyond these might possibly have yielded different results. Therefore, future research should investigate the moderating effect of environmental cues beyond the ones used in this study.

The results also showed that category involvement had a significant direct effect on all success measures. Aaker and Keller (1990) suggest that the effect of involvement should be investigated in future research, and Broniarczyk and Alba (1994) found the closely related construct consumer expertise to moderate the relationship between perceived fit and attitudes towards the extension. Although this study did not find support for any moderating effects, the results support Hansen and Hem (2004) who found that the role of involvement is not necessarily restricted to moderating effects.

Another implication that relates to the measurements in this study is the apparent distinction between intended and perceived fit. The stimuli in the experiment were designed as one high and one low fit condition, and the subjects perceived these the other way around. This illustrates the importance of discriminating between the two constructs and being specific in one's measurements.

6.2.3 Managerial implications

The obvious difference between intended fit and perceived fit also has major implications for managers. Even though an extension is designed to fit with the parent brand, the failure to account for consumers' perceptions could have major implications for the market performance of the extension. Therefore, automakers need to thoroughly assess consumers' fit perceptions in each distinctive market before launching an extension that could be perceived as low

fitting. The results also imply that new car concepts should not be discounted as too dissimilar before consumers have been exposed to them and provided feedback on the concept. After all, the favorable attitudes towards the Sallion Hybrid indicate that there might be an untapped potential for such an extension in Norway.

Although the external validity is low, the results of H1 do provide indications of the feasibility of a hybrid pony car. Despite its small market size, Norway has developed into one of the most important markets for electric vehicles, and as previously discussed, plug-in hybrids are on the rise. The attitudes of the student sample indicate that a hybrid pony car extension may be well received in the Norwegian market, but automakers certainly have to take into account the limited generalizability of these findings so that they don't overestimate the extension's feasibility in their target segments.

Since the moderating effects of environmental consciousness were not significant at a .05 significance level, pony car manufacturers should carefully consider how to communicate a hybrid extension's sustainable attributes.

Research on Norwegian EV owners has shown that the financial benefits are in fact more important than the environmental benefits of EVs, and given that plug-in hybrids are less environmentally friendly than EVs, potential buyers might be even less concerned about the vehicles' sustainable profile (Norsk elbilforening, 2014).

6.3 Conclusion of the study

This study has investigated the effects of perceived fit and explanatory links on brand extension success. The purpose was to assess whether a hybrid pony car extension is too far of a stretch from the performance-oriented parent brand, and if so, whether establishing explanatory links could help increase the feasibility of such an extension. This purpose was conceptualized through three research questions that will be answered in this final chapter.

RQ1: How does perceived fit affect the success of a hybrid pony car extension?

Despite the intentions behind the fictitious hybrid extension in this study, it was perceived as having a high degree of fit with the parent brand. Thus, the sample of Norwegian business students perceived it as a natural extension of the performance-oriented parent brand. While the feasibility of such an extension in the Norwegian market appears to be high, the perceived fit with the parent brand only has implications for attitudes towards the extension. Since no significant effects on the other success measures were found, a high degree of fit does not guarantee market success by itself-

RQ2: a) How does communication of explanatory links affect the success of a hybrid pony car extension and b) how does it interact with perceived fit in explaining the success of a hybrid pony car extension?

Communicating explanatory links between the parent band and its extension did not have any significant effects on the success of the extension. Neither did it interact with perceived fit in explaining the success of a pony car hybrid extension. Since the hybrid extension was already favorably evaluated, the importance of communicating explanatory links was reduced.

RQ3: How do consumer innovativeness, product category involvement and environmental consciousness moderate the relationship between perceived fit and brand extension success?

Consumer innovativeness was found to moderate the relationship between perceived fit and attitudes towards the extension. This makes sense given the novel nature of the modern plug-in hybrid cars, and the new and radical idea of combining a performance-oriented pony car brand with modern and environmentally friendly technology. This variable did not have any moderating effects on the other three success measures, however, and its moderating effect on the relationship between perceived fit and brand extension success is therefore limited. With regards to product category involvement, there were no moderating effects. Lastly, at a .1 level of significance, environmental consciousness moderated the effects of perceived fit on purchase intentions

towards the extension and the parent brand, but not the effects on attitudes. Consequently, the evidence for such an interaction is weak.

This study answers some questions about the feasibility of a hybrid pony car, but also opens up a lot of other questions that need to be addressed. In the next few years, pony car manufacturers are unlikely to be exempt from the adoption of environmentally friendly technology, and further research should therefore be conducted to challenge the generalizability of the results in this study.

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Appendices

Appendix 1a: Survey introduction



Den følgende undersøkelsen er en del av min masteroppgave ved NHH og omhandler holdninger til sportsbiler. Den tar ca. 5 minutter å gjennomføre. Undersøkelsen er anonym og besvarelsen vil bli behandlet konfidensielt.

Vennligst svar så ærlig som mulig og les nøye gjennom hvert spørsmål - når du trykker deg videre til neste side, kan du *ikke* gå tilbake.

Som kompensasjon for deltagelse er du med i trekningen av fem gavekort på stor pizza fra Peppes Pizza (verdi kr 296,-).

Ønsker du å delta?

Ja

0% 100%

>>

Appendix 1b: Informative text

En amerikansk bilprodusent produserer en rekke ulike kjøretøy, bl.a. SUV-er, kompaktbiler, stasjonsvogner samt en "pony car" med navnet 2015 Stallion 500. *Pony cars* er en type sportsbiler som er nært beslektet muskelbiler. De kjennetegnes ved kraftige motorer, sportslig ytelse, høy motorlyd rask akselerasjon og relativt lav pris. Bilene appellerer til kunder som er ute etter store motorer og rå kraft, og mange bruker disse bilene til å kjøre på racerbane. Stallion 500 har alltid blitt produsert med store bensinmotorer.

2016-modellen har nylig blitt presentert med flere oppgraderinger i forhold til 2015-modellen. Den nye modellen med navnet 2016 Stallion Hybrid har fått en såkalt "*facelift*" - det vil si at designet har blitt mer moderne og motorteknologien mer effektiv. I tillegg er den store bensinmotoren byttet ut med en hybridmotor. Det vil si at bilen i stor grad drives av en elektrisk motor i tillegg til en mindre bensinmotor. Ingen andre biler i denne kategorien tilbys i dag med hybridmotor.

I forbindelse med lanseringen av den nye modellen har Stallion sluppet følgende reklame:

Appendix 1c: Advertisements

Nyhet: 2016 Stallion Hybrid



Stallion Hybrid appellerer til målgruppen på grunn av kraftig motor, høy motorlyd og relativt lav pris. På grunn av den hybride motorteknologien får den nye modellen effektiv kraftutvikling og hurtig akselerasjon. Dette gjør at bilens egenskaper ved sportslig kjøring opprettholdes.

Low intended fit (high perceived fit) / Explanatory links

Nyhet: 2016 Stallion 500 S



Stallion 500 S appellerer til målgruppen på grunn av kraftig motor, høy motorlyd og relativt lav pris. På grunn av den moderne motorteknologien får den nye modellen effektiv kraftutvikling og hurtig akselerasjon. Dette gjør at bilens egenskaper ved sportslig kjøring opprettholdes.

High intended fit (low perceived fit) / Explanatory links

Nyhet: 2016 Stallion Hybrid



Low intended fit (high perceived fit) / No explanatory links

Nyhet: 2016 Stallion 500 S



High intended fit (low perceived fit) / No explanatory links

Appendix 1d: Survey questions for measurement of all constructs

Vennligst ranger følgende påstander om dine interesser og produktvaner (1 = Helt uenig og 7 = Helt enig)							
	1	2	3	4	5	6	7
Når det lanseres nye produkter kjøper jeg dem gjerne før jeg vet om andre liker dem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generelt sett liker jeg å kjøpe de siste produktnyhetene	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg liker å kjøpe nye produkter før andre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7
Jeg liker å kjøre og bruke bil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg snakker gjerne med andre om bil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg er interessert i biler	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	2	3	4	5	6	7
Jeg er en miljøvennlig forbruker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg er opptatt av miljøsaker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Det er flaut å <i>ikke</i> ha en miljøvennlig livsstil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg vil at venner og familie skal se på meg som miljøvennlig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Vennligst ranger følgende påstander om **den opprinnelige 2015-modellen Stallion 500**
(1 = Helt uenig og 7 = Helt enig)

	1	2	3	4	5	6	7
Produktet er attraktivt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dette er et bra produkt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg liker dette produktet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg er positiv til dette produktet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg er interessert i å kjøpe produktet i fremtiden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg vil sannsynligvis kjøpe produktet i fremtiden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg har intensjoner om å kjøpe dette produktet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Vennligst ranger følgende påstander om **den nye 2016-modellen**
(1 = Helt uenig og 7 = Helt enig)

	1	2	3	4	5	6	7
Produktet er attraktivt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dette er et bra produkt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg liker dette produktet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg er positiv til dette produktet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg er interessert i å kjøpe produktet i fremtiden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg vil sannsynligvis kjøpe produktet i fremtiden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg har intensjoner om å kjøpe dette produktet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Vennligst ranger følgende påstander om **den nye modellen i forhold til den gamle**
(1 = Helt uenig og 7 = Helt enig)

	1	2	3	4	5	6	7
Den nye modellen er lik den gamle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Den nye modellen virker logisk for Stallion-merket	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Den nye modellen er passende for Stallion-merket	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reklamen formidler hvordan den nye modellen er lik den gamle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reklamen gjør at jeg forstår linken mellom den nye og den gamle modellen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reklamen bidrar til at jeg opplever det nye produktet som naturlig for Stallion-merket	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 1e: Registration of email addresses

Takk for at du tok deg tid til å svare på spørreundersøkelsen!

Dersom du ønsker å være med i trekningen av fem gavekort fra Peppes Pizza, vennligst trykk deg videre. Du blir da videresendt til en ny side der du vil bli bedt om å oppgi din epost-adresse.

For å sikre full anonymitet vil din epost-adresse ikke bli lagret sammen med besvarelsen. Vinnerne blir kontaktet på epost innen 10. juni.

Vennligst oppgi din epost:

Appendix 2a: Complete results from MANOVA 1

Descriptive Statistics

	Perc.fit	Links.M	Mean	Std. Deviation	N
Att.par	Low	No	3.9931	1.09949	36
		Yes	4.3176	1.21856	37
		Total	4.1575	1.16481	73
	High	No	4.2656	1.29505	32
		Yes	4.1892	1.20963	37
		Total	4.2246	1.24125	69
	Total	No	4.1213	1.19427	68
		Yes	4.2534	1.20749	74
		Total	4.1901	1.19875	142
Att.ext	Low	No	4.2500	1.17868	36
		Yes	4.4189	1.32688	37
		Total	4.3356	1.25015	73
	High	No	4.9844	1.38968	32
		Yes	4.9054	1.13093	37
		Total	4.9420	1.24864	69
	Total	No	4.5956	1.32501	68
		Yes	4.6622	1.24858	74

		Total	4.6303	1.28159	142	
Int.par	Low	No	1.8611	.87514	36	
		Yes	1.9189	1.15177	37	
		Total	1.8904	1.01805	73	
	High	No	1.7031	1.01488	32	
		Yes	2.1757	1.36533	37	
		Total	1.9565	1.22995	69	
	Total	No	1.7868	.93966	68	
		Yes	2.0473	1.26103	74	
		Total	1.9225	1.12246	142	
	Int.ext	Low	No	2.0833	.96732	36
			Yes	2.0135	1.25547	37
			Total	2.0479	1.11544	73
High		No	2.0313	1.28225	32	
		Yes	2.3649	1.51221	37	
		Total	2.2101	1.41006	69	
Total		No	2.0588	1.11813	68	
		Yes	2.1892	1.39152	74	
		Total	2.1268	1.26524	142	

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Att.par	41.643 ^a	9	4.627	3.794	.000
	Att.ext	44.161 ^b	9	4.907	3.456	.001
	Int. par	22.323 ^c	9	2.480	2.108	.033
	Int.ext	25.839 ^d	9	2.871	1.896	.058
Intercept	Att.par	42.307	1	42.307	34.692	.000
	Att.ext	65.748	1	65.748	46.304	.000
	Int.par	6.982	1	6.982	5.934	.016
	Int.ext	10.730	1	10.730	7.086	.009

Fit.M	Att.par	.503	1	.503	.412	.522
	Att.ext	2.445	1	2.445	1.722	.192
	Int.par	1.169	1	1.169	.993	.321
	Int.ext	.661	1	.661	.437	.510
Links.M	Att.par	.355	1	.355	.291	.590
	Att.ext	2.507E-5	1	2.507E-5	.000	.997
	Int.par	1.936	1	1.936	1.645	.202
	Int.ext	.002	1	.002	.001	.971
Innovat	Att.par	.178	1	.178	.146	.703
	Att.ext	.308	1	.308	.217	.642
	Int.par	.520	1	.520	.442	.507
	Int.ext	.812	1	.812	.536	.465
Interest	Att.par	30.070	1	30.070	24.657	.000
	Att.ext	16.985	1	16.985	11.962	.001
	Int.par	9.535	1	9.535	8.103	.005
	Int.ext	15.126	1	15.126	9.989	.002
Environment	Att.par	.087	1	.087	.071	.790
	Att.ext	.030	1	.030	.021	.884
	Int.par	.445	1	.445	.378	.540
	Int.ext	.001	1	.001	.001	.976
Fit.M * Links.M	Att.par	1.840	1	1.840	1.509	.221
	Att.ext	1.758	1	1.758	1.238	.268
	Int.par	1.102	1	1.102	.936	.335
	Int.ext	.205	1	.205	.136	.713
Fit.M * Innovat	Att.par	2.883	1	2.883	2.364	.127
	Att.ext	8.692	1	8.692	6.121	.015
	Int.par	.061	1	.061	.052	.821
	Int.ext	2.510	1	2.510	1.657	.200
Fit.M * Interest	Att.par	.565	1	.565	.463	.497
	Att.ext	.663	1	.663	.467	.496
	Int.par	.356	1	.356	.302	.583
	Int.ext	1.913	1	1.913	1.263	.263

Fit.M * Environment	Att.par	.012	1	.012	.010	.921
	Att.ext	.705	1	.705	.497	.482
	Int.par	2.269	1	2.269	1.928	.167
	Int.ext	3.891	1	3.891	2.570	.111
Error	Att.par	160.973	132	1.219		
	Att.ext	187.429	132	1.420		
	Int.par	155.325	132	1.177		
	Int.ext	199.880	132	1.514		
Total	Att.par	2695.750	142			
	Att.ext	3276.000	142			
	Int.par	702.500	142			
	Int.ext	868.000	142			
Corrected Total	Att.par	202.616	141			
	Att.ext	231.590	141			
	Int.par	177.648	141			
	Int.ext	225.718	141			

a. R Squared = ,206 (Adjusted R Squared = ,151)

b. R Squared = ,191 (Adjusted R Squared = ,136)

c. R Squared = ,126 (Adjusted R Squared = ,066)

d. R Squared = ,114 (Adjusted R Squared = ,054)

Appendix 2b: Complete results from MANOVA 2

Descriptive Statistics

Perc.fit		Links.M	Mean	Std. Deviation	N
Att.par	Low	No	3.9931	1.09949	36
		Yes	4.3176	1.21856	37
	Total	4.1575	1.16481	73	

	2.00	No	4.2656	1.29505	32
		Yes	4.1892	1.20963	37
		Total	4.2246	1.24125	69
	Total	No	4.1213	1.19427	68
		Yes	4.2534	1.20749	74
		Total	4.1901	1.19875	142
Att.ext	Low	No	4.2500	1.17868	36
		Yes	4.4189	1.32688	37
		Total	4.3356	1.25015	73
	2.00	No	4.9844	1.38968	32
		Yes	4.9054	1.13093	37
		Total	4.9420	1.24864	69
Total	No	4.5956	1.32501	68	
	Yes	4.6622	1.24858	74	
	Total	4.6303	1.28159	142	
Int.par	Low	No	1.8611	.87514	36
		Yes	1.9189	1.15177	37
		Total	1.8904	1.01805	73
	2.00	No	1.7031	1.01488	32
		Yes	2.1757	1.36533	37
		Total	1.9565	1.22995	69
Total	No	1.7868	.93966	68	
	Yes	2.0473	1.26103	74	
	Total	1.9225	1.12246	142	
Int.ext	Low	No	2.0833	.96732	36
		Yes	2.0135	1.25547	37
		Total	2.0479	1.11544	73
	2.00	No	2.0313	1.28225	32
		Yes	2.3649	1.51221	37
		Total	2.2101	1.41006	69
Total	No	2.0588	1.11813	68	

Yes	2.1892	1.39152	74
Total	2.1268	1.26524	142

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F
Corrected Model	Att.par	2.181 ^a	3	.727	.501
	Att.ext	13.672 ^b	3	4.557	2.886
	Int.par	4.048 ^c	3	1.349	1.073
	Int.ext	2.932 ^d	3	.977	.605
Intercept	Att.par	2485.633	1	2485.633	1711.367
	Att.ext	3045.806	1	3045.806	1928.806
	Int.par	518.719	1	518.719	412.345
	Int.ext	637.860	1	637.860	395.108
Fit.M	Att.par	.184	1	.184	.127
	Att.ext	13.181	1	13.181	8.347
	Int.par	.086	1	.086	.069
	Int.ext	.792	1	.792	.491
Links.M	Att.par	.544	1	.544	.375
	Att.ext	.072	1	.072	.045
	Int.par	2.487	1	2.487	1.977
	Int.ext	.615	1	.615	.381
Fit.M * Links.M	Att.par	1.422	1	1.422	.979
	Att.ext	.543	1	.543	.344
	Int.ar	1.521	1	1.521	1.209
	Int.ext	1.439	1	1.439	.892
Error	Att.par	200.435	138	1.452	
	Att.ext	217.918	138	1.579	
	Int.par	173.600	138	1.258	
	Int.ext	222.786	138	1.614	
Total	Att.par	2695.750	142		

	Att.ext	3276.000	142		
	Int.par	702.500	142		
	Int.ext	868.000	142		
Corrected Total	Att.par	202.616	141		
	Att.ext	231.590	141		
	Int.par	177.648	141		
	Int.ext	225.718	141		

Tests of Between-Subjects Effects

Source	Dependent Variable	Sig.
Corrected Model	Att.par	.682
	Att.ext	.038
	Int.par	.363
	Int.ext	.613
Intercept	Att.orig	.000
	Att.ext	.000
	Int.par	.000
	Int.ext	.000
Fit.M	Att.par	.723
	Att.ext	.004
	Int.par	.794
	Int.ext	.485
Links.M	Att.par	.541
	Att.ext	.832
	Int.par	.162
	Int.ext	.538
Fit.M * Links.M	Att.par	.324
	Att.ext	.558
	Int.par	.273
	Int.ext	.347
Error	Att.par	

	Att.ext	
	Int.par	
	Int.ext	
Total	Att.par	
	Att.ext	
	Int.par	
	Int.ext	
Corrected Total	Att.par	
	Att.ext	
	Int.par	
	Int.ext	

- a. R Squared = ,011 (Adjusted R Squared = -,011)
- b. R Squared = ,059 (Adjusted R Squared = ,039)
- c. R Squared = ,023 (Adjusted R Squared = ,002)
- d. R Squared = ,013 (Adjusted R Squared = -,008)

Appendix 2c: Complete results from MANOVA 3

Descriptive Statistics

	Perc.fit	Mean	Std. Deviation	N
Att.par	Low	4.1575	1.16481	73
	High	4.2246	1.24125	69
	Total	4.1901	1.19875	142
Att.ext	Low	4.3356	1.25015	73
	High	4.9420	1.24864	69
	Total	4.6303	1.28159	142
Int.par	Low	1.8904	1.01805	73
	High	1.9565	1.22995	69
	Total	1.9225	1.12246	142

Int.ext	Low	2.0479	1.11544	73
	High	2.2101	1.41006	69
	Total	2.1268	1.26524	142

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Att.par	39.210 ^a	7	5.601	4.593	.000
	Att.ext	42.377 ^b	7	6.054	4.287	.000
	Int.par	19.604 ^c	7	2.801	2.375	.026
	Int.ext	25.633 ^d	7	3.662	2.452	.021
Intercept	Att.par	43.847	1	43.847	35.956	.000
	Att.ext	67.935	1	67.935	48.111	.000
	Int.par	6.444	1	6.444	5.464	.021
	Int.ext	10.566	1	10.566	7.076	.009
Fit.M	Att.par	.482	1	.482	.395	.531
	Att.ext	2.555	1	2.555	1.810	.181
	Int.par	1.483	1	1.483	1.257	.264
	Int.ext	.688	1	.688	.461	.498
Innovat	Att.par	.148	1	.148	.121	.728
	Att.ext	.438	1	.438	.310	.578
	Int.par	.119	1	.119	.101	.751
	Int.ext	.941	1	.941	.630	.429
Interest	Att.par	30.563	1	30.563	25.063	.000
	Att.ext	16.793	1	16.793	11.893	.001
	Int.par	10.801	1	10.801	9.158	.003
	Int.ext	15.481	1	15.481	10.368	.002
Environment	Att.par	.183	1	.183	.150	.699
	Att.ext	.167	1	.167	.118	.731
	Int.par	.063	1	.063	.054	.817
	Int.ext	.015	1	.015	.010	.919

Fit.M * Innovat	Att.par	2.162	1	2.162	1.773	.185
	Att.ext	7.440	1	7.440	5.269	.023
	Int.par	.353	1	.353	.300	.585
	Int.ext	3.042	1	3.042	2.038	.156
Fit.M * Interest	Att.par	.410	1	.410	.337	.563
	Att.ext	.469	1	.469	.332	.565
	Int.par	.574	1	.574	.487	.487
	Int.ext	2.071	1	2.071	1.387	.241
Fit.M * Environment	Att.par	.001	1	.001	.001	.975
	Att.ext	.387	1	.387	.274	.601
	Int.par	3.976	1	3.976	3.371	.069
	Int.ext	4.555	1	4.555	3.051	.083
Error	Att.par	163.406	134	1.219		
	Att.ext	189.212	134	1.412		
	Int.par	158.044	134	1.179		
	Int.ext	200.085	134	1.493		
Total	Att.par	2695.750	142			
	Att.ext	3276.000	142			
	Int.par	702.500	142			
	Int.ext	868.000	142			
Corrected Total	Att.par	202.616	141			
	Att.ext	231.590	141			
	Int.par	177.648	141			
	Int.ext	225.718	141			

a. R Squared = ,194 (Adjusted R Squared = ,151)

b. R Squared = ,183 (Adjusted R Squared = ,140)

c. R Squared = ,110 (Adjusted R Squared = ,064)

d. R Squared = ,114 (Adjusted R Squared = ,067)

Appendix 2d: Complete results from ANOVAs

Descriptives (Perceived fit)

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Att.par	Low	73	4.1575	1.16481	.13633	3.8858	4.4293
	High	69	4.2246	1.24125	.14943	3.9265	4.5228
	Total	142	4.1901	1.19875	.10060	3.9913	4.3890
Att.ext	Low	73	4.3356	1.25015	.14632	4.0439	4.6273
	High	69	4.9420	1.24864	.15032	4.6421	5.2420
	Total	142	4.6303	1.28159	.10755	4.4177	4.8429
Int.par	Low	73	1.8904	1.01805	.11915	1.6529	2.1279
	High	69	1.9565	1.22995	.14807	1.6611	2.2520
	Total	142	1.9225	1.12246	.09419	1.7363	2.1088
Int.ext	Low	73	2.0479	1.11544	.13055	1.7877	2.3082
	High	69	2.2101	1.41006	.16975	1.8714	2.5489
	Total	142	2.1268	1.26524	.10618	1.9169	2.3367

ANOVA (Perceived fit)

		Sum of Squares	df	Mean Square	F	Sig.
Att.par	Between Groups	.160	1	.160	.110	.723
	Within Groups	202.456	140	1.446		
	Total	202.616	141			
Att.ext	Between Groups	13.044	1	13.044	8.356	.004
	Within Groups	218.546	140	1.561		
	Total	231.590	141			
Int.par	Between Groups	.155	1	.155	.122	.794
	Within Groups	177.493	140	1.268		
	Total	177.648	141			
Int.ext	Between Groups	.933	1	.933	.581	.485

Within Groups	224.785	140	1.606		
Total	225.718	141			

Descriptives (Explanatory links)

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Att.par	No	69	4.1213	1.20668	.14527	3.8043	4.3841
	Yes	73	4.2534	1.19238	.13956	4.0026	4.5590
	Total	142	4.1901	1.19875	.10060	3.9913	4.3890
Att.ext	No	69	4.5956	1.32918	.16001	4.2532	4.8918
	Yes	73	4.6622	1.24166	.14533	4.3952	4.9746
	Total	142	4.6303	1.28159	.10755	4.4177	4.8429
Int.par	No	69	1.7868	.93752	.11286	1.5501	2.0006
	Yes	73	2.0473	1.26366	.14790	1.7668	2.3565
	Total	142	1.9225	1.12246	.09419	1.7363	2.1088
Int.ext	No	69	2.0588	1.11718	.13449	1.7751	2.3119
	Yes	73	2.1892	1.39402	.16316	1.8802	2.5307
	Total	142	2.1268	1.26524	.10618	1.9169	2.3367

ANOVA (Explanatory links)

		Sum of Squares	df	Mean Square	F	Sig.
Att.par	Between Groups	1.235	1	1.235	.859	.541
	Within Groups	201.381	140	1.438		
	Total	202.616	141			
Att.ext	Between Groups	.449	1	.449	.272	.832
	Within Groups	231.141	140	1.651		
	Total	231.590	141			
Int.par	Between Groups	2.907	1	2.907	2.329	.162
	Within Groups	174.741	140	1.248		
	Total	177.648	141			

Int.ext	Between Groups	.931	1	.931	.580	.538
	Within Groups	224.787	140	1.606		
	Total	225.718	141			