# THE EFFECT OF BUNDLING ON CUSTOMER EVALUATION OF NEW PRODUCTS

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# Preface

This paper is my master thesis for the conclusion of my Master program in business and economics, with a major in Marketing from Buskerud and Vestfold University College. The thesis includes research on bundling and new product introduction. The topic was chosen after gaining an interest for successful introductions of new products in the lectures on Market Oriented Product Development with Kåre Sandvik.

By the help of supervisor Marit Engeset, we developed a research question and could start the review of the literature on the field. I found that the majority of prior research on bundling are focused on the pricing of bundles. Furthermore, only a few articles focus on new products. Due to the limited research on the topic and a belief that bundling could lead to successful introductions of new products, it was a natural choice to study the effects of bundling on the evaluation of new products.

The topic has been interesting to work with, and I have learned a lot throughout the process. I have met several challenges, but with hard work and help from Marit Engeset I have overcome these challenges.

Several people deserve to be acknowledged for their contribution to the result of this paper. I would first like to thank my supervisor Marit Engeset, professor at the Buskerud and Vestfold University College, campus Kongsberg. She has been patient and flexible, and been an important support for the thesis. In addition, my fellow student Miriam Rask Arnesen deserves to be acknowledged for her help in developing the new product, as well as general support during the processes of writing the thesis. The thesis has sometimes been a lonely process, but with her help and support I have managed to get through it.

Oslo, 01.05.14

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# Abstract

Firms increasingly rely on new products for their long-term survival. Yet, new products continuously fail at launch. The literature suggests that the customers and firms hold different valuation of new products. The firms overvalue their new products, while the customers overvalue products they currently use and associate new products with a risk. The perceived risk is formed by among others the lack of knowledge of quality and usage situations. Bundling might reduce the risk consumers would associate with a new product. This is because the reputation of the existing product would serve as a guarantee for the new product. This paper introduces bundling as a strategy for increasing the evaluation of new products. Additionally, it is argued that the proposed effect is contingent on the level of perceived risk of the new product and the brand equity of the product bundled with.

The hypotheses are tested in an experimental study of the evaluation of a new product. However, the results indicated that the hypotheses were not supported. The insignificant results might be caused by poor manipulation, poor fit between the bundled products or the experiment being an unrealistic situation. Further research is needed on the subject of bundling new products at different levels of perceived risk, where the limitations of this study are addressed.

# Table of Contents

# List of tables

# List of figures

# 1. Introduction

Firms spend billions of dollars to develop new products (Gourville, 2006), yet, over half of these fail at launch (Bowersox, Stank, & Daugherty, 1999; Lee & O'Connor, 2003a). In some industries, the failure rates reach 90 % (Gourville, 2006). Even with a well-managed new product development process, there is about 30 % failure rate for new product launch (Beard & Easingwood, 1996). The launch activities are often one of the most costly stages in the new product development process. According to Cooper (1995) as much as 46 % of the money corporations spend on new product development is spent on products that fail commercially or are cancelled prior to market launch. Yet, new products are essential for the survival of firms, as increasingly more of the total sales comes from new products (Di Benedetto, 1999).

An issue for firms launching new products is how to get the potential customers to try and then adopt the product. For the last couple of decades, researchers and practitioners have attempted to obtain insight into success factors of new product launches. There has been a considerable amount of research on the marketing mix of new products. Evidence suggests that quality on its own is not enough for a successful launch. New products of higher quality than other current alternatives continuously fail (Langerak, Hultink, & Robben, 2004). When the Coca-Cola Company introduced the "New Coke", it was a favourite in blind tests, and Coca-Cola Company had already spent a vast amount of money on new packaging, logo and an ad campaign. Subsequently, the product is known as "one of the worst marketing blunders in history (Green, 2013). The customers still preferred the classic Coke, to the "New Coke" when the drinks were labelled, despite the "new coke" performing better in blind tests. Coca-Cola Company withdrew the "New Coke" shortly after its launch.

One important reason for market launch failure is the lack of consumer acceptance for the new products. According to Gourville (2006) the adoption of new products lies mostly in the mind of the consumer, and not so much in the economic value of the product. Often new products require a behavioural change in for the consumers, and the firm may not take account for the consumers' psychological costs associated with this change. Gourville (2006) suggests that consumers overvalue what they currently own in comparison to other products they might obtain. In addition, firms overvalue the new products they develop. Customers need to understand the products and their benefits in order to be willing to adopt them, and

the gains by adopting the new products have to overcome the losses by not consuming the current alternative. The customers are familiar with the use and quality of the existing product. Customers have to understand the new product in order to evaluate it and form an attitude towards it. Evaluation and understanding of a new product is important for customer acceptance (Reinders, Frambach, & Schoormans, 2010). The perceived risk refers to the individual opinion of the probability that the product does not live up to its expectations. The customers form a perceived value of the product, where the perceived risk is considered. Therefore, the perceived value is commonly lower after the perceived risk adjustment. Likewise, the perceived risk for a risk-averse person is higher than for a risk-taking person. Yet, as more customers adopt the product, the uncertainty decreases and the value of the product increases. For customers to adopt the new product the perceived risk adjusted value needs to exceed the selling price (Kalish, 1985).

For the customers to overcome the uncertainty associated with new products, marketers use different strategies. Some of these are the use of free product samples and brand extensions. Another strategy for introducing new products may be bundling (Reinders et al., 2010; Schilke & Wirtz, 2012; Simonin & Ruth, 1995). Bundling has received a great deal of attention in research the last decade. Bundling is defined as the "sale of two or more separate products in one package" (Stremersch & Tellis, 2002, p. 56), and the strategy might be a method to reduce the perceived risk for potential customers of new products, as the new product is sold with other familiar products/brands. Customers perceive products with familiar attributes less risky (Reinders et al., 2010), and the perception of quality of an existing product are transferred to the new product (Choi, 2003).

This thesis aims for testing the effects of introducing new products, of different levels of perceived risk, in a bundle. There is reason to believe that the perceived value of a new product is increased by getting the consumers to associate the new product with an existing product. Additionally, the perceived risk is assumed to moderate the effect of bundling a product. In this paper, I will study bundling as a strategy for reducing the perceived risk and increasing the probability of customer acceptance of new product launches. Following this, the research question follows:

> *Does bundling of new product contribute to a better customer evaluation for new products, compared to selling the products separately?*

The remainder of the paper is organised in the following way. In chapter 2, I review the literature on the concepts relevant to the thesis, including customer evaluation of new products, the strategy of bundling, brand equity and perceived risk. Based on the literature review, I develop four hypotheses. Then, in chapter 3, I explain the methodology of the study, followed by a review of the results in chapter 4. Finally, I discuss the results, along with the practical implications, weaknesses of the study and suggestions for future studies.

# 2. Literature Review and Hypotheses

In the following chapter, I will present the concepts relevant to the thesis; new products, new product evaluation, bundling, brand equity and perceived risk. After defining and discussing the concepts and their dimensions, I will review earlier literature and findings relevant to the topic. Based on the prior research four hypotheses are formed.

## 2.1.   Introducing New Products

New products are ones that are perceived as new by at least some customers (Kotler & Armstrong, 1996). "A new product has a new form attained through technology which is the power to do work, that delivers benefits that the customer has a need or desire for. Further a new product essentially is of the right quality at the right time at the right cost" (Vijayan & Suresh, 2011, p. 26). In the literature, there are some variances in the definitions of new products. From the table below it is evident that there are differences in how specific the definitions are. Vijayan and Suresh (2011) present a definition that is very specific, in a way that the products must have a new form attained through technology. Similarly, Blythe (2012) explains that the new product should be better than the existing products. These specific definitions exclude the possibility of products similar to other existing products introduced by new brands. Thus, this paper presents a wider definition. In this paper, the definition of new products follows; *new products are goods, services or ideas that are new to at least some of the customers*.

*Table 2.1: New product definition*

| Author | Definition |
|---|---|
| Vijayan and Suresh (2011) | A new product has a new form attained through technology which is the power to do work, that delivers benefits that the customer has a need or desire for. Further, a new product essentially is of the right quality at the right time at the right cost. |

| Kotler and Armstrong (1996) | New product: a good, service, or idea that is perceived by some potential customers as new. |
| --- | --- |
| Blythe (2012) | New "better" products: a product that more closely meets our customers' needs than does the product it supersedes. |

There are several types of new products. Often the literature distinguishes between products new-to-the-firm and new-to-the-customer. An aspect of the new product is that it should meet some customer needs' better than the existing products on the market. Additionally, the literature consider products as new if existing products are offered in a new market. In the study by Simonin and Ruth (1995) the new products were ones that already exist in the market, but they were new to the firm with a new brand name. For instance, they suggested an existing toothbrush with a new brand name as a new product. These products will still have the issue with customer acceptance, as the customers were not familiar with the quality of this particular brand. Reinders et al. (2010) use radical innovations as new products in their study. The authors define radical innovations as products offering new technology, substantial greater customer benefits relative to the existing products, or that require a considerable behavioural change. Radical innovations are probably the most obvious type of new products.

Vijayan and Suresh (2011) classify new products into two dimensions; newness and characteristics. The dimension "degree of newness of the product" are categorised into new-to-the-firm, new-to-the-marketplace, and perceived newness by the buyer/user. The products new to the firm may be improved products, line- and brand extensions, and diversifications. The products new to the marketplace can be new products similar to the ones in the market, improvements of current products in the market, or products completely new to the market or the world. The consumers' perception of newness might be high when a product has changed packaging, price or brand. The second dimension of new products is characteristics. A product can be considered new for a variety of different reasons: it may perform entirely new functions, offer improved performance or

new applications of existing functions, be offered to a new market, reach more customers through lower cost, or an existing product may be a restyled.

Jobber (2010) categorizes new products into four categories; product replacements, additional new products to the existing products, new product lines, and "new to the world" products. The product replacement is the largest group of new product introductions, and involves improvements of existing products. The second category includes products additional to the existing product lines. For instance, adding a tooth-whitening product with the same brand name as a Colgate toothpaste. The next category, new product lines, accounts for about 20 % of all new product introductions, and refers to the firm moving into new markets. The fourth new product category is the "new-to-the-world" products, which creates completely new markets. However, this latter group only accounts for about 10 % of all new product introductions.

All of the classifications are similar in the way that they vary in how many new characteristics the new product include, and who would consider the product new. Following the newness and characteristics classification, the new-to-the-firm and new-to-the-customer dimensions fits within the newness category. The classifications suggested by Jobber (2010) would mostly be classified as new-to-the-customer. Both products new to the market and new to the firm classifies as new. Following, both groups face issues of customer acceptance. If a firm introduces a new product under a new brand name, the customers are unfamiliar with the quality of that specific product.

## 2.2. Customer Evaluation of New Products

One important goal for firms is to maximize profit to ensure growth and the long-term survival in competitive environments. Another goal might be to maximize market penetration. The primary goal for introducing a new product is often market penetration, then profit is the secondary goal (Stremersch & Tellis, 2002). Customers go through several stages when accepting a new product. New product acceptance refers to the adoption of products (Easingwood, Mahajan, & Muller, 1983). The process start with awareness of the new product, followed by an interest in obtaining information about it.

Then, the customers evaluate the product and decide if they want to purchase (Kotler & Armstrong, 1996). According to Gourville (2006) the adoption of a new product requires a behavioural change. Consumers often fear changes and the unknown. As a result, they might avoid new product and stick with the old ones.

A positive customer evaluation of the new product is essential for the acceptance of new product (Jhang, Grant, & Campbell, 2012; Reinders et al., 2010; Schilke & Wirtz, 2012). When a consumer evaluate a new product, the person weigh the benefits against the costs. If the benefits overweight the costs the consumer are more likely to adopt the product (Wang, Dacko, & Gad, 2008). In this thesis, I use the definition of consumer evaluation applied by Kotler, Keller, Brady, Goodman, and Hansen (2012): *customer evaluation is the use of available information to consider the products worth based on some personal decision criteria.*

In the marketing context, the customer evaluation of a new product is established by several indicators (Johnson, Herrmann, & Bauer, 1999). One of these variables is attitude towards the new product, which has been the primary determinant for success. Others have used variables such as intention to purchase, quality (Gaeth, Levin, Chakraborty, & Levin, 1991) and choice (Yadav, 1995). In this study, the customer evaluation of a new product is measured on an overall level.

## 2.3. Bundling

There has been little agreement around the definition of bundling. As seen in Table 2.2, researchers agree upon some aspects of the definition, such as including two or more products or services. Stremersch and Tellis (2002) and Simonin and Ruth (1995) define products as both goods and services. Despite these similarities, the definitions differ in their focus of the strategy. Some definitions consider bundling as a strategy of selling, as other consider it as a strategy of marketing the products together. In addition, some definitions include the selling at a special price, while other exclude the price from the definition. The literature still call for an agreement regarding the content of a bundle. For example, Salinger (1995) treats a pair of shoes as a bundle. However, Stremersch and Tellis (2002) proposes that bundles consist of separate products, i.e. products that serve

different markets. The products in a bundle ought to have a value on its own. Thus, a pair of shoes is not a bundle, since one shoe would not be valuable without the second shoe.

*Table 2.2: Bundling definition*

| Reference | Definition |
| --- | --- |
| Stremersch and Tellis (2002) | Bundling: sale of two or more *separate* products in one package |
| Lee and O'Connor (2003b) | *Bundling*: selling two or more products as a set for a single price |
| Simonin and Ruth (1995) | Bundling: the strategy of marketing two or more products and/or services as a "package" at a special price |
| Guiltinan (1987) | Bundling: is the practice of marketing two or more products and/or services in a single "package" for a special price |
| Olderog and Skiera (2000) | Bundling: grouping of products and (a) corresponding price-setting strategy |
| Reinders et al. (2010) | Use the definition from Stremersch and Tellis (2002) |
| Harris and Blair (2006a) | Bundle: two or more products (in) a single offering |

This paper will use the definition of bundling applied by Stremersch and Tellis (2002, p. 57); *Bundling is "the sale of two or more separate products in one package"*.

Bundling strategies might be pursued for various reasons; for example to reduce costs, to expand the market, and to improve product performance (Lee & O'Connor, 2003a). The way that bundling expand the market is by cross-selling, acquisition of new customers, and retention of existing customers (Guiltinan, 1987)

The literature has normally distinguished between pure-,mixed- and unbundling strategies (Adams & Yellen, 1976; Guiltinan, 1987; Simonin & Ruth, 1995; Stremersch & Tellis, 2002; Yadav & Monroe, 1993). Furthermore, the literature distinguishes between price

bundling and product bundling (Reinders et al., 2010; Stremersch & Tellis, 2002). Stremersch and Tellis (2002) gathered the characteristics of bundling into a single framework, where the bundles are characterized according to bundle form and bundle focus. The former refers to whether the bundle is pure or mixed. A pure bundle involves offering the products only as a bundle, i.e. the products are not available separately. In a mixed bundle, the products are available in a bundle and separately. The bundling focus distinguishes between price bundles and product bundles. Price bundling involves selling two or more products in a package with a discount, while product bundling involves integrating and selling the products in a package, regardless of price.

The products included in bundles have several names in the theory, depending on their role in the bundle. Yadav (1994) refer to a bundle anchor, which is the product that is first evaluated and form the basis of the bundle evaluation. Choi (2003) refers to the second product in the bundle as a tie-in product. Furthermore, Yadav (1995) refers to a price leader, which is the product in the bundle that is discounted.

### 2.3.1. Research on Bundling and Evaluation

The early literature on bundling strategies was very much analytical, as opposed to empirical (Yadav, 1994). Adams and Yellen (1976) explain the bundling in terms of the economic theory with the *consumer surplus.* They suggest that consumers adopt the bundle only when the reservation price for the bundle exceeds the bundle price, and that the surplus is greater from the purchasing the bundle than the products separately. Later Guiltinan (1987) proposes a normative framework that can be used to select potential price bundles for firms with many line products that are complementary. The bundling literature includes research both from the economic and the marketing literature. However, the two differs in their focus. The economic literature largely focus on the market equilibrium, consumer welfare, and public policy implications on bundling, and the marketing literature is more concerned with issues such as bundle price, perceived value and customer evaluations of bundles (Yadav, 1995).

Prior research on bundling strategies have often focused on pricing of the bundles (Gijsbrechts, 1993; Guiltinan, 1987; Johnson et al., 1999; Naylor & Frank, 2001; Tanford, Baloglu, & Erdem, 2012; Yadav & Monroe, 1993). In addition, the evaluation of bundles has received a substantial attention in the research (Harris & Blair, 2006a; Johnson et al., 1999; Reinders et al., 2010; Simonin & Ruth, 1995; Yadav, 1994). Some of these studies on evaluation will be presented below.

Yadav (1994) presented a paper on customers' evaluation of mixed-leader product bundles. Mixed leader bundling refers to bundles where one product is sold at a discount when the other product is sold at regular price. The author found evidence that the most important item of the bundle, perceived by the customers, is the anchor of the consumer evaluation of the bundle. In this experiment, there was no information on price or brand name presented. The consumers first evaluate the product perceived as the most important item in the bundle, and then adjustments of the bundle evaluation occur as more items are evaluated. These findings might suggest that the probability of acceptance will be dependent on what item in the bundle is the price leader. In his next paper, Yadav (1995) found that the bundle evaluation was highest when the most preferred item also was the price leader (discounted product).

Schilke and Wirtz (2012) studied the bundling of broadband services, including Internet access, Internet telephone, and Internet television. Their findings suggest that the perceived usefulness and the perceived ease of use positively influences the customers' attitude towards the bundle. Moreover, the attitude towards the bundle positively influence the customers' intention to use the bundle. Therefore, it is important to establish a bundle that is useful and easy to use.

The use of bundling for new product introductions have received limited research. Simonin and Ruth (1995) studied the bundling of personal care products under a new brand name, such as toothbrushes and toothpastes. They found that the prior attitudes of the brands in the bundle would positively affect the bundle attitude, and each of the products contributed equally towards the bundle attitude. Furthermore, the attitude towards the brand positively affect the reservation price of the new product. Choi (2003) developed a rationale for quality transfer from existing experience goods onto new

experience goods based on the information leverage theory. He suggests that the use of a product with established quality can benefit the new product by overcoming the asymmetry of information in the latter market. The mechanism is also found in brand extensions. Reinders et al. (2010) studied bundle evaluation and adoption for radical innovations. They found that the evaluation and purchase intention is higher when the new product is offered in a product bundle as opposed to offered separately. Additionally, they found that the effect of bundling on evaluation only exists for consumers with a low prior knowledge of the product domain.

The fit between the products in a bundle is found to have an impact on the evaluation of a product or bundle. Product fit is defined as "the extent to which customers perceive the two product categories of the bundled products to be compatible" (Reinders et al., 2010, p. 1128). In a study of radical innovation, Reinders et al. (2010) found that the new product's evaluation and adoption intention is greater when the product bundle is characterised with a high degree of fit, as opposed to a moderate fit. Similarly, Simonin and Ruth (1995) found that the fit between the bundled products moderates the relationship between the prior attitudes of the products and the bundle attitude.

Despite what is known about the field there is a call for more knowledge on the topic of new product introductions and the use of bundling strategies.

## 2.4.    Customer-Based Brand Equity

Brand equity is an important concept for bundling new products, because the new product is affected by the attitude of the products sold with when in a bundle (Simonin & Ruth, 1995), and the associations and quality perception might be transferred between the products (Choi, 2003). Consequently, the new product has more associations and knowledge to exploit on when the other products is of high brand equity. Brand equity has been studied from two different perspectives; the financial and customer-based perspective. The financial perspective measures the outcome of the customer-based brand equity. However, this study are focusing on the customer-based perspective of brand equity, which is the consumers' response to the brand name (Lassar, Mittal, & Sharma,

1995). This paper applies the definition of brand equity used by Keller (1993, p. 2): *"differential effect of brand knowledge on consumer response to the marketing of the brand".* Brand equity can be described as the value a brand name adds to a product (Hem & Iversen, 2003).

Brand equity consists of four dimensions; brand awareness, brand loyalty, perceived quality, and brand associations (Aaker, 2009; Keller, 1993; Yoo & Donthu, 2001). In some cases, a fifth dimension of brand equity is present; other proprietary brand assets. Yet, this dimension is not relevant to the consumer perception (Yoo & Donthu, 2001), and are therefore not included in this study.

*Brand awareness.* The brand awareness is related to the strenght of the brand or the trace in the memory of the consumers. A brand of high awareness will be identified by the customers under different conditions. Keller (1993) divides the brand awareness into two categories; the brand recognition and brand recall. The *brand recognition* relates to the customers' ability to remember prior exposure of the brand when given the brand as a hint. The *brand recall* relates to the consumers' ability to come up with the brand name when a product category is given.

Brand awareness is important for the consumers decision making because it is important that the consumer think of the brand when they think about the product category (Keller, 1993).
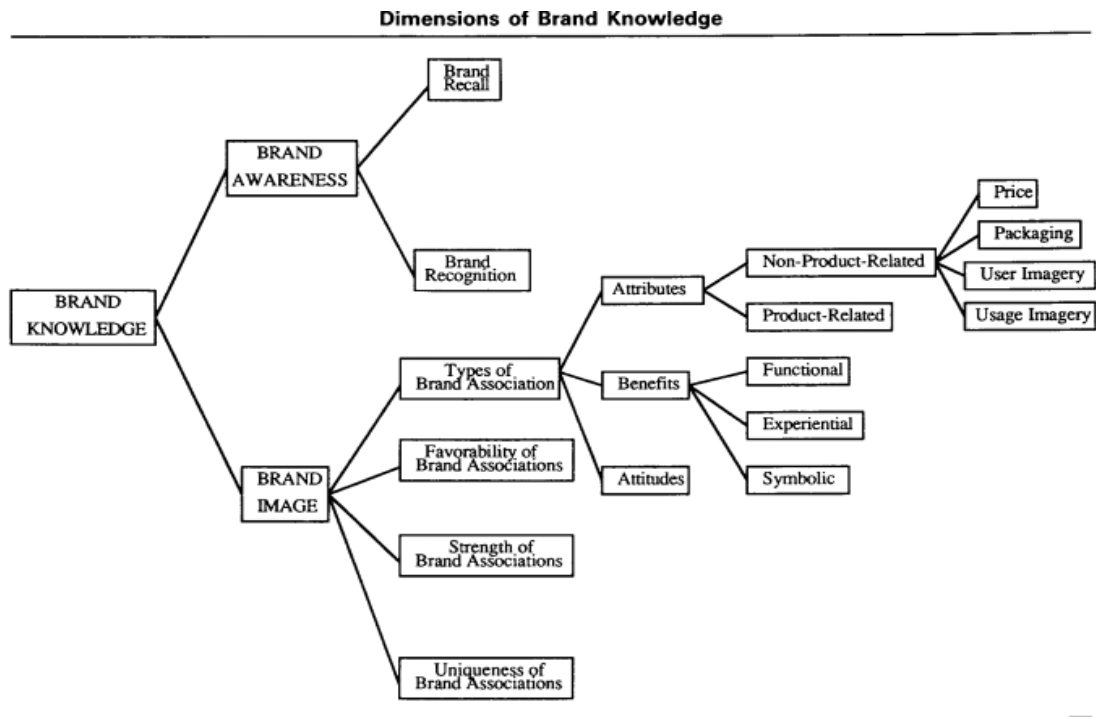
*Figure 2.1: Dimensions of brand knowledge (Keller, 1993: 7)*

*Brand loyalty*. According to Aaker (1991, p. 39) "the brand loyalty of the customer base is often the core of a brand's equity". Yet, the brand loyalty might stem from other dimensions of brand equity, such as brand associations or brand quality. Brand loyalty is defined as "the attachment that a customer has to a brand" (Aaker, 1991, p. 39).

*Perceived quality* is based on the consumers' opinion on the products' overall excellence or superiority (Yoo & Donthu, 2001).

*Brand associations.* Aaker (1991, p. 109) defines brand associations as "anything linked in memory to a brand", and suggests that all associations together form the brand image. Keller (1993) proposes four categories of categorization for brand associations; types, favourability, strength, and uniqueness. The categorization, types of brand associations, divides into attributes, benefits, and attitudes. Attributes refer the descriptive features to the product, both related to the physical product (i.e. colour), or non-product related attributes (i.e. price or usage-situation for the product). The second type of brand associations is benefits, which are the personal value the consumers hold in the product.

Brand attitudes are the overall evaluation of the brand. The attitudes are important for the consumer behaviour and purchase choice.

In addition to type of brand associations, there is possible to categorize the associations in terms of how favourable associations, the strength of connection to the brand node in the memory of the consumer, or the uniqueness of the brand associations in comparison with other competing brands. The brand associations that are both favourable, strong and unique belongs to a brand that make the differential response in brand equity (Keller, 1993).

There are reported different result around how many dimensions of brand equity exist. Some findings suggest three dimensions, while others found four dimensions.

## 2.5.    Perceived Risk

Consumers mostly make decisions with limited information available. As a result they face some degree of risk when considering a purchase (D. J. Kim, Ferrin, & Rao, 2008). When making a purchase decision the consumer evaluates the perceived gain against the perceived risk or loss. When the gain overweight the possible loss the consumer is willing to make a purchase (Gourville, 2006). In the study of online shopping, D. J. Kim et al. (2008, p. 546) define perceived risk as "a consumer's belief about the potential uncertain negative outcome from the online transaction". Dowling and Staelin (1994) suggest that the construct of perceived risk includes the two factors; probability and magnitude. Similarly, Arndt (1967) proposed that perceived risk consists of the two components importance and uncertainty. Perceived risk is a reaction by consumers when facing uncertainty and potentially undesirable outcomes of a purchase (Lim, 2003). Perceived risk can be understood as "a subjective expectation of loss" (Laroche, Yang, McDougall, & Bergeron, 2005, p. 253). In this paper the concept of perceived risk will follow the definition by Sarin, Sego, and Chanvarasuth (2003); perceived risk is an "*assessment of the probability and magnitude of potential negative consequences resulting from the purchase of a product offering*".

There literature includes several different types of perceived risk. For instance Jacoby and Kaplan (1972) proposed financial risk, physical risk, performance risk, social risk, and psychological risk. Another perspective was proposed by Roselius (1971) that conceptualized perceived risk by the type off loss that was possible after a purchase; time loss, hazard loss, ego loss, and money loss. The risk types suggested by Jacoby and Kaplan (1972) has been the most heavily and widely used in the literature, and will therefore be used in this study. However, there should be noted that all types of perceived risk rarely apply at the same time (Korgaonkar & Karson, 2007). Organisations can benefit from identifying the types of risk that is present in their situation, and then allocating the right resources to reduce the types of perceived risk present (Lim, 2003).

*Financial risk* refers to monetary loss (Lim, 2003), i.e. how the purchase of the product will affect the consumer's ability to purchase other products (Korgaonkar & Karson, 2007). However, this type of risk will not be the in focus in this study, as we wish to study the non-financial factors of new products. *Performance risk* is associated with the product itself and the consumers thoughts on the possibility that the product might be defect or working unsatisfactory (D. J. Kim et al., 2008; Rijsdijk & Hultink, 2003). Performance risk is likely to be very important in this study as the product is new and consumers are not familiar with the quality. *Social risk* refers to a possibility that the purchase and usage of the product reflects poorly on the person and that other people will think less of the person who uses the product. *Psychological risk* refers to the possibility that the usage of the product will damage the self-image of the person using it (Campbell & Goodstein, 2001). Additionally, it refers to the possibility that individuals will suffer mental stress because of the purchase (Lim, 2003). *Physical risk* refers to the extent which a product is harmful to a consumers' health or that the product does not meet the consumers' expectations of the appearance (Lim, 2003). Finally, *Time loss risk* refers to the possibility that the time spent on the product is better spent on something else (Lim, 2003). Time loss is not a dimension in the original dimensions proposed by Jacoby and Kaplan (1972), but it is used by some researchers.

## 2.6. Development of Hypotheses
### 2.6.1. Bundling

The evaluation of products are dependent on the considering the pros and cons of a products worth (Kotler et al., 2012), and the perceived value of a bundle affects the purchase intention. Purchase intention reflects the probability of a customer buying the new product (Reinders et al., 2010). In a bundle, the prior attitude to each of the products included contribute to the averaged bundle attitude (Simonin & Ruth, 1995). This suggests that the bundle attitude is likely to be higher when the new product is bundled with a product of high prior attitude. The consumers lack information about the new product and has little basis for their evaluation (Choi, 2003). Hence, the prior attitude of the new product is likely to be low. Simonin and Ruth (1995) found that the attitude towards the bundle affects the individual items reservation price in product bundles. The reservation price of a bundle reflects the worth the consumer puts on the product. The increased reservation price increases the purchase intention, as the perceived value is greater (Chang & Tayi, 2009). When a new product bundled with a product of high prior attitude, the total bundle attitude is positively affected by the prior attitude, which then positively increase the new product's reservation price. This suggests that the evaluation of a new product is likely to be higher when offered in a bundle, which is also supported in the study by Reinders et al. (2010). The same effect of leveraging on the established brand is utilised in brand extensions.

Washburn, Till, and Priluck (2004) suggest that merely the strategy of pairing products increase the customer evaluation. Since the bundle includes more than one product, the consumer receive added value by purchasing the products together. J. Kim, Bojanic, and Warnick (2009) found that the consumers benefit from purchasing bundles offered by online travel agents compared to purchasing the products separately. Bundling add value to the customers, because the bundles might be convenient (Stremersch & Tellis, 2002), reduces the search cost and simplifies the purchase decision process (J. Kim et al., 2009). However, the added perceived value from the reduced search cost is dependent on the customers' motivation to process information (Harris & Blair, 2006a).

The consumers' willingness to process information is higher when the product evaluated is of high complexity. Beldona, Morrison, and O'Leary (2005) studied the antecedents of purchase behaviour in the travel industry. They found the primary determinant of purchase for products of low complexity to be price. Furthermore, information aspects and ease of use were the most important factors for products of high complexity. These findings are likely to affect the way firms think about bundling products together. It is essential that important aspects of the bundle, based on type of complexity, are covered. Low complex products need a price focus, while high complex products need focus on information and ease of use.

As mentioned earlier product fit is important for the success of a bundle. Reinders et al. (2010) explain fit as products that are complementary. The consumers must believe the product categories have a fit in order to see the product or bundle as a logic purchase. Bundles add value when the products are complementary or related (Harris & Blair, 2006a; Reinders et al., 2010). Reduced search costs for complementary products might be a benefit for the customers when bundling the products together. In the case of product bundles, it is especially important that the bundled products are complementary. In product bundles, there is not a requirement of a special price or a discount. However, most consumers expect bundled products to cost less than the products sold separately (Tanford et al., 2012). If a product bundle is not discounted, and not complementary in a way that the purchase of the products together add value, the consumers are more willing to purchase the products separately. Based on the prior subsection I propose the following hypothesis:

> *H1a:    Consumer evaluation of the new product is more positive when a new product is sold in a bundle than sold alone.*

### 2.6.2.   Bundling and Perceived Risk

Perceived risk might include, among others, compatibility risks and quality risks. Customers are unfamiliar with new products and therefore are unsure what quality and compatibility to expect. Bundling a new product with an existing product of good quality,

will reduce the perceived risk regarding unknown quality in the new product, by transferring the expectation of quality from the existing to the new product (Choi, 2003). When consumers think about compatibility of a new product and other products, they are more likely to choose a bundle, than to choose the products separately (Harris & Blair, 2006b). Bundles often offer one warranty for all the items in the bundle (Lee & O'Connor, 2003b), which should imply that the new product and the other products are compatible.

Several researchers have suggested that the perceived risk is higher for unbundled products, than for bundles (Harris & Blair, 2006b; Wilson, Weiss, & John, 1990). Harris and Blair (2006b) performed a study on the compatibility risk of products, tested on home stereo receivers and speakers. The risk involves the perceived possibility of low functionality and performance of the bundle items. The results indicated that when increasing the salience of compatibility risk the preference for bundles increases. Furthermore, Schilke and Wirtz (2012) found evidence that perceived risk has a significant impact on the customers' attitude towards the bundle, mediated by the usefulness of bundles. Sarin et al. (2003) used product bundling as a strategy for reducing the perceived risk for high-tech products. They suggest that bundles reduced the perceived risk of compatibility of products in a product system. In a study in the retail industry Sweeney, Soutar, and Johnson (1999) found that perceived value is a mediator between perceived risk and willingness to buy. By reducing the perceived risk, the perceived value is increased, followed by an increased willingness to buy. In addition, perceived quality has an impact on perceived risk.

The perceived risk would be greater for a product that the consumer feels have great importance and impact on the life, and that at the same time uncertainty of how the product will perform. The bundling of a new product to an existing product is assumed to have greater effect than selling the new product alone (hypothesis 1a). Since, high perceived risk products are evaluated worse than low perceived risk products, the effect of bundling on new product evaluation is likely to be greater when the perceived risk is high. This because of the consumers' need of additional assurance that the product is worth the money and time spent on it. By bundling the new product, there is additional

value by purchasing the products together and the perceived risk is spread over two products. I propose the following:

> *H1b: The effect proposed in H1a is stronger (weaker) when perceived risk associated with the new product is high (low).*

### 2.6.3. Brand Equity

Bundling might be explained by the leverage theory (Waugh, 2004). The leverage theory explains bundling "as an instrument enabling a firm with some monopoly power in one market to use the leverage provided by this power to achieve sales in, and thereby monopolize, a second market" (Waugh, 2004, pp. 117-118). By using a bundling strategy, the new product is able to exploit the reputation from one market and overcome the customers' lack of knowledge about reputation and quality in the new product market (Choi, 2003).

A new product bundled with a high brand equity product, is likely to include mechanisms of transferring both the affect towards the brand and of knowledge of quality from the existing to the new product. Affective commitment to brands is a major determinant of customer loyalty (Hansen & Hem, 2004). Affect refers to the feeling a customer has towards a product, such as liking or fear (Blythe, 2012). These feeling are part of the evaluation of a product. Similarly to the mechanism found by Simonin and Ruth (1995), there is believed to be a transfer of affect from the existing product to the new product, by getting the consumers to associate the existing brand with the new brand.

Grewal, Iyer, Krishnan, and Sharma (2003) suggest that by creating an expectation of quality in the service, the perceived value will increase, and hence the evaluation and purchase intention. It is likely that bundling a new product to an existing product of good quality will increase the perceived value of the new service, and therefore should be a good strategy for getting the potential customers to try the product. One of the dimensions of brand equity is quality perceived by the customers. Hence, a high brand equity product should be perceived as of higher quality than a low brand equity product.

Bundling can be used to signal strength, reduce the uncertainty of new products, and give an idea to the customer that the new product has the same quality as the second bundled product. Consumers rely on credible brands in situations when they hold incomplete information about new products. The credibility of a new product is probably transferred from the high brand equity product, since the credible brand is willing to stake its reputation for the new product. Consumers are likely to expect that high quality brands will make an alliance with other high quality brands to avoid negative impact on the brand (Sarin et al., 2003). Choi (2003) suggests that when a new product of unknown quality is bundled with a well-known product of high quality, it transfers the perception of high quality to the new product. The new product benefits from the reputation of one product to overcome the lack of reputation in the new market. Furthermore, perceived quality has an effect on perceived risk. For radical innovations, the evaluation is often negative due to the incompatibility between the existing products and the new products (Reinders et al., 2010). Adding attributes that the customers are familiar with generally improves the evaluation of the products. Hence, customers are likely to perceive a new product as more familiar in a bundle, than sold separately. Based on the previous discussion I suggest the following hypothesis:

> *H2a: Consumer evaluation of the new product is more positive when the new product is bundled with a high brand equity product than with a low brand equity product.*

### 2.6.4. Brand Equity and Perceived Risk

Researchers have not agreed on the relationship between perceived risk and trust. Some researchers find a linear one-way relationship between trust and perceived risk, as others find a two-way relationship between the two. There is also a linear relationship between perceived risk and adoption. Also perceived risk as a moderating effect on the relationship between trust and willingness to buy is found. Due to the lack on congruent results Lim (2003) suggests that trust and perceived risk is closely related. A bundle

including a high brand equity product should impose an enhanced trust in the bundled products. Furthermore, the trust is even more important when the new product is of high perceived risk.

Perceived risk is found to be an antecedent to involvement, which is especially the case when the product is of high price and the potential monetary loss is high. Involvement with a brand is commonly known as brand loyalty (Vincent-Wayne, 1999). As brand loyalty is a dimension of brand equity, perceived risk should have some linkage with brand equity. Brand loyalty has shown to be a major source for reducing risk (Vincent-Wayne, 1999).

Arndt (1967) found differences in the customers preferences of high perceived risk products and low perceived risk products. He suggested that high-risk perceivers were less likely to buy a private label brand than low-risk perceivers were. High-risk perceivers also tended to seek additional information of the product, such as word-of-mouth. Thus, new products perceived to have high risk, should have a better evaluation when associated with a product of high brand equity, compared to a low brand equity product. Based on the discussion above the following hypothesis is proposed:

*H2b: The effect proposed in H2a is stronger (weaker) when associated risk connected with the new product is high (low).*
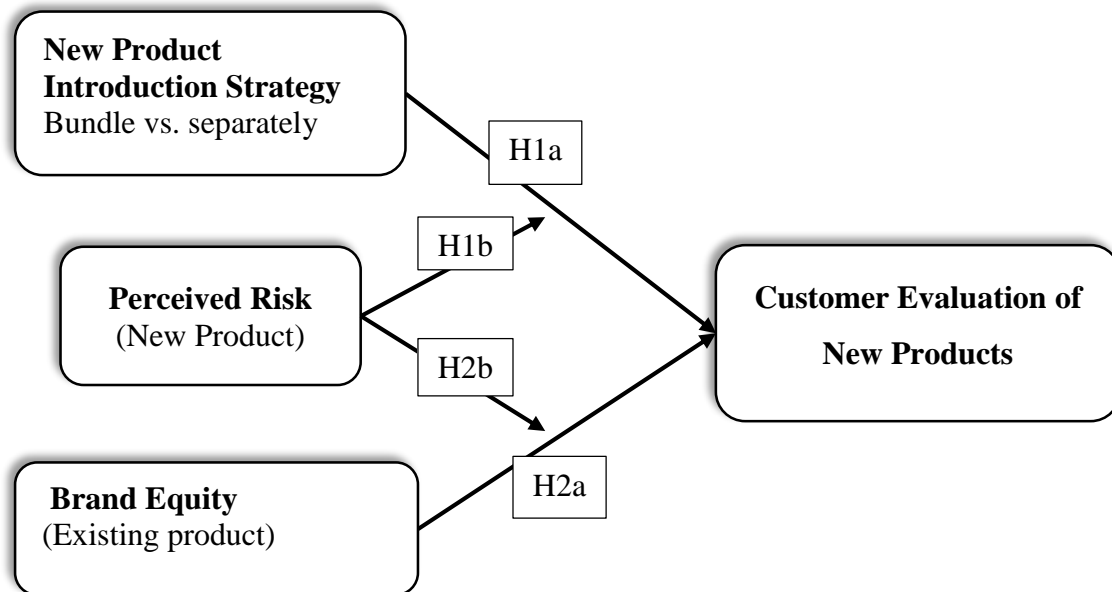
*Figure 2.2: Research Model*

# 3. Methodology

The aim of this paper is to study the effect of using a bundling strategy for increasing the probability for successful product introduction. In the previous chapter, I discussed the concepts relevant to the study, and hypotheses were developed. The research model is of causal character, which limits the methodological possibilities. In this chapter, I will discuss how the research model is best tested, and concludes with a review of the chosen design and the development of manipulations. Then, I present the pre-tests of the study, including their aim, procedure and results. Finally, there is a presentation of the procedure for the main experiment.

## 3.1. Choice of Research Design

The research design is a strategy for collecting the desired information, and for answering the research question. The choice of a research design is critical for a reliable, valid and successful study. Research designs can broadly be categorized into three different approaches (Grønhaug, 1985; Selnes, 1999);

- Explorative design
- Descriptive design
- Causal design

The explorative design is applicable when there is a poorly defined research problem, and the dimensions and relations are unclear. The descriptive design is applicable in research problems where there is a well-structured research question, but the aim is not to determine a causal effect. Finally, the causal design is applicable where the research questions includes a causal effect between to variables (Grønhaug, 1985), i.e. X causes Y. The aim of this study is to find whether bundling will cause a higher evaluation of a new product than to sell the new product on its own. Based on the type of research question presented in this study a causal design is suitable. The research question is precise and it involves a causal relationship. The research design will be an experiment, which are considered powerful when studying causal relationships (Edmonds & Kennedy, 2013). In

experiments, treatments of the independent variables are utilised in order to find an effect on the dependent variable. For a causal design it is desirable to maintain the conditions for causality, including association, temporal precedence and no plausible alternative explanations (Cook & Campbell, 1979).

### 3.1.1. The Requirements for Causality

In research one can never be certain that there is a causal relationship, but researchers are talking about a probabilistic causal relationship between variables (Selnes, 1999). One might find relationships between test scores even though they are not of a causal character. In order to conclude with a causal relationship between variables, three requirements must be met (Gipsrud, Olsson, & Silkost, 2008; Selnes, 1999):

1. Non-spuriousness (isolation)
2. There must be a covariance between X and Y (association)
3. X must occur before Y in time (temporal precedence)

The requirement of isolation/non-spuriousness (1) implies that there cannot exist any alternative explanations for the statistical effect found in a study between two variables (Frankfort-Nachmias & Nachimias, 2008). This requirement is also known as internal validity (Edmonds & Kennedy, 2013; Selnes, 1999). In this study, the isolation requirement was fulfilled by employing an experiment on undergraduate students of economics and leadership at Buskerud and Vestfold University College, campus Kongsberg. It is common to consider students as a homogeneous group (Peterson, 2001), which suggests disturbing factors might influence them similarly. Hence, it reduced the need for control variables. Secondly, the experiment took place in a lecture, which was considered as a laboratory under controlled settings. Experiments are the best design for fulfilling the isolation requirement, as one are quite certain that the treatment cause the effect. The treatments were controlled up against a control group and the environmental influence were controlled (Selnes, 1999). Thirdly, control variables were included in the study. To increase the internal validity in surveys, measurements of other plausible explanations can be included to exclude their effect on the dependent variable, and

therefore reject the alternative explanation. Finally, the experiment also included randomisation of treatments. Random sampling is an example of an action that can be applied for a better isolation (Bollen, 1989).

The requirement for association (2) implies that two variables have to correlate, i.e. different levels of X have the corresponding different levels of Y (Selnes, 1999). When the cause is present, the effect should be present, and when the cause is absent, the effects should be absent (Bollen, 1989). To fulfil this requirement there has to be present a statistical significant correlation between the variables, and this correlation cannot be caused by some coincident (Selnes, 1999). In this study, the requirement of association was satisfied by analysing the difference between a treatment group and a control group, and by analysing the difference within the group. There is a chance manipulations and measures are not working as intended, and resulting in no effects found (Selnes, 1999). Yet, lack of significant results in an experiment does not mean that the hypotheses are wrong, since measurement errors might be a disturbance to the results. The chance of measurement errors were in this study minimised by using multiple indicators for the concepts, and a 7-point Likert scale that capture the nuances in the concepts (Berry & Feldman, 1985).

One cannot talk about a causal relationship without knowing the casual direction. The requirement of temporal precedence (3) implies that the cause must happen before the effect in time, i.e. X has to occur before Y (Cook & Campbell, 1979; Selnes, 1999). In this study, the effect was observed after the manipulations were given. However, in some situations, there might be a time lag between the manipulation and the effect, and hence the researcher cannot find an effect (Cook & Campbell, 1979; Selnes, 1999).

### 3.1.2. Experimental Design

The term experiment means "test" (Cook & Campbell, 1979), i.e. a test of effects of a manipulation. Following are some of the benefits associated with experiments (Cook & Campbell, 1979; Edmonds & Kennedy, 2013; Frankfort-Nachmias & Nachimias, 2008):

- Manipulation of the independent variables

- Control of other conditions that might explain the cause and keep external forces outside
- Compare effects of different treatments and interactions

Experiments as a research design are categorised into true- and quasi-experiments. A true-experiment is based on a random assignment of subjects to the experimental groups, while a quasi-experiment does not involve random assignment (Mitchell & Jolley, 2013). Based on the causality requirements discussed in the previous subsection, true experiment was the most appropriate research method for this study. This type of experiment allows for randomisation of treatments, which increase the isolation.

In addition, experiments distinguish between field- and laboratory experiments. Field experiments are performed in the environment where the phenomenon naturally occur, while laboratory experiments are conducted in a closed room with a designed situation with the phenomenon. This study involved a true experiment in a laboratory. A true experiment is the most powerful design for finding causal relationship, and it allows a high degree of control of the surroundings in order to minimise the external influence on the phenomenon (Gipsrud et al., 2008).

This study employed a between-subjects factorial approach, as there were enough participants available and the approach allows for random assignment of different treatments and comparison of the treatments (Edmonds & Kennedy, 2013). The factorial design is used when more than one independent variable are analysed in one single experiment, and they allow testing of how two treatments interact, as well as testing the main effects (Cook & Campbell, 1979; Edmonds & Kennedy, 2013; Mitchell & Jolley, 2013). In this study, the interaction refers to how brand equity of the additional product and perceived risk of the new product interacts. Due to limited time and the scope of this master thesis, the effects were only tested after the treatment was given.

To summarise, the experiment in this study is a 3 (no bundle/low brand equity bundle/high brand equity bundle) x 2 (low/high perceived risk) *between-subjects factorial posttest design*. The chosen design adds to a total of six groups (see Tabel 3.1).

*Table 3.1: Experimental design*

| Experimental groups | No bundle | Low Brand Equity Bundle | High Brand Equity Bundle |
|---|---|---|---|
| Low perceived risk | 1 | 3 | 5 |
| High perceived risk | 2 | 4 | 6 |

## 3.2.  Validity

Validity refers to the extent in which the research answers the research question of the study (Edmonds & Kennedy, 2013). There are several types of validity, including internal validity, external validity, construct validity and statistical conclusion validity.

**Internal validity** refers to the extent which the independent variable cause the variation in a dependent variable, as opposed to other external factors (Edmonds & Kennedy, 2013). The internal validity was discussed in the prior chapter of causality. The true experiment, with its random assignment of treatment, reduces threats to the internal validity and controls for selection bias (ensure equality in the groups) (Edmonds & Kennedy, 2013). However, it has to be recognised that laboratory experiments do not give realistic situations and therefore reduces the external validity (Ringdal, 2007; Selnes, 1999).

**External validity** refers to the extent in which results can be generalised to apply to the whole population, relevant setting, treatments or outcomes (Edmonds & Kennedy, 2013). The issue with internal and external validity is that they often are in conflict. The isolation of an experiment creates an unreal situation. Hence, the experiments results are not externally valid in other situations. Yet, many argue that it is important to establish the internal validity first (Mitchell & Jolley, 2013). In this study, the internal validity was the focus.

**Construct validity** are concerned about whether the measures or manipulations actually measure/manipulate what they claim (Mitchell & Jolley, 2013). The measures are not

supposed to capture other concepts so that there is a confusion (Selnes, 1999). The items covering a concept must all load on one factor. This means that there must be compliance between the theoretical concepts and the measures. One can never with certainty state that a construct is valid, but it is possible to assume the validity after analysing the construct validity (Mitchell & Jolley, 2013). An analysis of construct validity is necessary for drawing conclusions about the research's findings and for the results to be meaningful, interpretable and generalizable (Reve, 1985).

Construct validity consists of four dimensions; content validity, convergent validity, discriminant validity and internal consistency (reliability) (Mitchell & Jolley, 2013). Each of the constructs of the study have undergone each of the four construct validity dimensions, and the results are presented in the following subsection.

*Content validity* refers to the extent in which the measures represent an adequate level of relevant dimensions, skills and knowledge (Mitchell & Jolley, 2013). A good content validity may be achieved by consulting with literature or other experts on the subjects, such as researchers and professors. A requirement for a good content validity is the use of multiple items (Reve, 1985); i.e. the concepts are measured through more than one dimension or characteristic.

*Convergent validity* refers to the extent in which the items of one construct correlate with the other items of the same construct (Mitchell & Jolley, 2013). The items correlates because they all measure the same construct, and not related to a different constructs. Frequently, a factor analysis is used to analyse the convergent validity, where it is possible to see if the items load on the same factor. If the items load on another factor the item is measuring something else than the construct aimed for. The factor loadings of a concept are required to be >.3, but should preferably be >.5.

In the theory, the *discriminant validity* and divergent validity is often used interchangeably. The discriminant validity are possible to test both on an indicator level and on an overall concept level. The discriminant validity was assessed on an indicator level. The discriminant validity refers to the extent in which it can be proven that the items are not measuring another construct than what supposed to (Mitchell & Jolley,

2013). This means that the items for perceived risk must differ from the items of new product evaluation. The variables that do not meet the requirement should be discarded. For a variable to be unrelated to the other variables there is a requirement the item only to load on one construct, or a close to zero correlation between the variables (<0.2) (Mitchell & Jolley, 2013). The difference between the correlations across the factors should be greater than 0.2.

*Internal consistency* is a reliability measure that refers to the data's trustworthiness, stability and possibility of replication. For a variable to be internally valid it has to be free for measurement errors (Reve, 1985). The internal consistence can be proven by showing that participants that score high in one item in a dimension of a concept also scores high in a second item of a dimension. This needs to be an objective statistical evidence, such as a high inter-item correlation (>.35), split-half reliabilities (>0.85), or Cronbachs alphas (>.85) (Mitchell & Jolley, 2013). Croncachs' alpha is the most commonly used measure for reliability, but the requirements of the Cronbachs alpha has little agreement in the theory. Churchill Jr (1979) suggests that in early stages of measure development, a lower Cronbachs alpha is sufficient (<.5), and in later stages the level should be above .9. Gipsrud et al. (2008) suggests a Cronbachs alpha should be above 0.7. Yet, the value should not be too close to 1. The Cronbachs alpha increase when more indicators are included. Hence, a construct containing 3 items, is likely lower than one containing 6 items.

The construct validity of the study's variables are assessed in chapter 4.2.

Finally, **statistical conclusion** validity refers to the extent in which the relationship between the predictor and the outcome variable is statistically accurate. The statistical conclusion validity was assessed by assuring that the assumptions for parametric tests were fulfilled. The assessment is presented in chapter 4.5.

### 3.3. Development of Measures

This section review the process of measure development based on Bollen (1989s)s four-step model, that according to the author can be a tool for ensuring good and meaningful measures for surveys or experiment;

1) Define the concept
2) Identify the dimensions and the latent variables that represent them
3) Find measures for the latent variables
4) Specify the relation between the measures and the latent variables

The process starts with a theoretical definition. A theoretical definition are composed by one or several latent variables, which can be measured through more concrete and observable variables. Bollen (1989) puts great emphasize on the importance of incorporating a relation between the latent variables and the observable variables. Bollen and Lennox (1991) distinguish between reflective and formative measurement models. In the reflective measurement models, the latent variables affects the indicators, and the indicators correlate with each other as the same latent variable affects them. In a formative measurement model, the indicators determine the latent variables. The indicators in a formative measurement model are often referred to as cause indicators. The direction of the relationship between the indicators and the latent variable is the major difference between the two models. The discussion of formative and reflective measurement models are highly relevant as the type of model affects the results of convergent and discriminant validity analyses.

Many factors might influence the measure, and making it vary from the concept it intend to measure. Churchill Jr (1979) explains that the functionally measures can be summarized like:

$$X_o = X_T + X_S + X_T,$$

Where $X_o$ is the observed score, the $X_T$ is the true score, $X_S$ is the systematic source of error and $X_T$ is the random source of error. Researchers aim for reducing the random and systematic errors as far as possible for the maximization of the construct validity.

The theoretical definition should thoroughly specify characteristics with the concept. In chapter 2 of this thesis, the concepts relevant to the study have been explained and defined, and the dimensions of each concepts are discussed. Therefore, step 1 and 2 in the measure development process, are performed in chapter 2. Following, step 3 and 4 in the measurement development process are reviewed for each of the concepts in the thesis.

The study operates with four different types of variables; independent variables, dependent variables, moderator variables and control variables. The independent variables are predictors to an outcome variable (Antonius, 2013). In an experiment, the independent variables are manipulated (Mitchell & Jolley, 2013). The dependent variable is a concept affected by other factors, such as the independent variables (Antonius, 2013). A moderator variable can be a pure- or quasi-moderator. A pure moderator only has an effect on the relationship it moderates, while a quasi-moderator additionally has a direct effect on the dependent variable (Sharma, Durand, & Gur-Arie, 1981).

All the scales used in the thesis are multiple-item scales, which reduces the chance of measure errors (Berry & Feldman, 1985).

### 3.3.1. The Measures for Pretest 1

In pretest 1, the product evaluation and perceived risk was measured. The measure of product evaluation was based on the product evaluation measures by Reinders et al. (2010) and intension to purchase a new product by Lehmann and Pan (1994). Perceived risk is in this article operationalized based on the definition by Kaplan, Szybillo, and Jacoby (1974), and applies the measure by Suplet, Suárez, and Martín (2009). The questions is presented in appendix A.

Due to the lacking construct validity of the measures from pretest 1, both the evaluation scale and the perceived risk scale were amended.

### 3.3.2. New Product Evaluation

The measure of purchase intention was measured through three items developed based on the study by Lehmann and Pan (1994). These items (question 1-3) measure choice, the degree in which a product is acceptable, and to what extent the product would be evaluated. Choice is the most important measure of intention, but with the two other questions, more nuances of the concept are captured. In addition, four question were developed independently. Question seven covers intention to purchase, and covers the same dimension as question 2. Question 4-6 were developed independently, but they are often found as components of evaluation scales in other research. For instance, Reinders et al. (2010) include "bad-good" and "unattractive-attractive" products, and Campbell and Goodstein (2001) include items of "bad-good" and "unappealing-appealing" products. The items were evaluated on a 7-point, Likert scale ranging from 1 *(strongly disagree)* to 7 *(strongly agree).* The scales includes a natural centre, which is desirable for a neutral response option. Additionally, it includes adequate nuances in the response options. A summary of the items used to measure of evaluation is showed in Table 3.2.

*Table 3.2: Customer Evaluation Scale*

**Customer Evaluation of a New Product scale**

| *Norwegian* | *English* |
|---|---|
| 1. *Vio Alpine* er absolutt et akseptabelt produkt for meg | 1. *Vio Alpine* is an acceptable product for me |
| 2. Vio Alpine er en alpinbrille jeg kunne kjøpt | 2. *Vio Alpine* is a definitely goggle I could have bought |
| 3. Vio Alpine er en skibrille jeg absolutt ville vurdert dersom det var aktuelt for meg å kjøpe skibriller | 3. *Vio Alpine* is definitely a goggle I would consider purchasing if I were to purchase goggles. |
| 4. Vio Alpine virker alt i alt svært attraktivt for meg | 4. *Vio Alpine* seems like an overall attractive product |
| 5. Vio Alpine virker som en bra skibrille | 5. *Vio Alpine* seems like a good goggle |

| | |
|---|---|
| *6.* Dersom en venn skal ha skibriller kommer jeg til å anbefale Vio Alpine for ham/henne | 6. If a friend of mine were to have goggles I would recommend *Vio Alpine* |
| *7.* Jeg kunne godt tenke meg å kjøpe Vio Alpine | 7. I would like to purchase *Vio Alpine* |

### 3.3.3. Brand Equity

In the present study, the scale of brand equity by W. G. Kim, Jin-Sun, and Kim (2008) was applied. In their study of the influence of brand equity on perceived value and revisit intension in the hospitality industry, they used the measures of brand awareness, brand loyalty and brand associations as suggested by Yoo and Donthu (2001). Yoo and Donthu (2001) paper gets a validated measure of brand equity. Their measurement scale is based on the conceptualization of brand equity by Aaker (1991) and Keller (1993). This scale has been the most widely accepted and validated scale for brand equity (W. G. Kim et al., 2008). Together brand awareness, brand loyalty and brand associations form the measure of brand equity in this study. In the original scale, the dimension of brand quality was also included. However, in this study brand quality is excluded as the sample is drawn from a population that does not necessarily are familiar with the quality of the specific brand or hotel. Additionally, there might be differences in the quality between the hotels within the same hotel chain.

The items were evaluated on a 7-point, Likert scale ranging from 1 *(strongly disagree)* to 7 *(strongly agree)*. W. G. Kim et al. (2008) used a 7-point Likert scale in their study and Yoo and Donthu (2001) used a 5-point Likert scale. The scales both includes a natural centre, which is desirable for a neutral response option. This study chose to apply the 7-point Likert scale as used by W. G. Kim et al. (2008) as they studied a similar industry and situation. The 7-point Likert scale also allows more nuances in the responses than a 5-point Likert scale.

The brand equity construct consists of three dimensions; brand awareness, brand loyalty and brand associations. A summary of the items used to measure brand equity and the

item's relationship to the latent variables (dimensions) is presented in Table 3.3. The scale are adapted to each situation by replacing "*hotellet*" with the brand name of the hotel analysed.

*Table 3.3: Brand Equity Scale*

**Brand Equity Scale**

| Norwegian | English | Dimension |
|---|---|---|
| 1. Jeg kjenner til *hotellet* | I am aware of the hotel | |
| 2. Jeg kan gjenkjenne *hotellet* blant andre konkurrerende merker | I can recognize the hotel among other competing brands | Brand awareness |
| 3. Jeg vet hvordan *hotellets* fysiske utseende er | I know what the hotel's physical appearance looks like | |
| 4. Jeg ser på meg selv som lojal mot *hotellet* | I consider myself to be loyal to the hotel | |
| 5. *Hotellet* ville vært mitt førstevalg | The hotel would be my first choice | Brand Loyalty |
| 6. Jeg ville med stor sannsynlighet byttet til et annet hotell enn *Hotellet* dersom et annet hotell har et kampanjetilbud (Reversed) | I am very likely to switch to another hotel brand that runs promotions (Reversed) | |
| 7. Jeg kommer raskt på noen egenskaper ved *hotellet* | Some characteristics of the hotel come to my mind quickly | |
| 8. Jeg kommer raskt på symbolet eller logoen til *hotellet* | I can quickly recall the symbol or logo of the hotel | Brand associations |
| 9. Jeg har vanskeligheter med å forestille meg *hotellet* (reversed) | I have difficulty in imagining the image of the hotel in my mind (reversed) | |

### 3.3.4. Perceived Risk

The measure of perceived risk was adopted from the scale used by Laroche et al. (2005). In their study of three intangibility dimensions on perceived risk and consumer's ability

to evaluate goods and services, they developed a general measurement scale of perceived risk that measure the negative consequences of a purchase.

The items were evaluated on a 7-point, Likert scale ranging from 1 *(strongly disagree)* to 7 *(strongly agree).* Laroche et al. (2005) used a 9-point Likert scale in their study. Yet, other scales in this study use a 7-point scale it may be easier for the participants with a scale with the same amount of points. The scale includes a natural centre, which is desirable for a neutral response option, and it includes adequate nuances in the response options. A summary of the items used to measure perceived risk is presented in Table 3.4.

*Table 3.4: Perceived Risk Scale*

**Perceived Risk Scale**

| Norwegian | English |
|-----------|---------|
| Det vil sannsynligvis være feil av meg å kjøpe Vio Alpine | There is a good chance I will make a mistake if I purchase Vio Alpine. |
| Jeg har en følelse av at bruk av Vio Alpine vil medføre store problemer | I have a feeling that purchasing Vio Alpine will really cause me lots of trouble. |
| Jeg vil pådra meg en viss risiko hvis jeg bruker Vio Alpine | I will incur some risk if I buy Vio Alpine. |
| Vio Alpine er et svært risikabelt kjøp | Vio Alpine is a very risky purchase. |

### 3.3.5. Control Variables

The control variables are additional measures that are not included in the research model. As mentioned in chapter 3.1.1 in the causality requirement of isolation, there can be no other plausible explanations for a relationship (Mitchell & Jolley, 2013). In the experiment the aim is for the groups of analysis to be close to identical, so that the researcher can argue that the treatment cause the change in the dependent variable. The questionnaire for the main experiment includes control variables for gender, destination

evaluation, knowledge about ski vacations, experience with ski vacations, interest in ski vacations and seriousness of answering the questionnaire. Age is another common control variable. However, as the study was performed on students on an undergraduate course, the majority are in the age group of 18-25. The age question was not included as the outcome was known, and it would only make the questionnaire more comprehensive.

## 3.4.    Development of Stimuli

The study's results are dependent on properly developed stimuli. In this study, there were manipulations of the brand equity of the existing product and the perceived risk of the new product. There are some common threats to the validity of manipulations. The threats are similar those for measuring variables; random errors and researcher's bias. The random error is desirably minimised, which can be achieved by standardising the administration of the treatments. In this study, all treatments are included in the same way in a booklet given to the participants. The researcher bias in relation to the treatments are minimised by standardising procedures and instructions (Mitchell & Jolley, 2013). In this study, all participants are given a written page of instructions, and the researcher gives a few standardized instructions before the experiment starts.

The new product for the study was chosen first. After discussion with fellow students three possible new products was suggested; SkiBanen, SmartGoggles and SkiSuit. The Skibanen, was an underground tube that would take the downhill skiers faster up the hill than the ski lifts today. It would also create smaller queues and free more ground for slopes. The SmartGoggles was a high-tech goggle, with features like video camera, digital clock, speed sensor, and crash sensor in the glass. Finally, the SkiSuit was a full winter suit with mini skies attached to the suit. The SkiSuit allows a unique flexibility in how to ski. A presentation of the three products and an illustration pictures are presented in Appendix A. In chapter 3.4.1 (Pretest 1), I describe the process of choosing one of the three proposed new products, where the SmartGoggle was continued.

The fit between the bundled products are essential for the evaluation of the bundle and each product in the bundle (Reinders et al., 2010; Simonin & Ruth, 1995). The second

bundled product should have a fit with the smart goggle. Discussions of the second bundled products involved products related to ski resorts and alpine centres, including ski lift pass and hotel accommodation. A hotel accommodation was chosen because hotels may include a known brand name, while brands for ski lifts are mostly unknown. In addition, at a destination, there is only one ski lift brand, as at one destination there might be more than one hotel chian. The hotel accommodation was chosen to secure best possibility for a significant difference between the high and low brand equity product. The hotel and SmartGoggles were considered to have a high compatibility for the usage situation for the products.

To secure the best possible difference between the brand equity of the two hotels included in each their bundle, the low brand equity hotel was decided to be a fictive hotel brand. A fictive hotel brand will score low on brand equity because people have no reference to the brand. The choice of the high brand equity hotel are discussed in section 3.4.2 (Pretest 2).

The manipulation of perceived risk is developed and discussed in chapter 3.4.4.

### 3.4.1. Pretest 1 – The Choice of the New Product

Pretest 1 assessed the product evaluation and the perceived risk for the three previously described new products. A questionnaire, made in QuestBack, included a short presentation of three new products for use in ski- and alpine centres, followed by questions assessing the evaluation and the perceived risk of each product. The respondents stated their degree of agreement of some statements according to a seven-point Likert type scale. The questionnaire for pretest 1 is presented in appendix A.

The questionnaire was distributed on Facebook, where an event was created with a link to the questionnaire. There was invited 478 people to the event page. The questionnaire was available for six days after being publishing, and generated 105 respondents; a response rate of 22 %. The respondents were 41 % female and 59 % male, and they were overrepresented by young people between the ages of 16-35 (see Table 3.5). One reason

for this overweight of young people might be that the questionnaire was distributed on Facebook to mostly people in that age group. However, this is not seen as an issue as the use of alpine- and ski centres are most likely overrepresented by this age group, and the main experiment is performed on students of the same age group.

*Table 3.5: Age – Pretest 1*

|       | Frequency | Percent |
|-------|-----------|---------|
| >15   | 2         | 1,9     |
| 16-25 | 62        | 59,0    |
| 26-35 | 27        | 25,7    |
| 36-45 | 6         | 5,7     |
| <46   | 8         | 7,6     |

The main objective of pretest 1 was to assess the three suggested new products in terms of potential customer evaluation and perceived risk. The pretest did not include a question of whether the respondent regularly/ever used alpine centres. This might have affected the result, as the respondents that never use an alpine centre will likely evaluate the product low.

There were performed several attempts of factor analyses in order to validate the measures. However, there were some difficulties with the validation across the different products. The lack of validation from the factor analysis might originate from issues with different research settings. The measures were tested on different products, which might be seen as different settings. A measure validated in one setting are not necessarily valid in another setting (Anderson, Gerbing, & Hunter, 1987).

Since the measures were not validated, items were combined into several variables both for evaluation and for perceived risk. Then the variables were analysed to find if the results were congruent. Variables was made based on the validation of one of the three products, as well as based on the original measures deployed by Suplet et al. (2009).

Even though the scales were not validated across the three products, the results are consistent for the analyses performed. The results indicate that the Skibanen was the most attractive product, closely followed by the SmartGoggles. SkiSuit had generally a lower evaluation, is also the product with highest variance in the evaluation (see Table 3.6: ).

*Table 3.6: Descriptive statistics – Evaluation (Pretest 1)*

| Evaluation (validated for one) | Mean | Variance |
|---|---|---|
| Skibanen | 5.11 | 1.60 |
| SkiSuit | 2.59 | 1.60 |
| Smart Goggles | 4.96 | 1.75 |
| **All evaluation Items** | | |
| Skibanen | 5.11 | 1.60 |
| SkiSuit | 2.59 | 2.08 |
| Smart Goggles | 4.96 | 1.75 |

As shown in Table 3.7 the Skisuit had the highest mean of perceived risk of the three products. It was also the product with the highest variance of perceived risk. For the best results in the main experiment it is essential that there is a significant difference between groups. Therefore, it is desirable with a high variance. The variances for the evaluation are relatively the same in all the three products. The SkiSuit is both regarded as the most risky and with highest variance in perceived risk.

*Table 3.7: Descriptive statistics – Perceived risk (Pretest 1)*

| | Perceived risk | | Risk_mean | | Risk all items | |
|---|---|---|---|---|---|---|
| | Mean | Variance | Mean | Variance | Mean | Variance |
| Skibanen | 2.07 | 0.72 | 2.05 | 0.74 | 1.81 | 1.43 |
| SkiSuit | 4.39 | 2.49 | 4.36 | 2.57 | 4.23 | 4.04 |
| Smart Goggles | 2.60 | 1.03 | 2.56 | 1.04 | 2.17 | 1.47 |

However, after careful consideration it was decided that the SmartGoggles was continued as the new product to the main experiment, even though the pretest revealed that the SkiSuit had the highest variation in perceived risk. The risk of the SkiSuit is likely to be connected to the personal use of the product, as opposed to the SmartGoggles that is likely to involve risk connected to the product and technology. Based on the research question a perceived risk liked to the product is desired. The Skibanen is likely to be a product people are partly familiar with from the tubes in the cities and does not include the newness this study need. There was further development of the SmartGoggles, including producing a brand name, logo and improved illustration picture. The brand name for the SmartGoggles was Vio Alpine. This type of smart goggles is not to my knowledge available in the market, and it includes a new brand name.

### 3.4.2. Pretest 2 – Brand Equity

The second pretest was performed to decide on the brand for high brand equity for one of the bundles used in the main experiment. This pretest was done to assure the best possible difference in brand equity between the two different hotels that were to be included in the bundles. A questionnaire was made in QuestBack, where the brand equity of three Norwegian hotel brands was assessed; including Radisson Blu, Dr. Holms, and Quality Hotels. The questionnaire was distributed on Facebook, where an event was created with a link to the questionnaire. There was invited 483 people to the event page. The questionnaire was available for 9 days after being publishing, and generated 122 respondents; a response rate of 25, 3 %. The respondents were 68 % female and 32 % male, and they were overrepresented by young people between the ages of 15-34 (see Table 3.9). One reason for this overweight of young people might be that the questionnaire was distributed on Facebook to mostly people in that age group. However, the age is not seen as an issue as the main experiment is performed on students in the same age group.

*Table 3.8: Gender – Pretest 2*

**Gender**

|  | Frequency | Percent |
|---|---|---|
| Male | 39 | 32.0 |
| Female | 83 | 68.0 |

Table 3.9: Age – Pretest 2

**Frequencies - Age**

|  | Frequency | Percent |
|---|---|---|
| <15 | 1 | .8 |
| 15-24 | 40 | 32.8 |
| 25-34 | 67 | 54.9 |
| 35-44 | 4 | 3.3 |
| >45 | 10 | 8.2 |

After consideration of missing data, 14 cases was excluded. A descriptive analysis of the results show that Quality Hotel and Radisson Blu had a brand equity that was approximately equal, and significantly higher than Dr. Holms Hotel. Radisson Blu had a higher variance than Quality Hotel. Consequently, Radisson Blu was continued to the main experiment as the high brand equity hotel.

*Table 3.10: Descriptive statistics - pretest 2*

**Descriptive Statistics – Brand Equity**

|  | N | Minimum | Maximum | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|
| Radisson Blu | 107 | .0 | 6.0 | 3.71 | 1.35 | 1.82 |
| Dr. Holms | 107 | .0 | 5.5 | 1.61 | 1.53 | 2.34 |
| Quality | 107 | .13 | 6.0 | 3.72 | 1.17 | 1.38 |

### 3.4.3. Development of Bundling and Brand Equity Stimuli

Hoeffler (2003) explains that consumers make visual images of the usage of a product and the consequences when deciding on a product purchase. Mental simulation might help the consumer think of a personal experience and relate the new product to a known usage situation. The stimuli for brand equity was presented in three similar advertisements. Two of the advertisements exist of a bundle with the Vio Alpine and a hotel accommodation (Radisson Blu/Trollstugo Hotell). The last advertisement is intended for the control group, and include the new product alone. The advertisements are presented in appendix E.

### 3.4.4. Development of Perceived Risk Stimuli

The stimulus for perceived risk was first suggested represented by a news article covering an accident involving the Vio Alpine. The idea was developed based on the manipulation of perceived risk using a customer report in the study by Gürhan-Canli and Batra (2004). The issue with manipulating the perceived risk using a news article of an accident with Vio Alpine is that it may change the evaluation of the product as well. Instead of manipulating the perceived risk, it was primed. Priming refers to the cognitive reaction of exposure to a specific language form or meaning that can influence the understanding of a later situation (Trofimovich & McDonough, 2011). The information first given are activated in the memory of the participant while observing the following information, and will affect how the participant understand the situation. The priming methods are one of the predominant experimental paradigms. Folkes (1988) found that especially regarding risk consumers are likely to believe the product is more likely to fail when examples of failures are fresh in the memory. A news article was created to present the activation of perceived risk with a story covering problems involving new technology products. The though is that the news article about technology will activate a feeling that the Vio Alpine is a risky purchase. There was made a second news article for the low perceived risk groups, in order to secure most similar situations for the groups. For the best results, only the stimuli vary between the groups. The second article was about the sunny days that people could expect.

In addition to the news articles, the participants got questions on their perceived risk regarding Vio Alpine before they answered the questions regarding their evaluation. This could potentially give an additional effect on the perceived risk of the high-risk groups because they are forced to think about potential risks.

### 3.4.5. Understanding of Questionnaire and Manipulation

The advertisements, the news articles and the questionnaire were tested on six people. The aim of this test was to check whether the questions and stimuli was understandable. They were asked whether they could easily see the two products in the advertisements of the bundles, and if they understood the news article. Five people said they saw both products easily and understood the advertisement, while one person claimed the hotel brand was the main first to be seen and that the person did not understand that the advertisement was for goggles. The person that did not understand the advertisement was not seen as an issue at the time. The person first, and mainly, noticed the hotel brand. It is believed that this reinforce the manipulation of the second brand's influence on the evaluation of the new product. The questions following the advertisement required the participant to have seen the name of the new product. In the case of the participant not realised the new product he/she would have to go back to find read the advertisement again.

All six subjects stated they understood the news article, and the questions in the questionnaire.

### 3.5. Data Collection

In this chapter, there will first be a presentation of the sampling procedure used in the experiment, followed by a review of the implementation procedure of the experiment.

### 3.5.1. Sampling Procedure

When analysing a phenomena in a market it takes extreme amount of time and resources to collect data from the whole population. Consequently, a sample of the population is used. For the sample to be generalizable, it is essential that the sample is representative for the population and not hold any systematic bias. According to Selnes (1999) there is a five step approach to ensure the best representative sample; including defining the population, identification of sampling frame, choice of selection method, sample size and collection of data.

This study aims to analyse effect of bundling on the evaluation of a new alpine goggle. The desired population for this study is *people that enjoy winter sports and ski holidays*, which in Norway is a relatively broad population.

The sampling frame is often a list, such as customers list or a student register, from where the sample is drawn. The list does not necessarily include the whole population, as long as it is representative (Selnes, 1999). "The researchers has to ensure that there is a high degree of correspondence between the sampling frame and the sampling population" (Frankfort-Nachmias & Nachimias, 2008, p. 165). The selection frame in this study is undergraduate students in economic and leadership at the Buskerud and Vestfold University College. Students are considered a homogenous group, which is desired in experiment to preserve the internal validity. After the collection of data, there should be a comparison of the characteristics of the sample and what is known about the population (Selnes, 1999). For instance, the sample in this study should include half women and half men. Students are otherwise homogenous with respect to age, education, economic situation and life situation. However, the ability to generalise the study is reduced by a homogeneous group

A representative sample is achieved when the sample produce results similar to those produced if the whole population was analysed (Frankfort-Nachmias & Nachimias, 2008). In sample designs, there is a distinction between probability and nonprobability sampling. In a probability sampling, there is a probability for each sampling unit of the population to be included in the sample. This probability should be different from zero

and in the simplest case similar for all units of the population. In a nonprobability sampling, there is no known probability for each unit in a population to be selected for the sample, and no assurance that each unit has a chance of being selected. Achievement of a representative sample are only possible in a probability sampling. Calculation of sampling error are possible in probability sampling, but calculation are not possible in nonprobability sampling (Frankfort-Nachmias & Nachimias, 2008; Selnes, 1999).

For experiments, some researchers suggest 20 cases in each experimental groups is adequate (Hair, Black, & Babin, 2010), while other suggest the minimum sample size should be 30 cases for each group (Saunders, Lewis, & Thornhill, 2009). Yet, there exist agreement that as the sample increase in size the precision of the sample results increase (Frankfort-Nachmias & Nachimias, 2008; Selnes, 1999). This is a study with a low budget and a short time frame, and therefore it is not possible to achieve a sample size that big. The sample size were 119 students at the Buskerud and Vestfold University College, including 19-21 cases in each experimental group.

When the sampling procedure is finished the data collection can start. It is important when collecting data that the researcher is aware of the possible research bias, such as sample error and measurement error. The first represents errors embedded in the sampling procedure, and the latter represents weakness in the measurement scale, missing data or errors in data processing (Selnes, 1999).

### 3.5.2. Procedure for the Experiment

The experiment took place in lectures with the lecturer present. Prior to the distribution of the questionnaires, there was given directions and information. The participants were instructed to read the two articles and the following questions carefully before answering, and not to look at the persons next to them. The actual implementation of the experiments started with the distribution of six different randomised questionnaires. The randomisation was conducted by sorting the questionnaire in a pile in the order from one to six. The questionnaire for the first group was distributed every sixth time a

questionnaire was handed out. In this way, there was no control over who got which questionnaire.

The procedure of the experiment is visualised in Figure 3.1. The front page included instructions, and all questionnaires had identical front pages. On the next two pages, there were a presentation of the stimuli; first the news article (perceived risk priming), followed by the advertisement (bundling and brand equity stimulus). The advertisements for the experimental groups included a bundle, while the control groups got an advertisement for Vio Alpine alone. After presenting the stimuli the participants answered questions on perceived risk of the Vio Alpine, evaluation of the Vio Alpine, evaluation of the bundle, evaluation of the destination *Trysil*, and finally demographical questions. Group one and two, which is the control groups, did not get a bundle advertisement and were not answering the questions on evaluation of the bundle or the destination. The questionnaire is presented in appendix E.

*Figure 3.1: Procedure for the experiments*

```
┌─────────────────────────────────────────────────┐
│            Exposure to news article             │
└─────────────────────────────────────────────────┘
                        │
                        ▼
┌─────────────────────────────────────────────────┐
│                 Exposure to Ad                  │
└─────────────────────────────────────────────────┘
                        │
                        ▼
        Article effectiveness measures (perceived risk)
                        │
                        ▼
                New product evaluation
                        │
                        ▼
                  Bundle evaluation
                        │
                        ▼
                Destination evaluation
                        │
                        ▼
                    Demographics
```
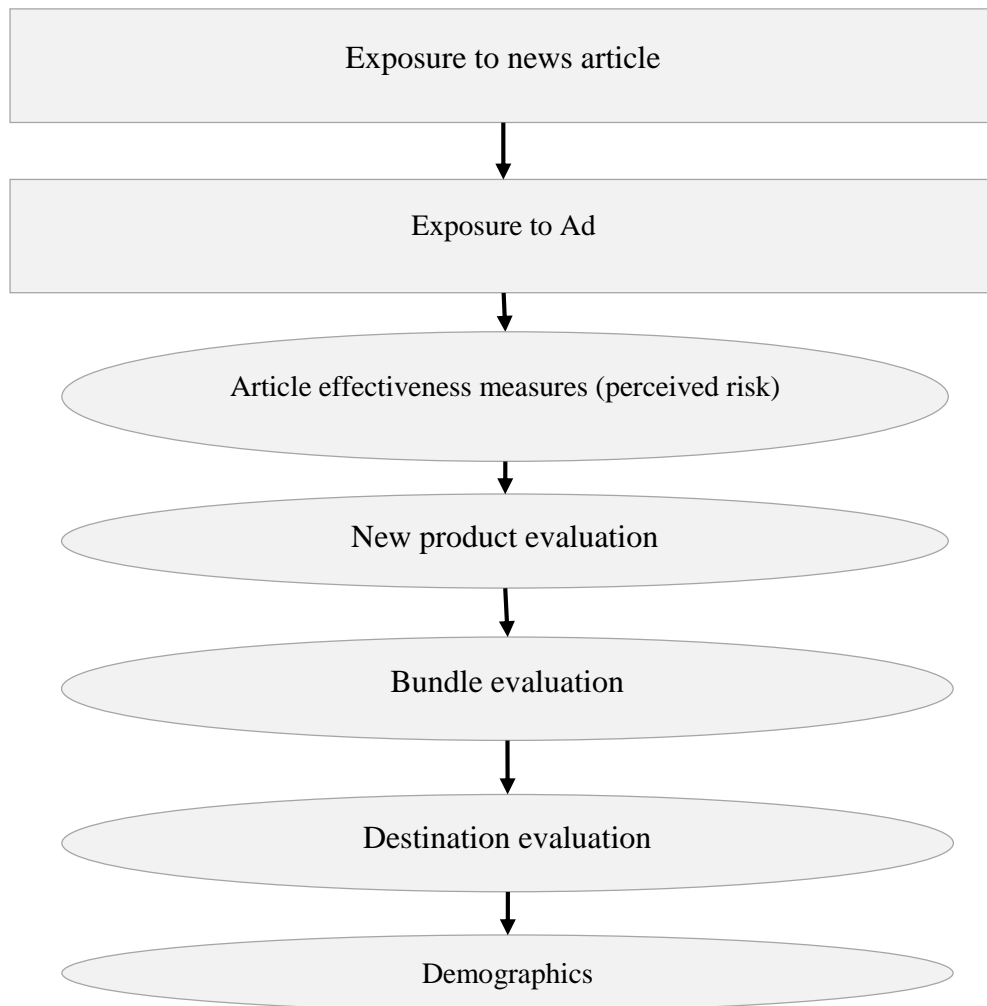
# 4. Analysis

In the following chapter, I will present the validation of the data, and the hypotheses analyses. I start the chapter by reviewing the descriptive statistics, followed by validating the constructs and a manipulation check. Thereafter, the assumptions for ANOVA and regression are reviewed before the hypotheses are tested, using the statistical program SPSS.

## 4.1. Descriptive statistic

There were 119 registered questionnaires form the data for use in the analysis. The participants in the experiments were students, in a three-year undergraduate economics and leadership course at university level. Thus, a relatively homogenous group produces the data material. There were collected 72 cases in the first class and 47 cases in the second class, both at campus Kongsberg.

There were nine missing answers found when reviewing the data material. After careful consideration, one case with five missing answers was removed. The five missing answers included all questions in the last section of demographic questions. Furthermore, two cases was deleted because they scored below four on the seriousness question. Finally, there were one case deleted because the questions lacked answers. Final N is accordingly 115.

In order to perform statistical analyses there has to be a nearly normally distributed data material. A descriptive analysis can show how normally distributed the data set is by analysing the skewness and kurtosis of the data. The skewness measures whether the values are distributed symmetrical on both sides of the centre of the graph, and the kurtosis measures how flat or peaked the shape the distribution has (Antonius, 2013). A standard error value of zero of both skewness and kurtosis represent a perfect normal distribution. A positive skewness represents a distribution that is skew to the right, i.e. with a tail to the right. Contrary, a negative skewness represents a tail to the left. A positive kurtosis represents a distribution with a high peak and a heavy tail, and a

negative value represent more flat, short-tailed distribution. A value greater than +/- 2 for skewness and/or kurtosis indicates an asymmetry in the sample, i.e. not a normal distribution (Myers, Well, & Lorch, 2013). Additionally, for normal distribution there is a requirement that standard deviation are >1. No items in the data set exceeded the requirement of skewness, kurtosis or standard deviation (see appendix F). Consequently, all items were kept for further analyses.

*Table 4.1: Gender*

|  | Frequency | Percent |
| --- | --- | --- |
| Male | 48 | 41,7 |
| Female | 67 | 58,3 |
| N | 115 | 100,0 |

Table 4.1 shows the gender distribution for the main experiment, which presents an overweight of women. However, the differences are not an issue as there is not hypothesized differences between genders in the evaluation of a new product. Additionally, the gender imbalance is unlikely large enough to have a significant impact on the result.

## 4.2. Construct Validity and Reliability

Construct validity are concerned about whether the measure or manipulation actually measure or manipulate what it claims (Mitchell & Jolley, 2013).

### 4.2.1. Content Validity

In this study, there were applied established multiple item scales, that in prior research have been validated. Additionally, there have been discussions of the measurement scales

with the supervisor and other fellow students. Based on this argumentation, the content validity is sufficient.

### 4.2.2. Convergent Validity

The convergent validity was assessed using factor analyses with a maximum likelihood extraction method and direct oblimin rotation. The maximum likelihood method is based on extracting the number of factors that best fit the correlations. In this thesis, the variables are assumed to be related. Thus, the oblique rotation methods were suitable because they are quite general and do not require completely unrelated variables (J.-O. Kim & Mueller, 1978). In situations where maximum likelihood does not show the details about the factors, principal components can be used.

The variables tested for convergent validity are perceived risk, new product evaluation, bundle evaluation and destination evaluation. All concepts analysed showed good convergent validity (>.3) and was continued to the discriminant validity. All items except one (Risk1) were also above the .5 desirable level. Risk1 was continued to the analysis of discriminant validity, before considering removing the item. The convergent analysis is shown in Appendix G (table A – table D).

### 4.2.3. Discriminant validity

To assess the discriminant validity of the constructs there is used a maximum likelihood extraction method with a direct oblimin rotation. In addition, the factor loading should be greater than .5 on the factor the item intended to measure, and below .3 on other factors. The optimal structure exists when all variables have high factor loadings on only one factor. The minimal acceptance of factor loadings are .3 (Hair et al., 2010). Hence, cross-loadings below .3 might be accepted.

When analysing all the four variables in one factor analysis, it was evident that there were little or no discriminant validity. The reason for this might be that the variables for evaluation of the new product, the bundle and the destination involve approximately the

same questions, and some correlation in there measures are assumed. The bundle evaluation and the new product evaluation both include the new product and should therefore to some extent correlate. Due to the similarities, the discriminant validity analysis was performed on perceived risk and new product evaluation. The analysis showed one item that did not meet the requirements for discriminant validity on an item level. Hence, Risk1 was removed as it loads on the wrong factor (see Table F in Appendix GTable). The revised discriminant validity analysis is presented in appendix GTable. All items were above the desired correlation level of .5, and they are loading on the right factors according to theory.

### 4.2.4. Reliability – Internal Consistency

The reliability analyses was performed assessing the Cronbachs alpha, which showed a satisfactory level for all constructs (see Table H - appendix G). The reliability can also be assessed by the squared correlation of a measure and its latent variables (Bollen, 1989). There was conducted a second reliability analysis to ensure the reliability of the measures. The average squared factor loadings showed adequate level of reliability (see table I – Appendix G).

To be internally consistent the variable must also logically follows from a accepted definition of the concept (Mitchell & Jolley, 2013). In this thesis, the concepts and definitions were from literature where concepts' definitions are consistent and the measures were validated in earlier studies.

### 4.3. Indexing Variables

Based on the construct analysis there were created indexes for the concepts for use in the hypotheses testing. I used an average method for indexing the concepts. This method involves adding all the items that belong to the same construct based on the construct validity analysis together, and dividing it by the number of items. The indexes will represent the means of the concepts. Table 4.2 presents the procedure and the items included in each variable.

*Table 4.2: Indexing procedure for variables*

| Concept | Variable name | Items and procedure |
|---|---|---|
| New product evaluation | NPEvaluation | *Mean(VurderingVA1 + VurderingVA2 + VurderingVA3 + VurderingVA4 + VurderingVA5 + VurderingVA6 + VurderingVA7)* |
| Bundle evaluation | BEvaluation | *Mean(VurderingP1 + VurderingP 2 + VurderingP3 + VurderingP4 + VurderingP5 + VurderingP6 + VurderingP7)* |
| Destination evaluation | DEvaluation | *Mean(VurderingD1 + VurderingD2 + VurderingD3 + VurderingD4 + VurderingD5 + VurderingD6 + VurderingD7)* |
| Perceived risk | Perceived_Risk | *Mean (Risiko2 + Risiko3 + Risiko4)* |

## 4.4. Manipulation Check

Before performing hypotheses tests in experiments the manipulations effectiveness must be assessed. The aim of a manipulation check is to assess whether the participant perceived the manipulation as intended (Mitchell & Jolley, 2013). In pretest 2, there was conducted a manipulation check of brand equity of hotels. There was conducted a manipulation check for perceived risk in the main experiment, by including questions of perceived risk in the questionnaire after the manipulation. To do the manipulation check in the main experiment can be a risky choice, because there are so many factors that might fail the experiment. On the other hand, by doing the manipulation check at the same time of the experiment, one saves a substantial amount of time, participants and work. There was decided to include the manipulation check of perceived risk in the main experiment, because of the time limit and limited access to participants. The manipulation was, however, discussed and approved by the supervisor prior to the experiment.

An "independent sample T-test" was used to perform a manipulation check, by testing whether the mean difference between the manipulation groups are different from zero (Berkman & Reise, 2011). The brand equity of the hotels are assumed to be significantly

different because the hotel with the highest brand equity and a fictive hotel with close to zero brand equity was used. The perceived risk manipulation was presented in two different news articles. The four questions for perceived risk from the main experiment were used as the manipulation check. The result shows that there is no significant difference between the low perceived risk group (M=3.65, SD=1.63) and high perceived risk groups (M=3.47, SD=1.56), $t_{(1,113)}$ =.590, p>0.05. The result of the manipulation check for perceived risk is presented in appendix H. Since the mean of the experimental groups and the control groups were not significantly different, the perceived risk groups cannot be used to test the hypotheses. Consequently, I used the perceived risk scale for analysing instead. When using the measurement scale, the correct method for analyses of the moderator effects are regression analyses.

## 4.5.    ANOVA and Regression Analysis

ANOVA stands for analysis of variance, and is a technique for discovering significant statistical differences between two or more groups. There are two types of ANOVA; one-way ANOVA and multiple-way ANOVA. The one-way ANOVA compares the differences between the categories of one independent variable, while the multiple-way ANOVA allows for comparison of two or more independent variables (Antonius, 2013). As a result of the perceived risk manipulation not working as intended, the first two hypotheses will be analysed using a one-way ANOVA. Both hypothesis 1a and hypothesis 2a involves two categories for one independent variable (H1a: alone and bundled, H2a: low/high brand equity). The one-way ANOVA analysis compares the mean of the dependent variable for the groups involved, and calculates a F-value. The F-value has a corresponding significance level. When the significance level is close to zero (p<.05) the differences between the groups are significantly different and the hypothesis supported.

 According to Ringdal (2007) regression analysis can be applied on both experimental and non-experimental data. Regression analysis is a way of predicting how an dependent variable will operate based on changes in an independent variable (Field, 2007). Thus, it is possible to test the hypotheses using large data materials. The theory distinguishes

between two different regression analyses; bivariate and multiple regression. A bivariate regression includes one dependent variable, while a multiple regression includes two or more dependent variables (Gordon, 2012). When performing regression analyses there are three values that need to be assessed:

- Beta value (b)
- Significance level
- Adjusted R squared

The b is a coefficient, which represents the gradient of the regression line. The b implies the direction and strength of an independent variable's effect on a dependent variable (Field, 2007). The significance level is associated with the t-statistics, which tests whether the b is significantly different from zero. The significance level must be $<.05$ for the b-value to be significant (Field, 2007). If the b is significantly different from zero, the independent variable associated with the b, has an effect and the hypothesis supported. The $R^2$ implies how much of the change in Y can be explained by change in X (Antonius, 2013). The $R^2$ usually varies between -1 and 1, where values close to zero represent a weak correlation and values close to -1 and 1 represent a strong correlation (Antonius, 2013). The adjusted $R^2$ indicates the predicted loss of predictive power, and explains how much variance in Y can be explained by the X if the model had been drawn from the whole population (Field, 2007). Similarly to $R^2$, adjusted $R^2$ varies from -1 to 1, where values close to zero represent a weak correlation and values close to -1 and 1 represent a strong correlation.


## 4.6. Assumptions for Parametric Tests (ANOVA)

There should be a review of the assumptions for parametric tests to secure that the data actually are parametric. When a non-parametric data is analysed using a parametric test there is a likelihood of the results being inaccurate. The assumptions of parametric tests include normally distributed data, homogeneity of variances, interval data and independence (Field, 2007).

*Assumption 1:* The first assumption implies that there must be a normal distribution of the data. The normality of the distribution can be analysed through a descriptive analysis including skewness and kurtosis. Values close to zero of skewness and kurtosis indicate a normally distributed data material. The descriptive analysis in chapter 4.1 analysed the skewness and kurtosis of the data, where no items exceeded the requirement. Consequently, all items were continued in the analysis and a normal distribution was proven. Hence, assumption 1 is satisfied.

*Assumption 2:* The assumption of homogeneity of variances implies that there is the same variance of the outcome variable across the data material. The homogeneity of variance assumption can be assessed using a *Levene's Test*. When the Levene's test is significant (<0.05) the variances across groups are significantly different. For the assumption to be met the Levene's test must not be significant (>0.05). However, it should be noted that the test can be affected by large samples, and the ratio between the groups (Field, 2007). There were performed tests for homogeneity of variance on all the experimental groups (see appendix I) and for the model in hypotheses 1a and 2a tested by ANOVA (see appendix I). Neither of the Levene's tests were significant. Hence, assumption 2 is satisfied.

*Assumption 3:* The assumption of interval data implies that the data should be measured using an interval scale, and is tested by common sense. An interval scale involves equal differences in the interval representing equal intervals in the construct being measures (Field, 2007). This assumption is satisfied by consequently using a 7-point Likert scale where applicable.

*Assumption 4:* The last assumption involves independence, and refers to the independence of each participant. This suggests that the participants cannot influence the other participants. In regression, the assumption of independence additionally refers to the error in the regression model being uncorrelated. The assumption is satisfied by performing the experiment in a classroom, telling the participants not to look at each other and by randomizing the treatments.

## 4.7.    Regression Assumptions

If the eight regression assumptions for OLS (ordinary least squares) regression analysis are met, the estimates for the regression model's coefficients are unbiased and efficient (Berry, 1993). In addition, when assumptions are met the OLS estimators are considered BLUE (best linear unbiased estimators). *Best* represent efficient estimators with high accuracy of equality of several samples. A variable is *unbiased* when the mean for the population from repeated samples tested are equal to the parameter tested. The importance of the assumptions lies in assuring that the random error is absent, because the random error might cause an impact on the correlation between the variables that are significant (Berry, 1993). According to Yang and Lai (2006) the regression model can be tested even when the assumptions are not met. However, when there are violation of the assumptions the possibility to generalize beyond the sample is lost. According to Edmonds and Kennedy (2013) the violation of the assumptions cause a threat to the statistical conclusion validity, where it might lead to overestimation or underestimation of practical and statistical significance of an outcome. When not accurate the strength of the relationship or the relationship itself might be wrong or missing. The following subsection will review the eight regression assumptions to prove that the study meets the requirements for regression. There are presentation of all analyses for the regression assumptions in appendix I.

*Assumption 1 – quantitative or dichotomous variables:* The regression assumptions implies that all independent variables $(X_1, X_2,…X_i)$ are quantitative or dichotomous, and that the dependent variable (Y) is quantitative, continuous, and unbound (Berry, 1993). A dichotomous variable has two levels and are unordered, such as "male/female", and a quantitative variable has three or more ordered levels. Ordered levels refer to equal differences between each level of the variable. The measure of bundle and brand equity are dichotomous variables. The bundle variable includes two levels; "no bundle/bundle", and the brand equity variable includes "low brand equity/high brand equity". The perceived risk scale is a quantitative scale with ordered levels (7-levels). Finally, the dependent variable, new product evaluation, is quantitative, continuous and unbound. The respondents can freely choose between the levels included in the variable, which ranges

from one to seven, with equal distances between each level. The seven levels are considered adequate for covering the nuances of the concept in the best possible way without being too comprehensive for the respondents.

Additionally, there is a requirement that the variables are measured without measurement errors (Berry, 1993). When there are measurement errors, either systematic or random, they will give misleading regression lines. Variables without measurement errors require a good theoretical precision in the concept. The best concepts are measured using multi-item measures. Yet, there is a possibility for measurement errors in the indicators due to them not measuring the concept exact. Earlier in this chapter, there were performed factor analyses to ensure the concept validity. Based on the analyses one indicator was excluded because of measurement errors. Risk1 was excluded from the perceived risk measure due to it loading on the wrong concept. After the exclusion, all indicators were validated for their respective concepts, and the assumption of measurements without error is met. The dichotomous variables can however, not be tested for measurement errors, as they do not include more than two measurement levels. Based on the construct validation regression assumption 1 is assumed met.

*Assumption 2 – nonzero variance:* The assumption implies that all independent variables have some variation in values. When performing regression analysis to find significant relationships there are required that change in the independent variable result in change in the dependent variable. When the variation of the independent variable is equal to zero, there are not possible to find any effects in dependent variables. The variance of all independent variables were analysed in the descriptive statistics to assure the fulfilment of assumption 2. The analysis showed that all independent variable met the requirement.

*Assumption 3 – absence of multicollinearity:* The third regression assumption requires an absence of perfect multicollinearity, meaning that there should not be an exact linear relationship between two or more independent variables (Berry, 1993). The independent variables should not correlate largely, as that might imply that the variables are measuring the same concept. According to Norušis and Inc (2000) when analysing linear regression with collinearity diagnostics, tolerances <0.1 indicates a possible multicollinearity problem. Also, high correlations (>0.9) between two independent

variables indicates multicollinearity (Pallant, 2010). Both the regression analysis and correlation analysis for multicollinearity showed satisfactory levels. Hence, the assumption is satisfied.

*Assumption 4 – Zero mean of error term:* The fourth regression assumption implies that the disturbance term has a zero mean. "At each set of values for the k independent variables, $(X_1, X_2, …X_{kj})$, $E(\varepsilon_j| X_1, X_2, …X_{kj})=0$ (Berry, 1993, p. 12). There might be two reasons for a mean error term different from zero; the error term is constant or it varies across observations. Constant error terms can be added to the model as a constant. If the mean error term differ from zero and varies across observations, a biased estimator coefficient exist. These estimators should be considered removed from the regression model. A potential source of lacking support for assumption 4 is a sample selection error, i.e. a sample that does not represent the population. The assumption was tested by performing analyses of the mean error term for each of the independent variables. The analyses include a visual analysis of a p-plot and scatter plot, a comparison of r squared for the linear and non-linear models, and the mean taken from the plot showing the standardised regression residuals.

The interpretation of the p-plot and scattar plot for perceived risk showed a close to zero mean error term. Furthermore, the histogram showed a negative mean (-2.29E-16). Yet, this mean is considered approximately zero. The analysis of linear and non-linear r squared showed that the non-linear models have slightly higher explained variance ($r^2$). This might be an indicator of a lacking linear relationship between perceived risk and new product evaluation. However, both the linear and non-linear models have significant effect on new product evaluation. The comparison of linear and non-linear models showed a small difference in explained variance for the linear and quadratic model (<.02), but the cubic model had a difference of .04. When the mean error term does not meet the requirement for the assumption, changes must be made to use OLS (Berry, 1993). These changes can be done by calculating a mean centralised variable using the concept's mean. After the centralising, a new *curve estimation* analysis was performed to compare the explained variance between the linear and non-linear models. However, the mean centralising of perceived risk did not reduce the difference between the linear and

cubic model to meet the requirement for the assumption (<.02). This will be taken into account in the following analyses.

The variable for bundling and for brand equity are both dichotomous variables, which have only two levels, and can therefore not be quadric or cubic models. The visual interpretation of the p-plot and scattar plot of both variables are considered both to be close to zero mean error term. Furthermore, the histograms showed a negative mean considered approximately zero (bundle: -5.39E-16, brand equity: -3.78E-16). Based on these analyses, the assumption of zero mean of the error term is concluded satisfied for bundle and brand equity, but perceived risk is not satisfied.

*Assumption 5 – uncorrelated error term:* The fifth assumption requires that the independent variables are uncorrelated with the error term. The assumption is satisfied when COV $(Xij|\varepsilon_j)=0$ (Berry, 1993). The error term might cover some effects that influence the dependent variable that are not included in the model. For this assumption to be satisfied there should not be other variables correlating with either the dependent or independent variable. According to Winship and Radbill (1994) the uncorrelated error term is the most important assumption for regression.

This assumption can be analysed by conducting a correlation analysis with the dependent and independent variables against control variables from the data set. The analysis is conducted to find possible spurious relationships, i.e. variables correlating with both the dependent and independent variable. A spurious relationship will influence the dependent variable and remove the original relationship between the independent and dependent variable. The correlation analysis (appendix I) showed no control variables that correlated with both the dependent variable and an independent variable. Based on the analysis the assumption is satisfied.

*Assumption 6 – homoscedasticity:* The sixth regression assumption implies that for each level of the independent variable the variance of the error term is constant, i.e. "for each of the k independent variables, $(X_1, X_2, \ldots X_{kj})$, $VAR(\varepsilon_j|X1, X2, \ldots X_{kj})=\sigma^2$, where $\sigma^2$ is a constant" (Berry, 1993, p. 12). When variances of the error term are unequal, it is referred

to as heteroscedasticity. A heteroscedastic graph include observations that form the shape of a funnel, and are spread out across the graph (see Figure 4.1) (Field, 2007).

*Figure 4.1: Homoscedasticity vs. Heteroscedasticity (Field, 2007, p. 248)*
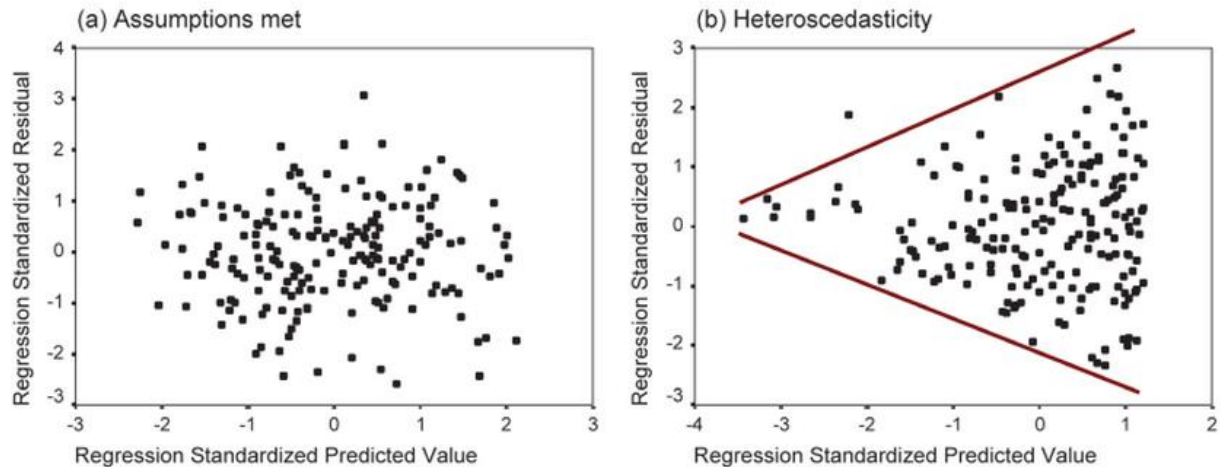


The assumption is tested analysing the scatter plots for each of the independent variables on the dependent variable. The observations should be distributed randomly among the regression line, with equal observations above and under the line (Field, 2007). The two dichotomous variables, bundle and brand equity, were evenly distributed on both sides of the line. Yet, the observations are not completely randomly dispersed across the line, as the variable only have two levels. Perceived risk, had a wide spread of the observations and they were evenly distributed above and under the regression line. Based on these analyses assumption 6 was satisfied.

*Assumption 7 – lack of autocorrelation:* The assumption implies that the error term for additional observations are uncorrelated (Berry, 1993). According to Field (2007) the assumption of autocorrelation can be assessed using a Durbin-Watson test, which assesses the serial correlations between errors. This assumption does not apply in this study, as it only applies when conducting longitudinal studies (Gipsrud et al., 2008).

*Assumption 8 – normally distributed:* The last assumption requires that for each set of values for the *k* independent variable, the error term must be normally distributed. For

large samples, the probability is high for the regression coefficient estimators being normally distributed even when the equations error term is not (Berry, 1993). Contrary, when analysing small samples there is a requirement that the error term is normally distributed, which allows an assumption of normally distributed coefficient estimators to apply. Nevertheless, the assumption of normally distributed error terms is not an absolute requirement as it is not included in the Gauss-Markov theorem. The assumption only applies to the perceived risk variable, as the other variables are dichotomous and cannot be normally distributed.

According to Fox (1984) the normality of the distribution can be assessed by visual analysis of plots including the regression residuals. The plot (shown in appendix I) indicates that perceived risk is normally distributed. As mentioned in the descriptive statistics prior in this chapter the normality of a distribution can also be assessed through a descriptive analysis, by checking the skewness and kurtosis (Antonius, 2013). The skewness, kurtosis and standard deviation for perceived risk fulfilled the requirement of the normal distribution assumption.

Additionally, the normal distribution was assessed checking for outliers. Outliers are values that differs significantly from the other values, and will differ from the main trend in the data (Field, 2007). There were no outliers (> 3 SD) found in the outlier analysis. Based on the previous discussion, the assumption of normally distributed error term is met.

## 4.8.    Hypothesis Testing

After the data material was validated, the indexes of the variables were made and the assumptions for parametric data and were reviewed, the study's hypotheses could be tested. The following subchapter presents the results of the hypotheses tests in ascending order. Because of the lacking effect of the perceived risk manipulations, analyses using ANOVA were not possible for H1b and H2b. In order to perform analyses, there were conducted regression analyses including the actual perceived risk scale. As the bundle and brand equity have no index and manipulations assumed working, hypothesis 1a and

2a were analysed first by comparing the means of the groups. The analyses are presented in appendix J.

### 4.8.1. Hypothesis 1a: Bundling

Hypothesis 1a suggested that the evaluation of a new product would be greater when the new product is sold in a bundle that sold separately. The manipulation of bundling was represented by selling the Vio Alpine with accommodation at Radisson Blu/Trollstugo Hotel, or the Vio Alpine sold alone. The results from comparing the groups using a one-way ANOVA did not give support for the hypothesis, $F_{(1,113)} = 1.74$, p = .190. The new product evaluation did not differ between selling the new product alone ($M_{alone}$=3.45) and selling in a bundle ($M_{bundle}$=3.84). Hypothesis 1a was rejected.

### 4.8.2. Hypothesis 2a: Brand Equity

Hypothesis 2a suggested that the new product evaluation would be greater when bundled together with an existing high brand equity product than an existing low brand equity product. Contrary to the predictions, the brand equity had a non-significant main effect on the new product evaluation, $F_{(1,73)} = .947$, p = .334. The new product evaluation did not differ between the groups of low brand equity ($M_{low} = 4.0$) and the high brand equity ($M_{high} = 3.67$). Hypothesis 2a was rejected.

### 4.8.3. Hypothesis 1b: Perceived risk (Bundle)

Hypothesis 1b suggested that the perceived risk of a new product would moderate the relationship between selling form of the new product (bundle/alone) and the new product evaluation. The hypothesis was tested using the index of perceived risk in a regression analysis. The adjusted $r^2$ decreased from .204 to .200 after including the interaction term. The first and second model explain about 20 % of the variance in the dependent variable, new product evaluation. Yet, perceived risk was the only significant effect on new product evaluation. However, the results of the regression analysis showed a non-

significant moderating effect of perceived risk on the relationship between bundling and new product evaluation, β = -.089, $t(3, 111)$ = -.657, p = .512. Hypothesis 1b was rejected.

### 4.8.4. Hypothesis 2b: Perceived risk (Brand Equity)

Hypothesis 2b suggested that the perceived risk of a new product would moderate the relationship between the brand equity of the existing product in the bundle and the new product evaluation. There was a decrease in adjusted $r^2$ after including the interaction term, from .256 to .246. The results showed a non-significant moderator effect of perceived risk on brand equity and new product evaluation, β = .030, $t(3, 71)$ = .202, p = .841. Hypothesis 2b was rejected.

### 4.8.5. Additional Analyses

Further analyses were performed to investigate whether bundling and brand equity might have different effects than hypothesised. Hypotheses 1b and 2b found no moderator effect. These tests analysed for pure- or quasi-moderators. A pure moderator only has an effect on the relationship it moderates, while a quasi-moderator additionally has a direct effect on the dependent variable. There is a third type of moderating effect, a homologizer. A homologizer affects the strength of the relationship of an independent and dependent variable, but does not interact with the independent variable (Sharma et al., 1981). Homologizer-tests were performed for both effects (bundle and brand equity). However, neither bundling nor brand equity tested significant as a homologizer (bundle: z=1.01, p=0.31, brand equity: z=.01, p=0.99). A third and fourth homologizer test was conducted for perceived risk on the relationship between bundle evaluation and new product evaluation, and for bundle evaluation on the relationship between perceived risk and new product evaluation. None of the two showed significant results (bundle evaluation: z=-1.2, p=0.23, risk: z=.87, p=0.38).

*Table 4.3: Summary of Hypotheses*

| Hypothesis | | F/t | Sig. | Conclusion |
|---|---|---|---|---|
| H1a | The new product evaluation is greater when a new product is sold in a bundle than in alone. | 1.737 | .190 | No support |
| H2a | The new product evaluation is greater when the new product is bundled with a high brand equity product than with a low brand equity product. | .947 | .334 | No support |
| H1b | The effect of bundling on new product evaluation is enhanced by the perceived risk | -.657 | .512 | No support |
| H2b | The effect of brand equity on the new product evaluation is enhanced by the perceived risk | -202 | .841 | No support |

# 5. Discussion

In this chapter, I discuss the results from the study. It will include the theoretical and practical implications of the results, and the limitations and weaknesses of the thesis. Finally, I present suggestions for further research.

The purpose of the thesis was to answer the overall research question; *Does bundling of new product contribute to a better customer evaluation for new products, compared to selling the products separately?*

Based on prior literature four hypotheses was developed and tested in an experiment. Each of the hypotheses will be reviewed separately. Initially, the hypotheses regarding bundling and brand equity are discussed, followed by a discussion of the hypotheses regarding perceived risk as a moderator. Finally, the additional results are discussed. In addition to finding whether bundling is beneficial for new products, the study aimed for gaining understanding how the brand equity of the second product in the bundle and the perceived risk of the new product influence the benefit of bundling new products.

## 5.1. Discussion of the Results and Theoretical Implications

### 5.1.1. Bundling of New Products

In hypothesis 1a, there was expected to be a higher evaluation of the new product when offered in a bundle than offered separately. The evaluation of each products prior to the bundling influence the evaluation of the bundle, which again influence the evaluation of each bundled product (Simonin & Ruth, 1995). According to Sarin et al. (2003) product bundles might give added perceived value due to the integration of products in a bundle. Thus, it was expected that the new smart goggles would receive additional value by being bundled together with a hotel accommodation. However, from the analysis it was evident that this relationship was not significant. Based on this data material, there is no ground for stating that new products are more likely to succeed when sold in a bundle than separately. Despite the lack of significant support, there is a tendency of a positive

relationship. The participants that received the bundles in the experiments evaluated the new product greater than the participants that received the new product alone. There might be several reasons for the lacking significant results, including the manipulation, the perceived fit between the bundled products, the products complexity, the information load, the experiment being an unrealistic situation and the sample size. Following, I discuss these potential reasons for insignificant results.

The strategy of selling the product in a bundle or separately was ***manipulated*** in an experiment, where a new product was presented in an advertisement alone or together with a hotel accommodation. The package with the new smart goggles and the hotel accommodation represented the bundling manipulation. There was no manipulation check of whether the bundling manipulation worked as intended. However, the manipulation was assumed working, since the advertisements included one or two products. In pretest 3, five of six people said they saw both products easily and understood the advertisement. The last person was not considered a threat to the manipulation as the focus on the second brand would reinforce the effect of the bundle. However, we cannot be sure that the manipulation worked as intended. Thus, the manipulation might be a weakness of the study.

Another reason for the lack of support might be the products included in the bundle. Many researchers have found a moderating effect of ***fit*** on the effect of bundles (Reinders et al., 2010; Simonin & Ruth, 1995). The ski-in-ski-out hotel was assumed to have good fit with goggles, as both are suitable for ski vacations. Yet, fit is subjective and the participants might not have perceived a good fit. According to Reinders et al. (2010) consumers might question the relevance and quality of a product when the bundled products have a low perceived fit. Research suggests that customers are more positive to co-branding when the brands are complementary rather than similar (Kotler et al., 2012). Levin, Davis, and Levin (1996) suggest that similar effects exist when consumers evaluate co-branded products and bundles. This suggests that bundles should consist of ***complementary*** products rather than similar products. There might be that the participants do not see the hotel accommodation and the smart goggles as complementary and therefore they do not evaluate the goggle better when sold with the hotel

accommodation. It might be argued that participants in which the majority in the age group of 20-25, rarely spend ski vacations at hotels, but more frequently in cabins. The hotel accommodation and goggles may have a poor fit/compatibility for the group analysed. As a result, the participants cannot relate to the bundle including a hotel accommodation, since it is not relevant for them to buy. Potentially, the alpine goggles would be perceived to have a higher fit or complementarity with for example alpine skis or ski helmets.

Beldona et al. (2005) found that for low *complexity* products the primary determinant of purchase is price, while high complexity products are determined by the ease of use and information aspects. The new product in this study was likely perceived as high in complexity, and the hotel accommodation was likely to be perceived as low in complexity. This might indicate that the price bundling is more appropriate for hotel accommodations, while the new product require information for customers to purchase it. There may be that the participants found the new product advertisement did not include enough information.

According to Bijmolt, Wedel, Pieters, and DeSarbo (1998) the judgement of similarities between two products are affected by the amount of *information* given. When too much information, such as brand name, pictures, text etc., the participants fail to see the similarities between products. In the experiment, a news article and an advertisement with a substantial amount of information was given that might have influenced the perception of the products similarity.

It might be argued that the offering of bundles used in this study were *unrealistic*, and that the participants cannot evaluate the product in the same way as they would for a real offer. The products were presented in an advertisement, and no other information was included. In a real situation customers would like to see the product and would seek additional information before purchasing (Arndt, 1967), such as word-of-mouth and product reviews. The marketing mix explains that product, price, place and promotion are all important aspects of an offering (Blythe, 2012). The promotion aspect is covered through the advertisement. The exclusion of price in the advertisements was a deliberate choice for assuring the isolation of the variables were in focus. The exclusion of price

might have caused the participants to not being able to evaluate the product accurately. In product bundles, there are not a requirement of a special price or a discount. However, most consumers expect bundled products to cost less than the products sold separately (Tanford et al., 2012). Furthermore, theory suggests price in itself is a signal of quality (Venkatesh & Mahajan, 1997). Hence, the transfer of quality perception might be reduced when price is not included. No information is given about "place". It is conceivable that the distribution channel is important for the understanding of a realistic situation. However, the price and place were not the focus in this study and might have compromised the isolation of the bundling effect, as the price and place probably would affect the evaluation.

The low *sample size* might have been a weakness of the study. Arguably, the sample size of 115 cases is the minimum of acceptance. Based on the six groups in the experiment, and a rule of thumb of 20 cases in each group there should be 120 cases. However, in hypothesis 1a, the participants that received the new product alone (40 cases) were compared against the participants that received the bundle advertisements (75 cases). There are different opinions on the minimum sample size required for a reliable result, some researchers suggest 20 cases in each experimental groups (Hair et al., 2010), while other suggest the minimum sample size should be 30 cases for each group (Saunders et al., 2009). Following, both the groups compared in hypothesis 1a are above the suggested minimum of both 20 and 30 cases, and are unlikely the reason for the lacking support. Yet, there might be argued that the low sample size can lead to unstable results, and thus non-significant results. For an ANOVA analysis, the differences among the groups must be relatively large for the differences to be significant.

Another conclusion that could be drawn from this is that there might be that new products in fact would not be evaluated greater when sold in a bundle than sold separately.

### 5.1.2. Bundling and Perceived Risk

In hypothesis 1b, there was expected that when a new product is perceived to have high risk, the strategy of bundling the product is greater than selling it alone. The high

perceived risk product involves a higher threshold for purchasing. Due to the manipulation not working as intended, the hypothesis was tested using regression analysis. However, the relationship was not significant. Based on this data material, there is no ground for stating that the perceived risk moderates the relationship between bundling and new product evaluation. Nevertheless, the lacking relationship for the main effects might also have influence on the lacking results of perceived risk as a moderator.

Most research reports a direct relationship or a relationship mediated by some factor on evaluation (Schilke & Wirtz, 2012; Sweeney et al., 1999). Following this stream of research, it might be possible that perceived risk has no moderating effect on bundling and new product evaluation, but a mediating effect. Bundling might have a direct effect on new product evaluation mediated by the perceived risk. However, due to the lack of a direct effect from bundling to new product evaluation there cannot be found a significant mediating effect either.

Sarin et al. (2003) suggested that the perceived risk of a new high-tech product might be reduced when the new product is placed in a bundle as a tie-in product, i.e. the second product. In this thesis, it can be argued that the new product is the anchor of the bundles. The authors suggest the bundle's anchor usually is evaluated first and that the first evaluation is used as a standard for analysing the second product. Hence, if the new product is the anchor, the evaluation of the new product happens first. Then, it is likely that the evaluation is the same in both groups, as they form an attitude towards the new product first.

Sweeney et al. (1999) find a ***mediating*** role of perceived value between perceived risk and willingness to buy. Although not included as hypothesis, this thesis finds a direct relationship of perceived risk on evaluation of a new product. Other studies has also found a direct relationship between perceived risk and evaluation (Schilke & Wirtz, 2012; Sweeney et al., 1999).

Finally, it should be noted that one assumption for regression was not fulfilled. The variable perceived risk had a violation on the zero mean error term assumption. The violation of assumptions might cause a threat to the statistical conclusion validity, and an

overestimation or underestimation of the statistical significance of results (Edmonds & Kennedy, 2013). Perceived risk was hypothesised as a moderator in this study, which might be a reason for the greater explained variance for the cubic model compared to the linear model.

### 5.1.3. Brand Equity of Second Product in Bundle

In hypothesis 2a, there was expected to be a higher evaluation of the new product when offered in a bundle with an existing high brand equity product than with a low brand equity product. However, from the analysis it was evident that this relationship was not significant. Based on this data material, there is no ground for stating that the brand equity of the existing product in a bundle will increase the evaluation of the new product. The reasons for the lacking results might include the credibility of the brands, the quality of the existing product and the prior attitudes to the products, as well as the same issues as presented for hypothesis 1a.

The theory suggests that consumers rely on *credible brands* in situations when they hold incomplete information about new products. The credibility was expected to transfer from the high brand equity product to the new product, because the credible brand was willing to stake its reputation on the new product (Sarin et al., 2003). Contrary to the theory, the results showed no effect of the brand equity on the evaluation of the new product. There might be that Radisson Blu as a brand are not a suitable alliance partner for a new brand of smart goggles. Research has found that there are asymmetry in the value added by different components (Sarin et al., 2003). Possibly, a bundle with another brand than Radisson Blu would add greater value to the new smart goggles.

Additionally, when participants lack the experience with the hotel, they might be unaware of the *quality* of the product. In pretest 2, the quality dimension of brand equity was removed due to the issue of many people not being aware of the quality of the specific hotel. According to Choi (2003) the existing product in a bundle signal quality onto the new product. If this dimension of brand equity is the most important for the evaluation of

new products in a bundle, the absence of this dimension in the existing product might cause the lacking results.

The strategy of selling the new product in a bundle with high or low brand equity products was *manipulated* using to different bundle advertisements. One bundle including the new smart goggles with accommodation at *Radisson Blu*, representing the high brand equity bundle. The second bundle, representing the low brand equity bundle, included the smart goggles with accommodation at the fictive hotel *Trollstugo Hotell*. Since the brand equity questions were not included in the experiment, there was no manipulation check of whether the brand equity manipulation worked as intended. The choice of excluding the manipulation check in the main experiment was made for keeping the scope of the experiment as small as possible. Nevertheless, there is an assumption that the manipulation worked. In pretest 2, the brand equity of Radisson Blu was tested, which scored high. It is reasonable to assume that the fictive brand has significantly lower brand equity. Due to the results in pretest 2, the lack of results in the experiment is unlikely to be a consequence of poor manipulation.

Following the discussion of *sample size* in hypothesis 1a, the sample size of 39 and 36 cases in the groups of comparison for hypothesis 2a was above the suggested requirement. Hence, the sample size are unlikely the reason for the lacking significance.

Simonin and Ruth (1995) suggest the *prior attitude* of a product affect the bundle attitude, which further affects the reservation price of the bundled products. This suggests that the evaluation of the new product should be greater when the consumers had a prior high attitude to the existing product in the bundle. A product of high brand equity are likely to gain a greater attitude than a low brand equity product. In contrast to earlier findings, no evidence was found of the effect of brand equity of the existing product on the evaluation of the new product. Yadav (1994) presented a paper on customers' evaluation of product bundles. The author found evidence that the most important item of the bundle, perceived by the customers, is the *anchor* of the consumer evaluation of the bundle. If the new product was perceived as the anchor in the bundle, the result might be affected by this. The anchor is likely to be the main influence of the evaluation of the

bundle. Therefore, the two bundles compared in hypothesis 2a are compared similarly if the smart goggles are perceived as the bundle anchor by the participants.

Another conclusion that could be drawn from this is that there might be that new products in fact would not be evaluated greater when sold in a bundle with a high brand equity product, compared to a low brand equity product.

### 5.1.4. Brand Equity and Perceived Risk

In hypothesis 2b, there was expected that when facing a new product of high (low) perceived risk, the effect of bundling the product with a high brand equity product on new product evaluation is positively enhanced (reduced). The hypothesis was tested using regression analysis. However, the relationship was not significant. Based on this data material, there is no ground for stating that the perceived risk moderates the relationship between brand equity of the second product in a bundle and the new product evaluation. Yet, the insignificant result for the main effect might have influence on the insignificant result of perceived risk as a moderator.

The reasons for the insignificant results might be similar to those presented for hypothesis 1b (section 5.1.2). Lim (2003) found studies where the concept of perceived risk is proven to work in several ways, and especially it was correlated with the concept of trust. According to Lim (2003) there are some studies that have found that perceived risk moderates the relationship between trust and willingness to buy. This study suggested that bundling worked as a strategy of increasing the evaluation by getting the consumer to trust the product when associated with another product they trust. Contrary to the predictions, a high perceived risk of the new product did not enhance the effect of brand equity on the evaluation of new products.

### 5.2. Practical Implications

Based on the insignificant results, there are minimal practical implications that can be drawn from the study. The results can be interpreted to that bundling the new product did

not give a positive effect on the customers' new product evaluation. This might suggest that the new products should not be introduced in a bundle, as the company's risks are higher associated with collaborating with another company than to sell the product on their own. However, the manipulation of the bundling might not have worked as intended. Hence, the practical implication are harder to draw from the results.

Based on the testing of hypothesis 2a there is no ground of stating that new products should be bundled with products of high brand equity, as the relationship was insignificant. However, the main experiment included no manipulation check of the two brand equity manipulations. Hence, it cannot with certainty be stated that it worked as intended, even though it is assumed to work.

When focusing on the moderating effect of perceived risk, it can be argued that companies should not introduce a new product in a bundle when the perceived risk is high. The results showed non-significant results of perceived risk as a moderating effect. Yet, the main effect was not significant and might have influenced the moderating effect.

## 5.3.    The Limitations and Weaknesses of the Thesis

Even though the chosen research design for the thesis has many benefits, there are some weaknesses with experiments that should be discussed. The strength of the experiment lies in its control, internal validity and causality. However, this strength comes at the cost of the external validity. When the external validity is low, the chance of **generalising** the results are low. The study can only be applied to the product category tested and no other categories. Other weaknesses of the experiment is the small scope. There is only used one new product and one product category in the second product in the bundles. In a realistic situation, there would be more than one option and other factors that would be included in the decision process, that are not present in an experiment setting.

In addition, the information given about the bundles is **unrealistic**. The only information given about the new product is through an advertisement, where a picture of the product and the logo is presented with some information of the features. No physical representation or word-of-mouth recommendation was present. According to Arndt

(1967) consumer in a real situation would seek additional information about the product before purchase.

The operationalization of perceived risk was on an overall level. Hence, there is no ground of commenting what dimensions of risk have the greatest effect on the evaluation of new products.

Another weakness to the generalisation is the exclusion of *age* as a control variable in the experiment. There could be a difference in the evaluation across age groups, and gender differences between the age groups. The sample is a limitation for the generalisation. The sample consists of undergraduate students on economics and leadership course, which are considered a homogeneous group. The internal validity and causality are secured in the best way using this sample, but the results cannot be generalised to other groups. The student group are not the main target group for ski resorts. Hence, there might have been better results by using a sample that more commonly uses hotels.

The *manipulations* of the study is also a limitation of the study, as they did not work as intended. There are no certainty about the manipulation of bundling and brand equity working as intended, since there were no complete manipulation check. The perceived risk manipulation did not work as intended. The failing manipulation is reducing the validity of the study. The analysis of perceived risk was performed through regression instead of comparing the manipulation groups for the perceived risk.

## 5.4. Further Research

The study leaves several unanswered questions where further research could be done. In this subsection there are presented some issues and topics that are interesting to gain more knowledge about. Due to the insignificant results and methodological challenges, future studies on the current topic are recommended.

Because of the manipulation not working as intended, the methodological challenges should be a focus for future research. The manipulation issue was in this study a major source of threat to the validity. Potentially, a replication of this study where the

limitations are considered, could be one possible way to go. The manipulation check of perceived risk showed lacking effect of the priming. To do this in a way that the participants change their behaviour can be difficult. There should be considered whether to try priming the perceived in a different way, or to manipulate the perceived risk. A potential priming tactic that has showed effective in earlier studies is the presentation of customer reviews of products including bad review (Gürhan-Canli & Batra, 2004; Harris & Blair, 2006b). A similar priming including a customer review could be applied for the new product in such a replication.

Both the presentation of the perceived risk manipulation and the bundling advertisements could be improved. A future replication should question the choice of products in the bundle. There should be chosen a product category relevant to the sample, and the compatibility between the products should be high. Preferably, the products should give a higher value of being sold together than sold on their own. The additional product should probably be a product most respondents have tried and where the quality are familiar, as this dimension of brand equity are likely to be important for the evaluation.

Additionally, it should be considered whether to present the stimuli in a more realistic situation, i.e. as a physical representation of one or more bundles/products. In this way, the participants might relate and understand the products better. For the realistic situation, more than one offer could be given, and the differences between using the new product as an anchor or tie-in product could be compared. However, the inclusion of more than one offering could challenge the internal validity of the experiment. Furthermore, the load of information should be considered. More information might give more details about the products used in the evaluation, but too much information might compromise the understanding of fit between the products. Furthermore, there must be questioned whether to include a price for making a more realistic situation for the participants. However, the price might directly influence the evaluation of a product, so that it is difficult to isolate the other effects.

Additionally, there could be interesting to study other service industries for the same effect. The intangible characteristics associated with makes them difficult to evaluate before the purchase (Chitty, Hughes, & D'Alessandro, 2012). There might be that the

tourism industry is very price conscious, and a product bundle is not a suitable strategy in this industry. It could be interesting to study the strategy of bundling new products in the IT industry, focusing on the B2B market. The B2B market is likely to be less price conscious than the consumer market. It could be interesting to see whether bundling services offered in an IT business would be beneficial when introducing a new IT tool or a new service. For instance, a new ERP or CRM system could be bundled with the service of installation and training by an IT company of high brand equity.

# 6. Conclusion

The purpose of this study was to acquire some understanding of how to increase the likelihood of success for new products. There was a focus on the relationship between bundling and the evaluation of new products. The research question was as following:

> *Does bundling of new product contribute to a better customer evaluation for new products, compared to selling the products separately?*

There was expected that new products would be evaluated better when bundled with a product of high brand equity, due to the transfer of reputation and quality perception. Additionally, the effect of bundling on the evaluation of the new product was expected to have better effect when the perceived risk was high. The hypotheses were tested in an experimental study of the evaluation of a new product. It distinguished between offering the new product separately, offered in a bundle with a low brand equity product, and offered in a bundle with a high brand equity product. In addition, the perceived risk was primed

However, none of the hypotheses was supported. The insignificant results might be a result of methodological issues. Hence, further research are needed to investigate the relationships of bundling and evaluation at different levels of perceived risk.

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# Appendices

## Appendix A: Pretest 1 – Questionnaire

**Vurdering av nye produkter for alpin- og skisentre**

Jeg er en masterstudent ved Høgskolen i Buskerud, og gjennomfører denne undersøkelsen som et forstudie til min masteravhandling.

Undersøkelsen omhandler tre potensielle nye produkter. Formålet er å kartlegge om det finnes et marked for disse produktene. Undersøkelsen vil ta omtrent 5 minutter, og vil være anonym.

---

**1) * Kjønn:**
○ Mann
○ Kvinne

---

**2) * Alder:**
○ >15
○ 16-25
○ 26-35
○ 36-45
○ <46

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## Skibanen

Alpinsentrene opplever ofte lange heiskøer. I tillegg tar stolheisen lang tid og det blir ofte kaldt i heisen på vei til toppen.

Det lanserers derfor en ny type skiheis - **Skibanen**, et undergrunnstog fra bunnen til toppen av alpinbakken. Toget/trikken går kontinuerlig og tar mange personer om gangen. Dette løser problemet med køer, og lange og kalde heisturer. Skibanen vil delvis erstatte stolheisen, men det vil i tillegg finnes stolheiser og t-kroker på de kortere strekningene.

Skibanen vil også frigjøre mer arealer til skiløyper.

Teknologien finnes og det vil være mulig å starte utbygging i dag. Prisen på heiskort vil være uendret.

*Illustrasjonsbilde:*

**4) * Vurder de følgende påstandene:**

| | Svært uenig | 2 | 3 | 4 | 5 | 6 | Svært enig |
|---|---|---|---|---|---|---|---|
| Jeg stiller meg positiv til Skibanen | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter Skibanen som et svært godt tilbud | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter Skibanen som svært tilfredsstillende | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter Skibanen som svært viktig | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter Skibanen som svært gunstig | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Skibanen er et produkt jeg kunne tenke meg å prøve | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Dersom Skibanen ble tilgjengelig nær meg ville jeg vurdert å kjøpe heiskort | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Generelt vil jeg beskrive Skibanen som svært attraktivt for meg | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**5) * Vurder de følgende påstandene:**

| | Svært uenig | 2 | 3 | 4 | 5 | 6 | Svært enig |
|---|---|---|---|---|---|---|---|
| Jeg ville vært redd for at Skibanen ikke var et trygt produkt. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for at Skibanen ikke klarte å levere de fordelene den hadde lovet. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg mener at å kjøpe heiskort til Skibanen ville vært en dårlig måte å bruke penger på. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for at Skibanen ikke var verd pengene jeg måtte brukt på å kjøpe heiskort til den. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg tror at bruk av Skibanen kunne utgjort en fare for helsen min. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville følt meg ukomfortabel ved å bruke Skibanen. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for hva familie og venner tenkte om meg dersom jeg hadde kjøpt heiskort til Skibanen. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg tror det ville vært forbundet med mange ulemper for meg ved å kjøpe heiskort til Skibanen. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Alt i alt tror jeg det ville vært galt av meg å kjøpe heiskort til Skibanen. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville følt stor usikkerhet forbundet med å kjøpe heiskort til Skibanen. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

# SkiSuit

Det lansereset helt nytt produkt til utleie hos alpinsentrene. Produktet heter **SkiSuit,** og er en skidrakt med mange "miniski" festet på drakten. Dette gir en fleksibilitet i hvordan en bruker skiene. Det vil være plassert miniski på:

- på arm (albue til hender),
- skinnlegg (fra kne til fot)
- På bryst/mage (mykere materiale som kan bøyes noe)
- På rygg (mykere materiale som kan bøyes noe)
- På rompe (mykere materiale som kan bøyes noe)

I tillegg vil det være miniski under skoene som vil være sammenleggbare. Skiene under skoene kan benyttes på to måter. Det er mulig å brette ut skiene til tredobbel størrelse for å kunne stå på oppreist på "normale" ski. Alternativt kan skiene brettes under skoene, for ikke å være i veien dersom en ligger på mage/rygg eller sitter på rompa.

SkiSuit gir mulighet til normal slalom på miniski, samt at en kan bruke armer, rygg, mage, rompe og ben i forskjellige kominasjoner.

*Illustrasjonsskisse:*





*:bilde:*

### 7 ) * Vurder de følgende påstandene:

| | Svært uenig | 2 | 3 | 4 | 5 | 6 | Svært enig |
|---|---|---|---|---|---|---|---|
| Jeg stiller meg positiv til SkiSuit | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter SkiSuit som et svært godt tilbud | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter SkiSuit som svært tilfredsstillende | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter SkiSuit som svært viktig | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter SkiSuit som svært gunstig | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| SkiSuit er et produkt jeg kunne tenke meg å prøve | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Dersom SkiSuit ble tilgjengelig nær meg ville jeg vurdert å leie dette produktet | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Generelt vil jeg beskrive SkiSuit som svært attraktivt for meg | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**8) \* Vurder de følgende påstandene:**

| | Svært uenig | 2 | 3 | 4 | 5 | 6 | Svært enig |
|---|---|---|---|---|---|---|---|
| Jeg ville vært redd for at SkiSuit ikke var et trygt produkt. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for at SkiSuit ikke klarte å levere de fordelene den hadde lovet. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg mener at å leie SkiSuit ville vært en dårlig måte å bruke penger på. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for at SkiSuit ikke var verd pengene jeg måtte brukt på å leie det. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg tror at bruk av SkiSuit kunne utgjort en fare for helsen min. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville følt meg ukomfortabel ved å bruke SkiSuit. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for hva familie og venner tenkte om meg dersom jeg hadde leid SkiSuit. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg tror det ville vært forbundet med mange ulemper for meg ved å leie SkiSuit. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Alt i alt tror jeg det ville vært galt av meg å leie SkiSuit. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville følt stor usikkerhet forbundet med å leie SkiSuit. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## Smart Goggles

I alpinbakken går ofte omgivelsene i hverandre og den hvite snøen kan gjøre det vanskelig å se konturene av bakken.

Alpinsentrene lanserer nå en ny skibille – **Smart Goggles**, en høyteknologisk skibrille som vil være til utleie hos alpinsentrene. Egenskaper ved Smart Goggles:

- Terrengglass - Glasset på brillen vil ha en funksjon som gir mulighet til å skru på terrengbilder som gjør det enklere å se konturen på bakken.

- Hastighetsmåler/høydemåler – Nede i høyre hjørne vil det være en digital hastighetsmåler, som kan skiftes til høydemåler dersom en er i hoppbakken.

- Sidesensor – For å unngå kollisjoner vil det dukke opp varseltrekant dersom noe/noen kommer brått innpå fra siden. Trekanten vil dukke opp i den siden der faren oppstår.

- Kamera – På toppen, midt på brillen vil det være montert et kamera som kan ta film og bilder. Videre kan disse synkroniseres med en telefon-app.

- Klokke – Nede i venstre hjørne vil det være digital klokke, som også kan skiftes til stoppeklokke.

*Illustrasjonsbilde:*



89

**10) * Vurder de følgende påstandene:**

| | Svært uenig | 2 | 3 | 4 | 5 | 6 | Svært enig |
|---|---|---|---|---|---|---|---|
| Jeg stiller meg positiv til Smart Goggles | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter Smart Goggles som et svært godt tilbud | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter Smart Goggles som svært tilfredsstillende | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter Smart Goggles som svært viktig | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg oppfatter Smart Goggles som svært gunstig | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Smart Goggles er et produkt jeg kunne tenke meg å prøve | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Dersom Smart Goggles ble tilgjengelig nær meg ville jeg vurdert å leie dette | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Generelt vil jeg beskrive Smart Goggles som svært attraktivt for meg | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**11) * Vurder de følgende påstandene:**

| | Svært uenig | 2 | 3 | 4 | 5 | 6 | Svært enig |
|---|---|---|---|---|---|---|---|
| Jeg ville vært redd for at Smart Goggles ikke var et trygt produkt. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for at Smart Goggles ikke klarte å levere de fordelene den hadde lovet. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg mener at å leie Smart Goggles ville vært en dårlig måte å bruke penger på. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for at Smart Goggles ikke var verd pengene jeg måtte brukt på å leie det. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg tror at bruk av Smart Goggles kunne utgjort en fare for helsen min. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville følt meg ukomfortabel ved å bruke Smart Goggles. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville vært redd for hva familie og venner tenkte om meg dersom jeg hadde leid Smart Goggles. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg tror det ville vært forbundet med mange ulemper for meg ved å leie Smart Goggles | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Alt i alt tror jeg det ville vært galt av meg å leie Smart Goggles | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville følt stor usikkerhet forbundet med å leie Smart Goggles | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## Appendix B: Pretest 1 – Validation of Measures and Results

**Convergent validity for** *Skibanen*

Performed factor analysis for evaluation questions, with two predicated factors, as the measure were developed based on two measures; «brand evaluation» and «purchase intention».

**Pattern Matrix[a]**

| | Factor | |
| --- | --- | --- |
| | 1 | 2 |
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som et svært godt tilbud | 1.013 | -.104 |
| Vurder de følgende påstandene:: Jeg stiller meg positiv til Skibanen | .908 | |
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som svært tilfredsstillende | .777 | .158 |
| Vurder de følgende påstandene:: Generelt vil jeg beskrive Skibanen som svært attraktivt for meg | | .927 |
| Vurder de følgende påstandene:: Dersom Skibanen ble tilgjengelig nær meg ville jeg vurdert å kjøpe heiskort | | .924 |
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som svært viktig | | .601 |
| **Vurder de følgende påstandene:: Skibanen er et produkt jeg kunne tenke meg å prøve** | **.424** | **.485** |
| **Vurder de følgende påstandene:: Jeg oppfatter Skibanen som svært gunstig** | **.393** | **.413** |

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 8 iterations.

**Goodness-of-fit Test**

| Chi-Square | df | Sig. |
| --- | --- | --- |
| 45.185 | 13 | .000 |

Two items that were ambiguous were removed, resulting in good factor loadings and a adequate GOF.

**Pattern Matrix[a]**

| | Factor |
| --- | --- |

| | 1 | 2 |
|---|---|---|
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som et svært godt tilbud | 1.008 | |
| Vurder de følgende påstandene:: Jeg stiller meg positiv til Skibanen | .894 | |
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som svært tilfredsstillende | .771 | .170 |
| Vurder de følgende påstandene:: Generelt vil jeg beskrive Skibanen som svært attraktivt for meg | | .914 |
| Vurder de følgende påstandene:: Dersom Skibanen ble tilgjengelig nær meg ville jeg vurdert å kjøpe heiskort | | .908 |
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som svært viktig | | .584 |

Extraction Method: Maximum Likelihood.
 Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 5 iterations.

**Goodness-of-fit Test**

| Chi-Square | df | Sig. |
|---|---|---|
| .662 | 4 | .956 |

## Perceived Risk

**Pattern Matrix**[a]

| | Factor | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Vurder de følgende påstandene:: Alt i alt tror jeg det ville vært galt av meg å kjøpe heiskort til Skibanen. | .844 | -.109 | .222 |
| Vurder de følgende påstandene:: Jeg ville følt stor usikkerhet forbundet med å kjøpe heiskort til Skibanen. | .811 | | .175 |
| Vurder de følgende påstandene:: Jeg tror det ville vært forbundet med mange ulemper for meg ved å kjøpe heiskort til Skibanen. | **.554** | **.405** | |
| Vurder de følgende påstandene:: Jeg ville vært redd for hva familie og venner tenkte om meg dersom jeg hadde kjøpt heiskort til Skibanen. | .426 | .111 | |
| Vurder de følgende påstandene:: Jeg tror at bruk av Skibanen kunne utgjort en fare for helsen min. | .167 | .767 | -.194 |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke var et trygt produkt. | | .652 | .287 |

| | 1 | 2 | 3 |
|---|---|---|---|
| Vurder de følgende påstandene:: Jeg ville følt meg ukomfortabel ved å bruke Skibanen. | .128 | .633 | .188 |
| Vurder de følgende påstandene:: Jeg mener at å kjøpe heiskort til Skibanen ville vært en dårlig måte å bruke penger på. | | | .684 |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke klarte å levere de fordelene den hadde lovet. | -.100 | .261 | .622 |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke var verd pengene jeg måtte brukt på å kjøpe heiskort til den. | .296 | | .616 |

**Pattern Matrix**[a]

| | Factor | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Vurder de følgende påstandene:: Jeg ville følt stor usikkerhet forbundet med å kjøpe heiskort til Skibanen. | .825 | .126 | .113 |
| Vurder de følgende påstandene:: Alt i alt tror jeg det ville vært galt av meg å kjøpe heiskort til Skibanen. | .818 | | .168 |
| Vurder de følgende påstandene:: Jeg ville vært redd for hva familie og venner tenkte om meg dersom jeg hadde kjøpt heiskort til Skibanen. | .406 | | |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke var et trygt produkt. | | .729 | .219 |
| Vurder de følgende påstandene:: Jeg tror at bruk av Skibanen kunne utgjort en fare for helsen min. | .167 | .708 | -.197 |
| Vurder de følgende påstandene:: Jeg ville følt meg ukomfortabel ved å bruke Skibanen. | .104 | .692 | .116 |
| Vurder de følgende påstandene:: Jeg mener at å kjøpe heiskort til Skibanen ville vært en dårlig måte å bruke penger på. | | | .680 |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke var verd pengene jeg måtte brukt på å kjøpe heiskort til den. | .287 | | .661 |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke klarte å levere de fordelene den hadde lovet. | | .257 | .611 |

Extraction Method: Maximum Likelihood.
 Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 5 iterations.

## Discriminant

**Pattern Matrix<sup>a</sup>**

| | Factor | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Vurder de følgende påstandene:: Alt i alt tror jeg det ville vært galt av meg å kjøpe heiskort til Skibanen. | .967 | | | |
| Vurder de følgende påstandene:: Jeg ville følt stor usikkerhet forbundet med å kjøpe heiskort til Skibanen. | .614 | | .154 | .342 |
| **Vurder de følgende påstandene:: Jeg ville vært redd for hva familie og venner tenkte om meg dersom jeg hadde kjøpt heiskort til Skibanen**. | **.267** | **-.148** | **-.182** | **.240** |
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som et svært godt tilbud | -.139 | .965 | | |
| Vurder de følgende påstandene:: Jeg stiller meg positiv til Skibanen | | .812 | | -.217 |
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som svært tilfredsstillende | | .759 | -.200 | |
| Vurder de følgende påstandene:: Dersom Skibanen ble tilgjengelig nær meg ville jeg vurdert å kjøpe heiskort | -.104 | | -.800 | -.176 |
| Vurder de følgende påstandene:: Generelt vil jeg beskrive Skibanen som svært attraktivt for meg | | | -.793 | -.223 |
| Vurder de følgende påstandene:: Jeg oppfatter Skibanen som svært viktig | .132 | .218 | -.666 | .126 |
| **Vurder de følgende påstandene:: Jeg mener at å kjøpe heiskort til Skibanen ville vært en dårlig måte å bruke penger på.** | **.247** | | **.519** | |
| **Vurder de følgende påstandene:: Jeg oppfatter Skibanen som svært gunstig** | | **.446** | **-.490** | **.110** |
| Vurder de følgende påstandene:: Skibanen er et produkt jeg kunne tenke meg å prøve | | .334 | -.394 | -.378 |
| **Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke var verd pengene jeg måtte brukt på å kjøpe heiskort til den.** | **.276** | | **.369** | |
| Vurder de følgende påstandene:: Jeg tror at bruk av Skibanen kunne utgjort en fare for helsen min. | | | | .812 |
| Vurder de følgende påstandene:: Jeg tror det ville vært forbundet med mange ulemper for meg ved å kjøpe heiskort til Skibanen. | .246 | .120 | .150 | .717 |
| Vurder de følgende påstandene:: Jeg ville følt meg ukomfortabel ved å bruke Skibanen. | | -.150 | .109 | .574 |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke var et trygt produkt. | | -.150 | | .564 |

| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke klarte å levere de fordelene den hadde lovet. | | -.182 | .177 | .188 |
|---|---|---|---|---|

Extraction Method: Maximum Likelihood.
 Rotation Method: Oblimin with Kaiser Normalization.
 a. Rotation converged in 9 iterations.

**Pattern Matrix<sup>a</sup>**

| | Component | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Vurder de følgende påstandene:: Jeg ville følt meg ukomfortabel ved å bruke Skibanen. | .844 | | |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke var et trygt produkt. | .839 | | |
| Vurder de følgende påstandene:: Jeg tror at bruk av Skibanen kunne utgjort en fare for helsen min. | .810 | .290 | .304 |
| Vurder de følgende påstandene:: Jeg mener at å kjøpe heiskort til Skibanen ville vært en dårlig måte å bruke penger på. | | -.838 | |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke var verd pengene jeg måtte brukt på å kjøpe heiskort til den. | | -.813 | .242 |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Skibanen ikke klarte å levere de fordelene den hadde lovet. | .301 | -.646 | -.238 |
| Vurder de følgende påstandene:: Jeg ville vært redd for hva familie og venner tenkte om meg dersom jeg hadde kjøpt heiskort til Skibanen. | | | .859 |
| Vurder de følgende påstandene:: Alt i alt tror jeg det ville vært galt av meg å kjøpe heiskort til Skibanen. | | -.467 | .550 |
| Vurder de følgende påstandene:: Jeg ville følt stor usikkerhet forbundet med å kjøpe heiskort til Skibanen. | .340 | -.390 | .511 |

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.
 a. Rotation converged in 11 iterations.

**Smart Goggles**

**Pattern Matrix<sup>a</sup>**

| | Factor | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Vurder de følgende påstandene:: Dersom Smart Goggles ble tilgjengelig nær meg ville jeg vurdert å leie dette | .998 | | | | | |
| Vurder de følgende påstandene:: Generelt vil jeg beskrive Smart Goggles som svært attraktivt for meg | .666 | | .274 | | | .178 |
| Vurder de følgende påstandene:: Jeg ville vært redd for at Smart Goggles ikke var et trygt produkt. | | .892 | -.143 | | | |

| Vurder de følgende påstandene | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| :: Jeg stiller meg positiv til Smart Goggles | | | .857 | | | -.234 |
| :: Jeg oppfatter Smart Goggles som et svært godt tilbud | .126 | | .833 | | | |
| :: Jeg oppfatter Smart Goggles som svært tilfredsstillende | | | .805 | | | .210 |
| :: Jeg ville vært redd for hva familie og venner tenkte om meg dersom jeg hadde leid Smart Goggles. | | | -.123 | .823 | | |
| :: Jeg tror at bruk av Smart Goggles kunne utgjort en fare for helsen min. | | .388 | | .625 | | -.195 |
| :: Alt i alt tror jeg det ville vært galt av meg å leie Smart Goggles | -.326 | | | .597 | .133 | |
| :: Jeg ville følt meg ukomfortabel ved å bruke Smart Goggles. | -.196 | .208 | -.127 | .443 | .226 | .118 |
| :: Jeg ville vært redd for at Smart Goggles ikke var verd pengene jeg måtte brukt på å leie det. | | -.145 | | | .821 | |
| :: Jeg ville vært redd for at Smart Goggles ikke klarte å levere de fordelene den hadde lovet. | | .227 | | | .661 | |
| :: Jeg oppfatter Smart Goggles som svært viktig | .302 | .118 | .330 | | -.287 | .330 |

Extraction Method: Maximum Likelihood.
 Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 8 iterations.


No discriminant validity for Smart Goggles or SkiSuit.

Attraktivitet: Q4.1-4.4+Q4.7-4.8

**Risiko**

Helse: Q5.1 + Q5.5 + Q5.6

Finansiell: Q5.2-5.4

Physical: Q5.7 + Q5.9-5.10

Combined into one variable for risk.

**Results**

**Gender:**

| | Frequency | Percent |
|---|---|---|
| Men | 43 | 41.0 |
| Women | 62 | 59.0 |
| Total | 105 | 100.0 |

**Age:**

| | Frequency | Percent |
|---|---|---|
| >15 | 2 | 1,9 |
| 16-25 | 62 | 59,0 |
| 26-35 | 27 | 25,7 |
| 36-45 | 6 | 5,7 |
| <46 | 8 | 7,6 |

| Evaluation (validated for one) | Mean | Variance |
|---|---|---|
| Skibanen | 5.1119 | 1.596 |
| SkiSuit | 2.5929 | 1.596 |
| Smart Goggles | 4.9571 | 1.752 |
| **All Evaluation Items** | | |
| Skibanen | 5.1119 | 1.596 |
| SkiSuit | 2.5929 | 2.078 |
| Smart Goggles | 4.9571 | 1.752 |

| Descriptive statistics - Risk | Skibanen | SkiSuit | Smart Goggles |
|---|---|---|---|
| Risk_Physical (Validated for SkiBanen) | 2.0063 | 4.7714 | 2.4190 |
| Variance | 1.169 | 2.984 | 1.560 |
| Risk_financial (Validated for SkiBanen) | 2.5937 | 4.5714 | 3.3587 |
| Variance | 1.190 | 2.728 | 1.677 |
| Risk_PsychoSocial (Validated for SkiBanen) | 1.6190 | 3.8127 | 2.0095 |
| Variance | .918 | 3.241 | 1.142 |
| Risk total | 2.0730 | 4.3852 | 2.5958 |
| Variance | .717 | 2.485 | 1.030 |
| Risk_mean | 2.0505 | 4.3590 | 2.5571 |
| Variance | .739 | 2.569 | 1.043 |
| Original measures (all items) | | | |
| Performance | 2.5857 | 4.3905 | 3.0190 |
| Financial | 2.4714 | 4.7190 | 3.2476 |
| Physical | 1.5714 | 4.8381 | 2.2952 |
| Psychological | 2.1143 | 4.9714 | 2.5048 |
| Social | 1.2857 | 2.8667 | 1.7429 |
| Overall | 1.8063 | 4.2317 | 2.1651 |
| Variance-Performance | 1.368 | 2.995 | 1.629 |

| | | | |
|---|---|---|---|
| Variance -Financial | 1.389 | 3.163 | 1.986 |
| Variance - Physical | .709 | 4.137 | 2.018 |
| Variance -Psychological | 2.391 | 3.605 | 2.406 |
| Variance -Social | .456 | 3.597 | 1.154 |
| Variance -Overall | 1.433 | 4.037 | 1.470 |

# Appendix C: Pretest 2 – Questionnaire

**Hoteller i Norge**

Jeg er en masterstudent ved Høgskolen i Buskerud og Vestfold, og gjennomfører denne undersøkelsen som et forstudie til min masteravhandling.

Undersøkelsen omhandler norske hotell. Formålet er å kartlegge merkeverdien til de forskjellige hotellene for senere bruk i hovedundersøkelsen.

Undersøkelsen vil ta omtrent 5 minutter.
Din identitet vil holdes skjult.
Les om retningslinjer for personvern. (Åpnes i nytt vindu)

## SPØRSMÅL 1

**1) * Tenk at du skal på ski-weekend til en destinasjon i Norge. List navnet på de hotellene/hotellkjedene du ville forvente å finne der:**

**2) Vurder følgende påstander om Radisson Blu**

|  | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
|---|---|---|---|---|---|---|---|
| Jeg kjenner til Radisson Blu | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg kan gjenkjenne Radisson Blu blant andre konkurrerende merker | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg vet hvordan Radisson Blu's fysiske utseende er | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ser på meg selv som lojal mot Radisson Blu | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
|---|---|---|---|---|---|---|---|
| Radisson Blu ville vært mitt førstevalg | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville med stor sannsynlighet byttet til et annet hotell enn Radisson Blu dersom et annet hotell har et kampanjetilbud | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg kommer raskt på noen egenskaper ved Radisson Blu | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg kommer raskt på symbolet eller logoen til Radisson Blu | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg har vanskeligheter med å forestille meg Radisson Blu | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**3) Vurder følgende påstander om Dr. Holms**

| | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
|---|---|---|---|---|---|---|---|
| Jeg kjenner til Dr. Holms | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg kan gjenkjenne Dr. Holms blant andre konkurrerende merker | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg vet hvordan Dr. Holms fysiske utseende er | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ser på meg selv som lojal mot Dr. Holms | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Dr. Holms ville vært mitt førstevalg | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville med stor sannsynlighet byttet til et annet hotell enn Dr. Holms dersom et | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

100

annet hotell
har et
kampanjetilbud

| | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
|---|---|---|---|---|---|---|---|
| Jeg kommer raskt på noen egenskaper ved Dr. Holms | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg kommer raskt på symbolet eller logoen til Dr. Holms | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg har vanskeligheter med å forestille meg Dr. Holms | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**4) Vurder følgende påstander om Quality Hotels**

| | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
|---|---|---|---|---|---|---|---|
| Jeg kjenner til Quality Hotels | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg kan gjenkjenne Quality Hotels blant andre konkurrerende merker | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg vet hvordan Quality Hotels fysiske utseende er | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ser på meg selv som lojal mot Quality Hotels | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Quality Hotels ville vært mitt førstevalg | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg ville med stor sannsynlighet byttet til et annet hotell enn Quality Hotels dersom et annet hotell har et kampanjetilbud | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg kommer raskt på noen egenskaper ved Quality Hotels | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg kommer | | | | | | | |

101

| raskt på symbolet eller logoen til Quality Hotels | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Jeg har vanskeligheter med å forestille meg Quality Hotels | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

⇨

**5) * Kjønn**

Velg alternativ [ ▼ ]

**6) * Hvor gammel er du?**

○ <15

○ 15-24

○ 25-34

○ 35-44

○ >45

## Appendix D: Pretest 2 – Analysis

| Gender | Frequency | Percentage |
|--------|-----------|------------|
| Male | 39 | 32 |
| Female | 83 | 68 |

| Age | Frequency | Percentage |
|-----|-----------|------------|
| <15 | 1 | .8 |
| 15-24 | 40 | 32.8 |
| 25-34 | 67 | 54.9 |
| 35-44 | 4 | 3.3 |
| >45 | 10 | 8.2 |

**Validation of the measuremen scale brand equity**

**Convergent validity - Brand Equity**

All questions for brand equity for Radisson Blu was included in a factor analysis; including q2.1 to q2.9.

**Factor Matrix[a]**

| | Factor | |
|---|---|---|
| | 1 | 2 |
| Vurder følgende påstander om Radisson Blu: Jeg vet hvordan Radisson Blu's fysiske utseende er | .885 | -.220 |
| Vurder følgende påstander om Radisson Blu: Jeg kan gjenkjenne Radisson Blu blant andre konkurrerende merker | .838 | -.273 |
| Vurder følgende påstander om Radisson Blu: Jeg kommer raskt på symbolet eller logoen til Radisson Blu | .782 | -.101 |
| Vurder følgende påstander om Radisson Blu: Jeg har vanskeligheter med å forestille meg Radisson Blu | -.713 | .150 |
| Vurder følgende påstander om Radisson Blu: Jeg kommer raskt på noen egenskaper ved Radisson Blu | .697 | .153 |
| Vurder følgende påstander om Radisson Blu: Jeg kjenner til Radisson Blu | .660 | -.286 |
| Vurder følgende påstander om Radisson Blu: Jeg ser på meg selv som lojal mot Radisson Blu | .647 | .616 |
| Vurder følgende påstander om Radisson Blu: Radisson Blu ville vært mitt førstevalg | .552 | .566 |
| Vurder følgende påstander om Radisson Blu: Jeg ville med stor sannsynlighet byttet til et annet hotell enn Radisson Blu dersom et annet hotell har et kampanjetilbud | | -.280 |

Extraction Method: Maximum Likelihood.

a. 2 factors extracted. 5 iterations required.

**Goodness-of-fit Test**

| Chi-Square | df | Sig. |
|---|---|---|
| 67.861 | 19 | .000 |

The factor matrix showed results where several of the items have factor loadings on two factors. As the original scale had one factor, attempts was made with a factor analysis with one fixed factor.

**Factor Matrix[a]**

| | Factor |
|---|---|
| | 1 |
| Vurder følgende påstander om Radisson Blu: Jeg vet hvordan Radisson Blu's fysiske utseende er | .908 |
| Vurder følgende påstander om Radisson Blu: Jeg kan gjenkjenne Radisson Blu blant andre konkurrerende merker | .858 |
| Vurder følgende påstander om Radisson Blu: Jeg kommer raskt på symbolet eller logoen til Radisson Blu | .802 |
| Vurder følgende påstander om Radisson Blu: Jeg har vanskeligheter med å forestille meg Radisson Blu | -.742 |
| Vurder følgende påstander om Radisson Blu: Jeg kjenner til Radisson Blu | .681 |
| Vurder følgende påstander om Radisson Blu: Jeg kommer raskt på noen egenskaper ved Radisson Blu | .667 |
| Vurder følgende påstander om Radisson Blu: Jeg ser på meg selv som lojal mot Radisson Blu | .516 |
| Vurder følgende påstander om Radisson Blu: Radisson Blu ville vært mitt førstevalg | .438 |
| Vurder følgende påstander om Radisson Blu: Jeg ville med stor sannsynlighet byttet til et annet hotell enn Radisson Blu dersom et annet hotell har et kampanjetilbud | 0.08 |

Extraction Method: Maximum Likelihood.

a. 1 factors extracted. 5 iterations required.

**Goodness-of-fit Test**

| Chi-Square | df | Sig. |
|---|---|---|
| 151.477 | 27 | .000 |

The last item (q2.6) was then excluded due to a low factor loading (0.08).

**Factor Matrix[a]**

| | Factor |
|---|---|

| | 1 |
|---|---|
| Vurder følgende påstander om Radisson Blu: Jeg vet hvordan Radisson Blu's fysiske utseende er | .907 |
| Vurder følgende påstander om Radisson Blu: Jeg kan gjenkjenne Radisson Blu blant andre konkurrerende merker | .858 |
| Vurder følgende påstander om Radisson Blu: Jeg kommer raskt på symbolet eller logoen til Radisson Blu | .802 |
| Vurder følgende påstander om Radisson Blu: Jeg har vanskeligheter med å forestille meg Radisson Blu | -.744 |
| Vurder følgende påstander om Radisson Blu: Jeg kjenner til Radisson Blu | .679 |
| Vurder følgende påstander om Radisson Blu: Jeg kommer raskt på noen egenskaper ved Radisson Blu | .668 |
| Vurder følgende påstander om Radisson Blu: Jeg ser på meg selv som lojal mot Radisson Blu | .518 |
| Vurder følgende påstander om Radisson Blu: Radisson Blu ville vært mitt førstevalg | .440 |

Extraction Method: Maximum Likelihood.

a. 1 factors extracted. 5 iterations required.

**Goodness-of-fit Test**

| Chi-Square | df | Sig. |
|---|---|---|
| 134.892 | 20 | .000 |

All items without q.2.6 was accepted. The same items was then tested for the two other hotels Quality and Dr. Holms with similar results.

**Factor Matrix<sup>a</sup>**

| | Factor |
|---|---|
| | 1 |
| Vurder følgende påstander om Quality Hotels: Jeg vet hvordan Quality Hotels fysiske utseende er | .868 |
| Vurder følgende påstander om Quality Hotels: Jeg kommer raskt på symbolet eller logoen til Quality Hotels | .806 |
| Vurder følgende påstander om Quality Hotels: Jeg kan gjenkjenne Quality Hotels blant andre konkurrerende merker | .793 |
| Vurder følgende påstander om Quality Hotels: Jeg kommer raskt på noen egenskaper ved Quality Hotels | .742 |
| Vurder følgende påstander om Quality Hotels: Jeg kjenner til Quality Hotels | .689 |
| Vurder følgende påstander om Quality Hotels: Jeg har vanskeligheter med å forestille meg Quality Hotels | -.676 |

| | .471 |
|---|---|
| Vurder følgende påstander om Quality Hotels: Jeg ser på meg selv som lojal mot Quality Hotels | .471 |
| Vurder følgende påstander om Quality Hotels: Quality Hotels ville vært mitt førstevalg | .464 |

Extraction Method: Maximum Likelihood.

a. 1 factors extracted. 5 iterations required.

**Goodness-of-fit Test**

| Chi-Square | df | Sig. |
|---|---|---|
| 123.317 | 20 | .000 |

**Factor Matrix[a]**

| | Factor |
|---|---|
| | 1 |
| Vurder følgende påstander om Dr. Holms: Jeg vet hvordan Dr. Holms fysiske utseende er | .901 |
| Vurder følgende påstander om Dr. Holms: Jeg kan gjenkjenne Dr. Holms blant andre konkurrerende merker | .895 |
| Vurder følgende påstander om Dr. Holms: Jeg kommer raskt på noen egenskaper ved Dr. Holms | .875 |
| Vurder følgende påstander om Dr. Holms: Jeg kommer raskt på symbolet eller logoen til Dr. Holms | .802 |
| Vurder følgende påstander om Dr. Holms: Jeg kjenner til Dr. Holms | .783 |
| Vurder følgende påstander om Dr. Holms: Dr. Holms ville vært mitt førstevalg | .552 |
| Vurder følgende påstander om Dr. Holms: Jeg har vanskeligheter med å forestille meg Dr. Holms | -.549 |
| Vurder følgende påstander om Dr. Holms: Jeg ser på meg selv som lojal mot Dr. Holms | .538 |

Extraction Method: Maximum Likelihood.

a. 1 factors extracted. 5 iterations required.

**Goodness-of-fit Test**

| Chi-Square | df | Sig. |
|---|---|---|
| 97.269 | 20 | .000 |

Discriminant validity

Q2.1-2.9 (-2.6) + Q3.1-3.9 (-3.6) + Q4.1-4.9 (4.6)

**Pattern Matrix**[a]

| | Factor | | | Kvadrert faktorladning |
|---|---|---|---|---|
| | 1 | 2 | 3 | |
| | 0.57450362 | 0.50743917 | 0.47785934 | |
| Vurder følgende påstander om Dr. Holms: Jeg kan gjenkjenne Dr. Holms blant andre konkurrerende merker | **.909** | | | 0.82662811 |
| Vurder følgende påstander om Dr. Holms: Jeg vet hvordan Dr. Holms fysiske utseende er | **.894** | | | 0.79998346 |
| Vurder følgende påstander om Dr. Holms: Jeg kommer raskt på noen egenskaper ved Dr. Holms | **.884** | | | 0.78138996 |
| Vurder følgende påstander om Dr. Holms: Jeg kjenner til Dr. Holms | **.801** | .120 | .103 | 0.64180143 |
| Vurder følgende påstander om Dr. Holms: Jeg kommer raskt på symbolet eller logoen til Dr. Holms | **.798** | | | 0.63643084 |
| Vurder følgende påstander om Dr. Holms: Jeg har vanskeligheter med å forestille meg Dr. Holms | **-.596** | | .174 | 0.35477983 |
| Vurder følgende påstander om Dr. Holms: Dr. Holms ville vært mitt førstevalg | **.536** | -.122 | | 0.2875574 |
| Vurder følgende påstander om Dr. Holms: Jeg ser på meg selv som lojal mot Dr. Holms | **.517** | -.103 | | 0.26745793 |
| Vurder følgende påstander om Radisson Blu: Jeg vet hvordan Radisson Blu's fysiske utseende er | | **.893** | | 0.79672511 |
| Vurder følgende påstander om Radisson Blu: Jeg kan gjenkjenne Radisson Blu blant andre konkurrerende merker | | **.870** | | 0.75765712 |
| Vurder følgende påstander om Radisson Blu: Jeg kommer raskt på symbolet eller logoen til Radisson Blu | | **.775** | | 0.60119287 |
| Vurder følgende påstander om Radisson Blu: Jeg har vanskeligheter med å forestille meg Radisson Blu | | **-.745** | | 0.55493947 |
| Vurder følgende påstander om Radisson Blu: Jeg kjenner til Radisson Blu | | **.683** | | 0.46612224 |
| Vurder følgende påstander om Radisson Blu: Jeg kommer raskt på noen egenskaper ved Radisson Blu | .120 | **.648** | .106 | 0.42022508 |
| Vurder følgende påstander om Radisson Blu: Jeg ser på meg selv som lojal mot Radisson Blu | | **.528** | | 0.27853125 |
| Vurder følgende påstander om Radisson Blu: Radisson Blu ville vært mitt førstevalg | | **.429** | | 0.18412024 |
| Vurder følgende påstander om Quality Hotels: Jeg vet hvordan Quality Hotels fysiske utseende er | | .121 | **.835** | 0.69681214 |
| Vurder følgende påstander om Quality Hotels: Jeg kan gjenkjenne Quality Hotels blant andre konkurrerende merker | | .130 | **.800** | 0.63991723 |
| Vurder følgende påstander om Quality Hotels: Jeg kommer raskt på symbolet eller logoen til Quality Hotels | | | **.779** | 0.60683553 |
| Vurder følgende påstander om Quality Hotels: Jeg kjenner til Quality Hotels | | | **.752** | 0.56494155 |
| Vurder følgende påstander om Quality Hotels: Jeg kommer raskt på noen egenskaper ved Quality Hotels | | | **.707** | 0.49914293 |
| Vurder følgende påstander om Quality Hotels: Jeg har vanskeligheter med å forestille meg Quality Hotels | | -.119 | **-.631** | 0.39850201 |

| | | | | |
|---|---|---|---|---|
| Vurder følgende påstander om Quality Hotels: Quality Hotels ville vært mitt førstevalg | | -.173 | **.483** | |
| | | | | 0.23358621 |
| Vurder følgende påstander om Quality Hotels: Jeg ser på meg selv som lojal mot Quality Hotels | | | **.428** | |
| | | | | 0.1831371 |

Extraction Method: Maximum Likelihood.
 Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 4 iterations.

**Goodness-of-fit Test**

| Chi-Square | df | Sig. |
|---|---|---|
| 575.939 | 207 | .000 |


Discriminant validity


**Correlations**

| | | BE_rad | BE_Holms | BE_Qual |
|---|---|---|---|---|
| BE_rad | Pearson Correlation | 1 | .005 | ,237[*] |
| | Sig. (2-tailed) | | .961 | .012 |
| | N | 116 | 112 | 111 |
| BE_Holms | Pearson Correlation | .005 | 1 | .094 |
| | Sig. (2-tailed) | .961 | | .319 |
| | N | 112 | 118 | 114 |
| BE_Qual | Pearson Correlation | ,237[*] | .094 | 1 |
| | Sig. (2-tailed) | .012 | .319 | |
| | N | 111 | 114 | 117 |

*. Correlation is significant at the 0.05 level (2-tailed).

## Descriptive analysis of pretest 2

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|
| BE_rad | 116 | .00 | 6.00 | 3.7058 | 1.34632 | 1.813 |
| BE_Holms | 118 | .00 | 5.50 | 1.5561 | 1.51132 | 2.284 |
| BE_Qual | 117 | .13 | 6.00 | 3.6197 | 1.23082 | 1.515 |
| Valid N (listwise) | 108 | | | | | |

14 cases was excluded, so the statistics changed to:

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|
| BE_rad | 107 | .00 | 6.00 | 3.7114 | 1.34951 | 1.821 |
| BE_Holms | 107 | .00 | 5.50 | 1.6133 | 1.53089 | 2.344 |
| BE_Qual | 107 | .13 | 6.00 | 3.7220 | 1.17402 | 1.378 |
| Valid N (listwise) | 107 | | | | | |

**Appendix E: Main experiment – Manipulation and Questionnaire**

**Risk manipulation**

Mandag 3. Mars 2014 — **Dagbladet**

# Trøblete teknologi får fatale følger

Ny teknologi fører ofte til problemer for brukeren.
Foto: Runar Oppland

Tekst: **Camilla Dalsegg**
cda@dagbladet.no

**Stadig flere produkter med ny teknologi som lanseres har alvorlige mangler. Det har den siste tiden dukket opp flere tilfeller der feilene har fått store konsekvenser for brukeren.**

Forrige uke ble det gjennom Facebook offentliggjort flere tilfeller av ny teknologi som ikke har levet opp til kundenes forventninger. En mann forteller at hans nye smart-TV helt plutselig mistet bildet og skjermen gikk i sort.

Andre forteller om spillkonsoller som gir elektriske støt, smart-klokker som uprovosert ringer tilfeldige personer i kontaktlisten og en Segway hvor bremsene sviktet.

Ifølge Google har også utviklingen av deres nye smartbriller vært utfordrende.

Et problem ny teknologi er ofte dårlig batterikapasitet. I kaldt vintervær blir batteritiden enda kortere.

Teknologien har kommet langt, men mange produkter er lansert for tidlig og trenger videreutvikling, sier produkttester Knut Steinung.

# Flotte vinterdager i vente

Nå skal snøen komme etterfulgt av solfylte dager. Det blir perfekte forhold i alpinbakkene over hele Sør-Norge.
Foto: Runar Oppland

Tekst: **Camilla Dalsegg**
cda@dagbladet.no

**Etter en laber vinter så langt skal Sør-Norge endelig få noen fine vinteruker fremover.**

Den kommer nesten som bestilt: Sola har knapt vist seg i Sør-Norge hittil i år og snøen har uteblitt. Men nå er snøen på plass og solen er på vei. Bare smør deg med litt tålmodighet.

For trøndere og vestlendinger som drømmer om å tenne bål og grille pølser kan det også skje gode ting på værfronten fremover.

De neste ukene kommer snøen, noe skisentrene i Norge er glade for.

Så kommer det et høytrykk inn over hele Sør-Norge som gir solfylte dager med mild bris og temperaturer rundt 7 minusgrader.

Høytrykket erstatter snøbygene, og vi kan vente fine vinterdager, avslutter meteorolog Løvdahl.

*Alpinbrillen som ser bakken for deg!*

**Den nye smartbrillen har:**

- Dual-vented glass med F3 anti-fog coating
- Terrengglass
- Hastighetsmåler
- Sidesensor med farevarsling
- Videokamera
- Klokke
- Synkroniseringsmulighet med app

Kjøp TRYSIL-PAKKEN:

2 netter på Radisson Blu Resort

og Vio Alpinbrille

# VIO ALPINE

**Alpinbrillen som ser bakken for deg!**

**Den nye smartbrillen har:**

- Dual-vented glass med F3 anti-fog coating
- Terrengglass
- Hastighetsmåler
- Sidesensor med farevarsling
- Videokamera
- Klokke
- Synkroniseringsmulighet med app

12:55

54 km/h
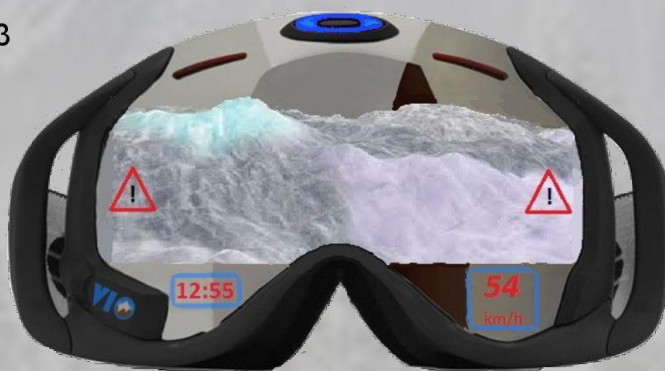
Kjøp TRYSIL-PAKKEN:

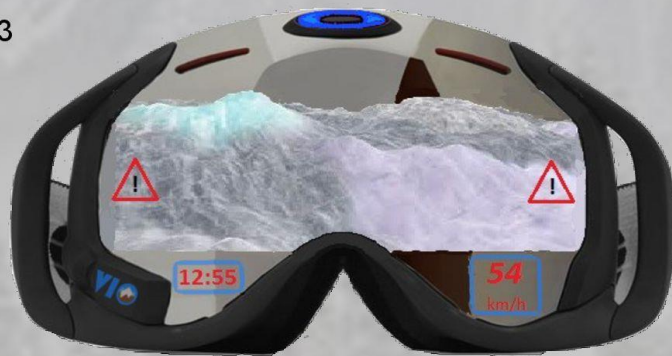2 netter på Trollstugo Hotell

og Vio Alpinbrille

Trollstugo Hotell

# VIO ALPINE

## *Alpinbrillen som ser bakken for deg!*

**Den nye smartbrillen har:**

- Dual-vented glass med F3 anti-fog coating
- Terrengglass
- Hastighetsmåler
- Sidesensor med farevarsling
- Videokamera
- Klokke
- Synkroniseringsmulighet med app
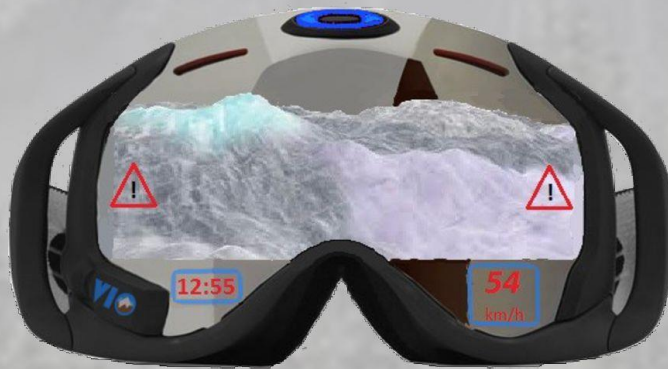
## Kjøp DIN Vio Alpinbrille i dag!

**Questionnaire**

**Undersøkelse til masteroppgave**

Takk for at du tar deg tid til å være med på denne studien, som tar 5-10 minutter. Din identitet vil holdes skjult. Studien gjennomføres som en del av masterutdanningen i økonomi og ledelse ved HBV.

På neste side finner du en avisartikkel etterfulgt av en reklameannonse for et nytt produkt. Les nøye og svar deretter på spørsmålene i slutten av heftet. Svar ærlig på spørsmålene.

Hensikten med studien er å undersøke hvordan folk oppfatter budskapet i ulike typer skriftlig informasjon.

**Gjengi det du har lest i artikkelen og reklamen med egne ord:**

(2-3 setninger på hver)

Artikkel:

Reklame:

**Siden Vio Alpine er et helt nytt produkt er vi spesielt interessert i din oppfatning av dette produktet. Vurder følgende utsagn om Vio Alpine:**

| | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Det vil sannsynligvis være feil av meg å kjøpe Vio Alpine. | O | O | O | O | O | O | O |
| Jeg har en følelse av at bruk av Vio Alpine vil medføre store problemer. | O | O | O | O | O | O | O |
| Jeg vil pådra meg en viss risiko hvis jeg bruker Vio Alpine. | O | O | O | O | O | O | O |
| Vio Alpine er et svært risikabelt kjøp. | O | O | O | O | O | O | O |

| Forutsatt at Vio Alpine er solgt til en pris som er akseptabel for deg, hva er din vurdering av Vio Alpine? | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Vio Alpine er absolutt et akseptabelt produkt for meg | O | O | O | O | O | O | O |
| Vio Alpine er en alpinbrille jeg kunne kjøpt | O | O | O | O | O | O | O |
| Vio Alpine er en skibrille jeg absolutt ville vurdert dersom det var aktuelt for meg å kjøpe skibriller | O | O | O | O | O | O | O |
| Vio Alpine virker alt i alt svært attraktivt for meg | O | O | O | O | O | O | O |
| Vio Alpine virker som en bra skibrille | O | O | O | O | O | O | O |
| Dersom en venn skal ha skibriller kommer jeg til å anbefale Vio Alpine for ham/henne | O | O | O | O | O | O | O |
| Jeg kunne godt tenke meg å kjøpe Vio Alpine | O | O | O | O | O | O | O |

| Forutsatt at pakken med Vio Alpine og overnatting på Radisson Blu (Trollstugo Hotell) er solgt til en pris som er akseptabel for deg, hva er din vurdering av pakken? | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Pakken er absolutt akseptabel for meg | O | O | O | O | O | O | O |
| Pakken er et tilbud jeg kunne kjøpt | O | O | O | O | O | O | O |
| Pakken er et tilbud jeg absolutt ville vurdert dersom det var aktuelt for meg med hotell og skibriller | O | O | O | O | O | O | O |
| Pakken virker alt i alt svært attraktivt for meg | O | O | O | O | O | O | O |
| Pakken virker som et godt tilbud | O | O | O | O | O | O | O |
| Dersom en venn skal ha overnatting på hotell og skibriller kommer jeg til å anbefale pakken for ham/henne | O | O | O | O | O | O | O |
| Jeg kunne godt tenke meg å kjøpe pakken | O | O | O | O | O | O | O |

| Hva er din vurdering av destinasjonen Trysil | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Helt uenig | Ganske uenig | Litt uenig | Hverken eller | Litt enig | Ganske enig | Helt enig |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Trysil er absolutt en akseptabel destinasjon for meg | O | O | O | O | O | O | O |
| Trysil er en destinasjon jeg kunne reist til | O | O | O | O | O | O | O |
| Trysil er en destinasjon jeg absolutt ville vurdert dersom det var aktuelt for meg med skiferie | O | O | O | O | O | O | O |
| Trysil virker alt i alt svært attraktivt for meg | O | O | O | O | O | O | O |
| Trysil virker som en bra destinasjon | O | O | O | O | O | O | O |
| Dersom en venn skal på en skiferie kommer jeg til å anbefale Trysil for ham/henne | O | O | O | O | O | O | O |
| Jeg kunne godt tenke meg å dra til Trysil | O | O | O | O | O | O | O |

| Nå ønsker vi å få vite litt om hvor mye kunnskap og erfaring du har om ferieopphold på vinterdestinasjoner. | | | | | | |
|---|---|---|---|---|---|---|
| Hvor mye kunnskap opplever du at du har om ferieopphold på vinterdestinasjoner sammenlignet med befolkningen generelt? | | | | | | |
| Svært mye dårligere kunnskap | Mye dårligere kunnskap | Litt dårligere kunnskap | Tror vi kan omtrent like mye | Litt bedre kunnskap | Mye bedre kunnskap | Svært mye bedre kunnskap |
| O | O | O | O | O | O | O |

| I løpet av de siste 2 årene, hvor mange ganger har du hatt et ferieopphold/weekendopphold på en vinterdestinasjon? | | | | | | |
|---|---|---|---|---|---|---|
| Ingen | 1 gang | 2-4 ganger | 5-7ganger | 7-10 ganger | 11-15 ganger | Mer enn 15 ganger |
| O | O | O | O | O | O | O |

| Hvor interessant er skiferier for deg? | | | | | | |
|---|---|---|---|---|---|---|
| Svært uinteressant | Ganske uinteressant | Litt uinteressant | Hverken eller | Litt interessant | Ganske interessant | Svært interessant |
| O | O | O | O | O | O | O |

| Kjønn: | |
|---|---|
| Mann | O |
| Kvinne | O |

| Hvor seriøst svarte du på disse spørsmålene? | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Svært useriøst | Useriøst | Middels useriøst | Litt useriøst | Hverken eller | Litt seriøst | Middels seriøst | Seriøst | Svært seriøst |
| O | O | O | O | O | O | O | O | O |

120

## Appendix F: Descriptive Analysis

The table below shows the results of the descriptive analysis of all items in from the experiment. The table present the number of how many participants have answered each question, the maximum, the minimum, the mean, the standard deviation, the skewness and the kurtosis of each question. As the table shows, no item violated the requirement about skewness and kurtosis ($< +/-2$). Additionally, no standard deviation is under 1.

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation | Skewness | | Kurtosis | |
|---|---|---|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| Risk1 | 115 | 1 | 7 | 4,86 | 1,731 | -,421 | ,226 | -,661 | ,447 |
| Risk2 | 115 | 1 | 7 | 4,14 | 1,680 | -,133 | ,226 | -,697 | ,447 |
| Risk3 | 115 | 1 | 7 | 4,12 | 1,671 | -,265 | ,226 | -,605 | ,447 |
| Risk4 | 115 | 1 | 7 | 4,05 | 1,544 | -,191 | ,226 | -,450 | ,447 |
| EvaluationNP1 | 115 | 1 | 7 | 4,02 | 1,845 | -,265 | ,226 | -,903 | ,447 |
| EvaluationNP2 | 115 | 1 | 7 | 3,53 | 2,049 | ,083 | ,226 | -1,423 | ,447 |
| EvaluationNP3 | 115 | 1 | 7 | 4,06 | 2,023 | -,265 | ,226 | -1,245 | ,447 |
| EvaluationNP4 | 115 | 1 | 7 | 3,23 | 1,752 | ,254 | ,226 | -,938 | ,447 |
| EvaluationNP5 | 115 | 1 | 7 | 4,55 | 1,613 | -,611 | ,226 | -,084 | ,447 |
| EvaluationNP6 | 115 | 1 | 7 | 3,56 | 1,743 | -,223 | ,226 | -,956 | ,447 |
| EvaluationNP7 | 115 | 1 | 7 | 2,98 | 1,887 | ,440 | ,226 | -1,088 | ,447 |
| EvaluationB1 | 75 | 1 | 7 | 4,68 | 1,653 | -,815 | ,277 | -,261 | ,548 |
| EvaluationB2 | 75 | 1 | 7 | 4,35 | 1,774 | -,635 | ,277 | -,756 | ,548 |
| EvaluationB3 | 75 | 1 | 7 | 5,21 | 1,287 | -,958 | ,277 | ,986 | ,548 |
| EvaluationB4 | 75 | 1 | 7 | 3,95 | 1,541 | -,090 | ,277 | -,508 | ,548 |
| EvaluationB5 | 75 | 2 | 7 | 4,57 | 1,286 | -,245 | ,277 | -,382 | ,548 |
| EvaluationB6 | 75 | 1 | 7 | 4,24 | 1,667 | -,285 | ,277 | -,777 | ,548 |
| EvaluationB7 | 75 | 1 | 7 | 3,47 | 1,877 | ,211 | ,277 | -1,031 | ,548 |
| EvaluationD1 | 75 | 1 | 7 | 5,27 | 1,679 | -1,051 | ,277 | ,485 | ,548 |
| EvaluationD2 | 75 | 1 | 7 | 5,45 | 1,613 | -1,213 | ,277 | 1,048 | ,548 |
| EvaluationD3 | 75 | 1 | 7 | 5,65 | 1,409 | -1,260 | ,277 | 1,275 | ,548 |
| EvaluationD4 | 75 | 1 | 7 | 4,68 | 1,653 | -,815 | ,277 | -,261 | ,548 |
| EvaluationD5 | 75 | 1 | 7 | 4,35 | 1,774 | -,635 | ,277 | -,756 | ,548 |
| EvaluationD6 | 75 | 1 | 7 | 5,21 | 1,287 | -,958 | ,277 | ,986 | ,548 |
| EvaluationD7 | 75 | 1 | 7 | 3,95 | 1,541 | -,090 | ,277 | -,508 | ,548 |
| Valid N | 75 | | | | | | | | |

Four cases were deleted that scored below four on the seriousness scale, and one case was deleted that had missing answers for the descriptive statistics.

| Seriousness | | Frequency | Percent |
|---|---|---|---|
| 2 | **Useriøst** | **1** | **,8** |
| 3 | **Middels useriøst** | **1** | **,8** |
| 4 | **Litt useriøst** | **2** | **1,7** |
| 5 | Hverken eller | 1 | ,8 |
| 6 | Litt seriøst | 2 | 1,7 |
| 7 | Middels seriøst | 11 | 9,2 |
| 8 | Seriøst | 59 | 49,6 |
| 9 | Svært seriøst | 41 | 34,5 |
| | Missing | 1 | ,8 |
| | Total | 119 | 100,0 |

| Knowledge about winter vacations | Frequency | Percent |
|---|---|---|
| Svært mye dårligere kunnskap | 9 | 7,6 |
| Mye dårligere kunnskap | 11 | 9,2 |
| Litt dårligere kunnskap | 36 | 30,3 |
| Tror vi kan omtrent like mye | 33 | 27,7 |
| Litt bedre kunnskap | 19 | 16,0 |
| Mye bedre kunnskap | 8 | 6,7 |
| Svært mye bedre kunnskap | 2 | 1,7 |
| Missing | 1 | ,8 |
| Total | 119 | 100,0 |

| Experience with winter vacations the last 2 years | Frequency | Percent |
|---|---|---|
| Ingen | 29 | 24,4 |
| 1 gang | 20 | 16,8 |
| 2-4 ganger | 45 | 37,8 |
| 5-7 ganger | 12 | 10,1 |
| 5-10 ganger | 4 | 3,4 |
| 11-15 ganger | 2 | 1,7 |
| Mer enn 15 ganger | 5 | 4,2 |
| Missing | 2 | 1,7 |
| Total | 119 | 100,0 |

| Interest for ski vacations | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| Svært uinteressant | 15 | 12,6 | 12,7 | 12,7 |
| Ganske uinteressant | 12 | 10,1 | 10,2 | 22,9 |
| Litt uinteressant | 13 | 10,9 | 11,0 | 33,9 |

| | | | | |
|---|---|---|---|---|
| Hverken eller | 6 | 5,0 | 5,1 | 39,0 |
| Litt interessant | 33 | 27,7 | 28,0 | 66,9 |
| Ganske interessant | 32 | 26,9 | 27,1 | 94,1 |
| Svært interessant | 7 | 5,9 | 5,9 | 100,0 |
| Missing System | 1 | ,8 | | |
| Total | 119 | 100,0 | | |

| Gender | Frequency | Percent |
|---|---|---|
| Male | 48 | 41,7 |
| Female | 67 | 58,3 |
| N | 115 | 100,0 |

## Appendix G: Construct Validity

In this appendix, the results of the construct validity analysis are presented. The convergent validity are presented first, followed by the discriminant validity and the reliability. The convergent validity has a requirement of factor loadings >.3, but preferably >.5.

### Convergent validity

Risk 1 are below the desired level of .5, but will be continued provisionally as the factor loading is above .3. All the other items of perceived risk showed good convergent features (see Table A), and all items are continued into an analysis of discriminant validity.

*Table A: Convergent validity - Perceived Risk*

**Perceived risk - Factor Matrix[a]**

| Item | Factor 1 |
|------|----------|
| Risk1 | ,412 |
| **Risk2** | **,778** |
| **Risk3** | **,725** |
| **Risk4** | **,775** |

Extraction Method: Maximum Likelihood.

a. 1 factors extracted. 4 iterations required.

The factor analysis of new product evaluation showed good convergent features (See Table B), and are all continued to the discriminant validity analysis.

*Table B: Convergent validity - New Product Evaluation*

**New Product Evaluation - Factor Matrix[a]**

| Item | Factor 1 |
|------|----------|
| NPEvaluation1 | ,776 |
| NPEvaluation2 | ,856 |
| NPEvaluation3 | ,769 |
| NPEvaluation4 | ,898 |
| NPEvaluation5 | ,665 |

| NPEvaluation6 | ,691 |
|---|---|
| NPEvaluation7 | ,888 |

Extraction Method: Maximum Likelihood.

a. 1 factors extracted. 4 iterations required.

The factor analysis of bundle evaluation shows good convergent features (See Table C), and are all continued to the discriminant validity analysis.

*Table C: Convergent validity - Bundle Evaluation*

**Factor Matrix**[a]

| Item | Factor |
|---|---|
| | 1 |
| BEvaluation1 | ,831 |
| BEvaluation2 | ,882 |
| BEvaluation3 | ,595 |
| BEvaluation4 | ,924 |
| BEvaluation5 | ,640 |
| BEvaluation6 | ,597 |
| BEvaluation7 | ,857 |

Extraction Method: Maximum Likelihood.

a. 1 factors extracted. 5 iterations required.

The factor analysis of destination evaluation shows good convergent features (See Table D), and are all continued to the discriminant validity analysis.

*Table D: Convergent validity - Destination Evaluation*

**Factor Matrix**[a]

| Item | Factor |
|---|---|
| | 1 |
| DEvaluation1 | ,922 |
| DEvaluation2 | ,930 |
| DEvaluation3 | ,778 |
| DEvaluation4 | ,940 |
| DEvaluation5 | ,844 |
| DEvaluation6 | ,709 |
| DEvaluation7 | ,917 |

Extraction Method: Maximum Likelihood.

### Discriminant validity

The first discriminant validity analysis containing all four varibles showed that many of the items was related to more than one construct (see Table E**Error! Reference source not found.**). The reason for this might be that the variables for evaluation of the new product, the bundle and the destination involves approximately the same questions, and there is assumed a degree of correlation in there measures. For that reason, the discriminant validity analysis was performed with perceived risk and new product evaluation.

*Table E: Discriminant validity with all four constructs*

| **Pattern Matrix**[a] | Factor | | | |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
| Risk1 | -,460 |  | -,241 |  |
| **Risk2** |  |  | **-,782** | **-,130** |
| **Risk3** | **-,153** |  | **-,487** | **,111** |
| **Risk4** | **,103** | **-,128** | **-,558** |  |
| NPEvaluation1 | ,470 |  | ,476 |  |
| NPEvaluation2 | ,599 |  | ,439 | -,151 |
| **NPEvaluation3** | **,131** |  | **,592** | **,183** |
| NPEvaluation4 | ,579 |  | ,459 |  |
| NPEvaluation5 |  |  | ,668 | ,313 |
| NPEvaluation6 | ,112 |  | ,501 | ,476 |
| NPEvaluation7 | ,745 |  | ,364 |  |
| **BEvaluation1** | **,693** |  | **-,168** | **,262** |
| **BEvaluation2** | **,796** | **-,130** | **-,252** | **,236** |
| BEvaluation3 | ,168 |  | ,117 | ,563 |
| **BEvaluation4** | **,882** |  | **-,198** | **,208** |
| BEvaluation5 | ,212 |  |  | ,650 |
| BEvaluation6 |  |  | ,271 | ,800 |
| BEvaluation7 | ,715 |  |  | ,250 |
| **DEvaluation1** |  | **-,935** |  |  |
| **DEvaluation2** |  | **-,928** |  |  |
| **DEvaluation3** |  | **-,800** |  |  |
| **DEvaluation4** | **,149** | **-,917** |  |  |
| **DEvaluation5** | **-,206** | **-,900** |  |  |

| | Factor | |
|---|---|---|
| | 1 | 2 |
| DEvaluation6 | | **-,665** | ,130 |
| DEvaluation7 | ,103 | **-,891** |

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 17 iterations.

*The second attempt of discriminant validity analysis showed two items that did not meet the discriminant validity requirement. Hence, Risk1 are removed as it loads on the wrong factor, and Evaluation5 removed, as it is ambiguous (loadings on both factors) (see Table F). The revised discriminant validity analysis is presented in*

TableTable G. As seen, all items are above the desired correlation level of 0.5, and they are loading on the right factors according to theory.

*Table F: Discriminant: Perceived Risk and New Product Evaluation*

| | Factor | |
|---|---|---|
| **Pattern Matrix**[a] | 1 | 2 |
| Risk1 | -,442 | ,158 |
| **Risk2** | -,128 | **,745** |
| **Risk3** | | **,685** |
| **Risk4** | | **,800** |
| **NPEvaluation1** | **,801** | |
| **NPEvaluation2** | **,897** | |
| **NPEvaluation3** | **,757** | |
| **NPEvaluation4** | **,890** | |
| NPEvaluation5 | ,562 | -,205 |
| **NPEvaluation6** | **,668** | |
| **NPEvaluation7** | **,944** | ,102 |

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 4 iterations.

*Table G: Final discriminant validity - Perceived Risk and New Product Evaluation*

| | Factor | |
|---|---|---|
| **Pattern Matrix**[a] | 1 | 2 |
| Risk2 | -,105 | ,786 |
| Risk3 | | ,678 |

| | | | |
|---|---|---|---|
| Risk4 | | | ,769 |
| NPEvaluation1 | | ,799 | |
| NPEvaluation2 | | ,894 | |
| NPEvaluation3 | | ,751 | |
| NPEvaluation4 | | ,878 | |
| NPEvaluation5 | | ,553 | ,222 |
| NPEvaluation6 | | ,655 | |
| NPEvaluation7 | | ,933 | |

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 4 iterations.

## Reliability

*Table H: Cronbachs Alpha - Reliability*

| | Cronbach's Alpha | N of Items |
|---|---|---|
| Perceived risk | 0,802 | 3 |
| New product evaluation | 0.923 | 7 |
| Bundle evaluation | 0.912 | 7 |
| Destination Evaluation | 0.952 | 7 |

In addition to the Cronbachs Alpha analysis, a second reliability analysis was performed to strengthen the reliability results. The average squared factor loading should be >.5 for a good reliability. Both factors are above the requirement.

*Table I: Reliability – squared factor loadings*

| | Factor | | |
|---|---|---|---|
| **Pattern Matrix**[a] | 1 | 2 | |
| Average squared factor loadings | **0.63** | **0.56** | Squared factor loading |
| Risk2 | -0.105 | 0.786 | 0.62 |
| Risk3 | | 0.678 | 0.46 |
| Risk4 | | 0.769 | 0.59 |
| NPEvaluation1 | 0.799 | | 0.64 |
| NPEvaluation2 | 0.894 | | 0.80 |

| | | | |
|---|---|---|---|
| NPEvaluation3 | 0.751 | | 0.56 |
| NPEvaluation4 | 0.878 | | 0.77 |
| NPEvaluation5 | 0.553 | 0.222 | 0.31 |
| NPEvaluation6 | 0.655 | | 0.43 |
| NPEvaluation7 | 0.933 | | 0.87 |

Extraction Method: Maximum Likelihood.

 Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 4 iterations.

## Appendix H: Manipulation Check (Perceieved Risk)

**Group Statistics**

| | Groups - Low and high perceived risk | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| New product evaluation index | Low risk (1,3,5) | 58 | 3,7956 | 1,57316 | ,20657 |
| | High risk (2,4,6) | 57 | 3,6090 | 1,49282 | ,19773 |

**Independent Samples Test**

| New product evaluation | Levene's Test | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Diff. | Std. Error Diff. | 95% Confidence Interval of the Difference | |
| | | | | | | | | Lower | Upper |
| Equal variances assumed | ,001 | ,972 | ,652 | 113 | ,516 | ,18654 | ,28608 | -,38023 | ,75332 |
| Equal variances not assumed | | | ,652 | 112,863 | ,515 | ,18654 | ,28595 | -,37998 | ,75307 |

# Appendix I: Assumptions for Parametric tests (ANOVA) and Regression

## ANOVA

**Between-Subjects Factors** - Experiment group

|   | Value Label | N |
|---|---|---|
| 1 | Kontroll lav | 21 |
| 2 | Kontroll høy | 19 |
| 3 | Trollstugo lav | 20 |
| 4 | Trollstugo høy | 19 |
| 5 | Radisson lav | 17 |
| 6 | Radisson høy | 19 |

**Levene's Test of Equality of Error Variances[a]**

| Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|
| ,665 | 5 | 109 | ,651 |

Dependent Variable:   New product evaluation index

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Eksperiment_gruppe

### Regression

**Assumption 2**: All variables showed variance different from zero.

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|
| Perceived risk index from questions | 115 | 1,00 | 7,00 | 4,1043 | 1,38240 | **1,911** |
| New product evaluation index | 115 | 1,00 | 7,00 | 3,7031 | 1,53000 | **2,341** |
| Groups of bundles | 115 | 1.00 | 3.00 | 1.9652 | .81575 | **.665** |
| Groups of brand equity level | 75 | -1.00 | 1.00 | -.0400 | 1.00593 | **1.012** |

**Assumption 3**: Tolerances <0.1 indicates that multicollinearity might be a problem. This is not a problem in the independent variables.

**Coefficients<sup>a</sup>**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 5,728 | ,409 | | 14,004 | ,000 | | |
| | Perceived risk | -,502 | ,093 | -,453 | -5,393 | ,000 | **,987** | **1,013** |
| | Bundle | ,115 | ,134 | ,072 | ,856 | ,394 | **,987** | **1,013** |
| a. Dependent Variable: New product evaluation index | | | | | | | | |

High correlations (>0.9) between two independent variables also indicates multicollinarity. Perceived risk is neither highly correlated with the independent variable bundling nor brand equity. However, bundling and brand equity are correlated as drawn from the same variable.

**Correlations**

| | New product evaluation index | Perceived risk index from questions | Bundle Groups | Brand Equity Groups |
|---|---|---|---|---|

132

| | | | |
|---|---|---|---|
| New product evaluation | 1 | -,462[**] | ,123 | -,113 |
| Perceived risk | -,462[**] | 1 | -.113 | ,045 |
| Bundle Group | .123 | -.113 | 1 | .[b] |
| Brand equity | -,113 | ,045 | .[b] | 1 |

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

b. Cannot be computed because at least one of the variables is constant.

## Assumption 4:

The mean error term should be zero, and the observations should be distributed evenly above and under the regression line in the p-plot and the scatter plot. From the scatter plot and p-plot for the perceived risk variable the error terms can be interpreted to be reasonably distributed on both sides of the line. However, this analysis is not very accurate as it is considered on a discretionary basis.

*Perceived risk:* The analyses for the independent variable perceived risk was interpreted to have close to zero mean error term when interpreting the p-plot and scatter plot. Furthermore, the analysis of linear and non-linear r squared showed that the non-linear models have slightly higher explained variance ($r^2$). This might be an indicator of a lacking linear relationship between perceived risk and new product evaluation. However, both the linear and non-linear models have significant effect on new product evaluation. The comparison of linear and non-linear models showed a small difference in explained variance for the linear and quadratic model (<.02), but the cubic model had a difference



133
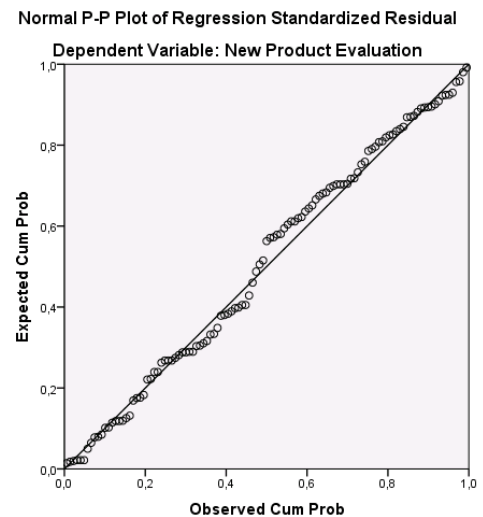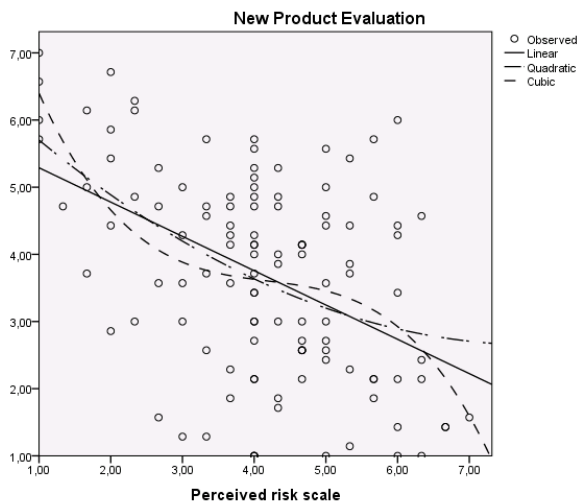
of 0,04. The histogram showed a negative mean (-2,29E-16). Yet, this mean is considered approximately zero.

**Model Summary and Parameter Estimates**

| Equation | Model Summary | | | | | Parameter Estimates | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | R Square | F | df1 | df2 | Sig. | Constant | b1 | b2 | b3 |
| Linear | ,213 | 30,592 | 1 | 113 | ,000 | 5,800 | -,511 | | |
| Quadratic | ,223 | 16,054 | 2 | 112 | ,000 | 6,643 | -1,005 | ,063 | |
| Cubic | ,253 | 12,527 | 3 | 111 | ,000 | 9,537 | -3,987 | ,921 | -,073 |

The independent variable is Perceived risk index from questions.

Dependent Variable:  New product evaluation index



Histogram
Dependent Variable: New Product Evaluation

Mean = 2,29E-16
Std. Dev. = 0,996
N = 115
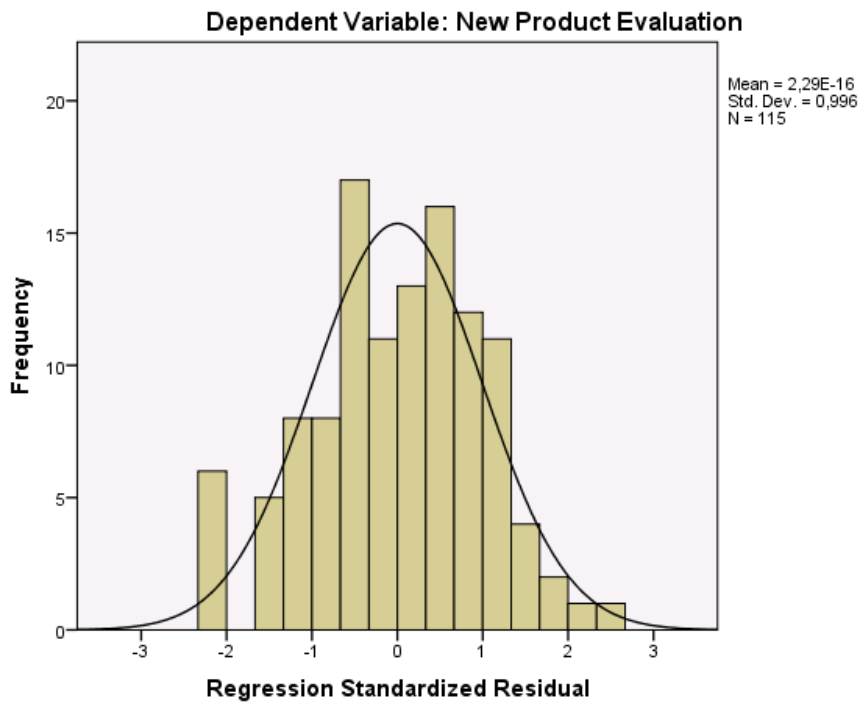
**Standardised values:**

The standardised variable of perceived risk was quadrated for a mean centred variable. Then the assumption was tested again.

**Model Summary and Parameter Estimates**

Dependent Variable:   New product evaluation index

| Equation | Model Summary | | | | | Parameter Estimates | | | |
|---|---|---|---|---|---|---|---|---|---|
| | R Square | F | df1 | df2 | Sig. | Constant | b1 | b2 | b3 |
| Linear | .040 | 4.669 | 1 | 113 | .033 | 3.468 | .238 | | |
| Quadratic | .060 | 3.603 | 2 | 112 | .030 | 3.623 | -.218 | .113 | |
| Cubic | .081 | 3.258 | 3 | 111 | .024 | 3.463 | .791 | -.538 | .094 |

The independent variable is Risk_kvadrert.

**Bundle:**



New Product Evaluation
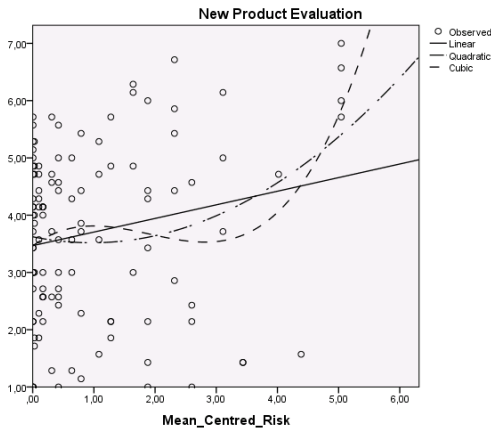


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: New Product Evaluation
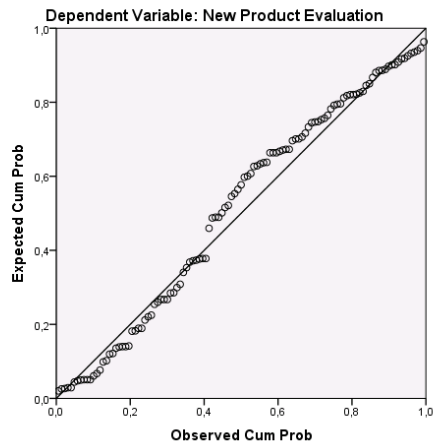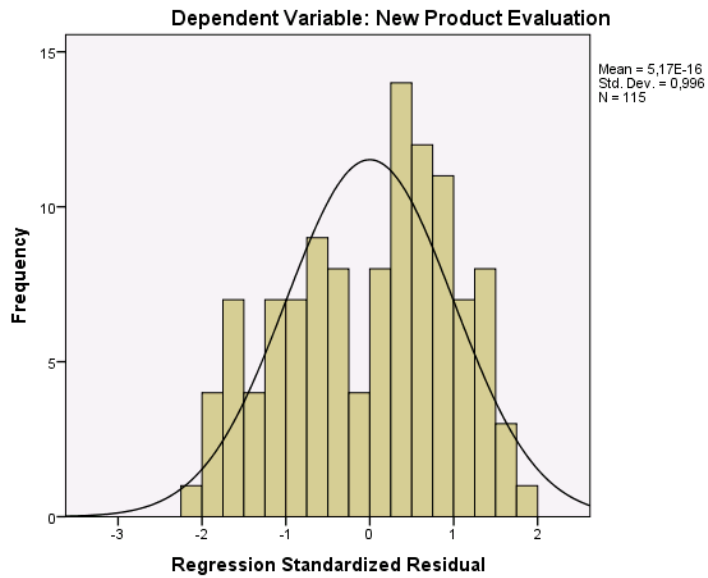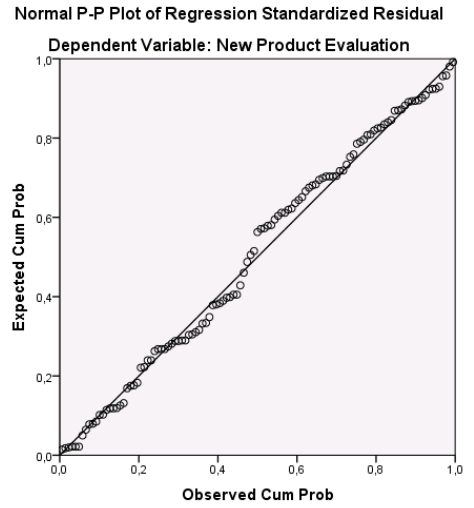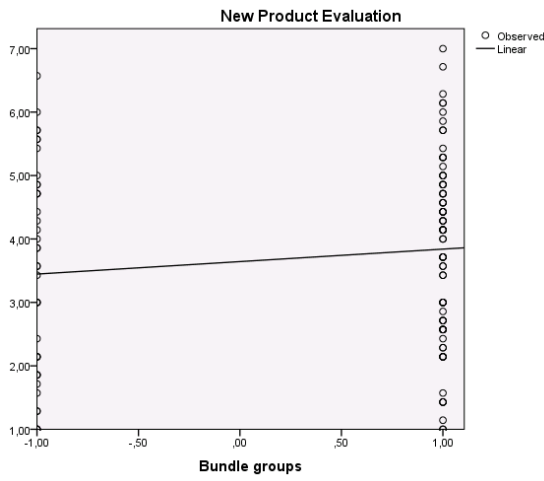
**Model Summary and Parameter Estimates**

Dependent Variable:   New product evaluation index

| Equation | Model Summary | | | | | Parameter Estimates | | | |
|---|---|---|---|---|---|---|---|---|---|
| | R Square | F | df1 | df2 | Sig. | Constant | b1 | b2 | b3 |
| Linear | ,015 | 1,737 | 1 | 113 | ,190 | 3,643 | ,197 | | |
| Quadratic | . | . | . | . | . | ,000 | ,000 | ,000 | |
| Cubic | . | . | . | . | . | ,000 | ,000 | ,000 | ,000 |

The independent variable is  Bundle groups.
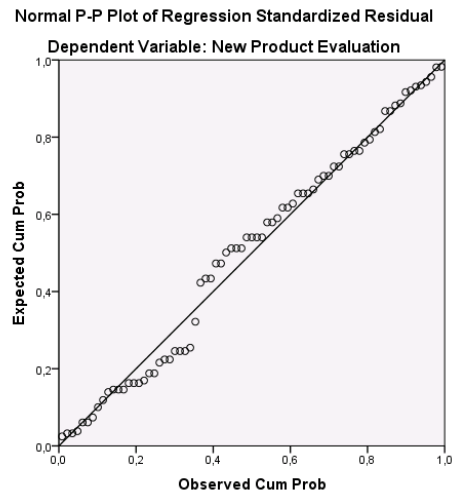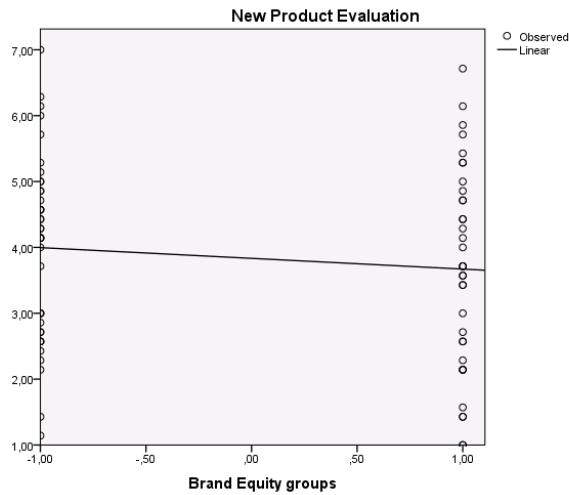


Histogram
Dependent Variable: New Product Evaluation

Mean = 5,39E-16
Std. Dev. = 0,996
N = 115

**Brand equity:**



**Model Summary and Parameter Estimates**

Dependent Variable:   New product evaluation index

| Equation | Model Summary | | | | | Parameter Estimates | | | |
|---|---|---|---|---|---|---|---|---|---|
| | R Square | F | df1 | df2 | Sig. | Constant | b1 | b2 | b3 |
| Linear | ,013 | ,947 | 1 | 73 | ,334 | 3,833 | -,163 | | |
| Quadratic | . | . | . | . | . | ,000 | ,000 | ,000 | |
| Cubic | . | . | . | . | . | ,000 | ,000 | ,000 | ,000 |

The independent variable is Brand Equity groups.
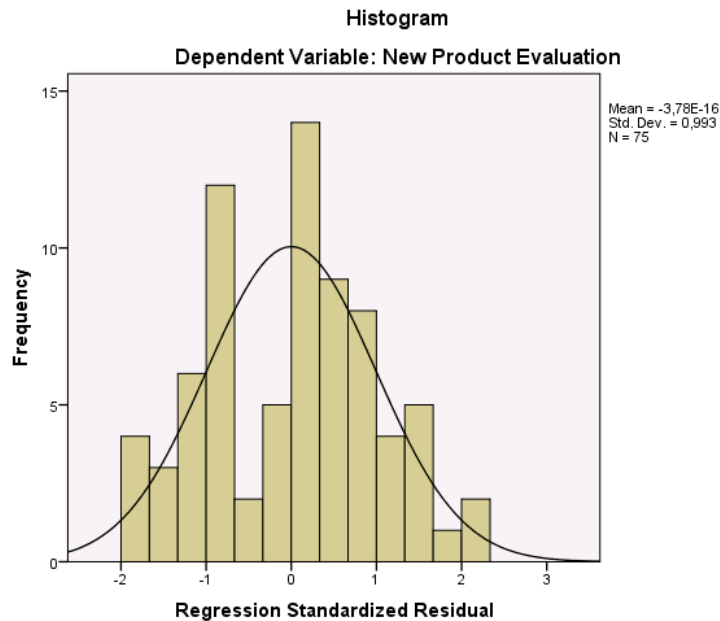
**Assumption 5:**

No control variables correlated significantly with both the dependent and one independent variable.

**Correlations**

|  | New Product Evaluation | Perceived risk scale | Bundle groups | Brand Equity groups |
|---|---|---|---|---|
| Seriousness | ,043 | -,024 | -,042 | -,159 |
| Knowledge | -,008 | -,036 | ,068 | -,197 |
| Experience | ,048 | -,071 | ,121 | -,150 |
| Interest | ,136 | -,075 | ,047 | -,259[*] |
| Gender | -,208[*] | ,167 | -,063 | ,099 |
| Destination Evaluation | ,095 | ,115 | .[c] | -,104 |

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

*. Correlation is significant at the 0.05 level (2-tailed).

c. Cannot be computed because at least one of the variables is constant.

**Assumption 6:**

Observations are dispersed evenly above and under the regression line, and for the quantitative variable, perceived risk, the observations are randomly dispersed.



138
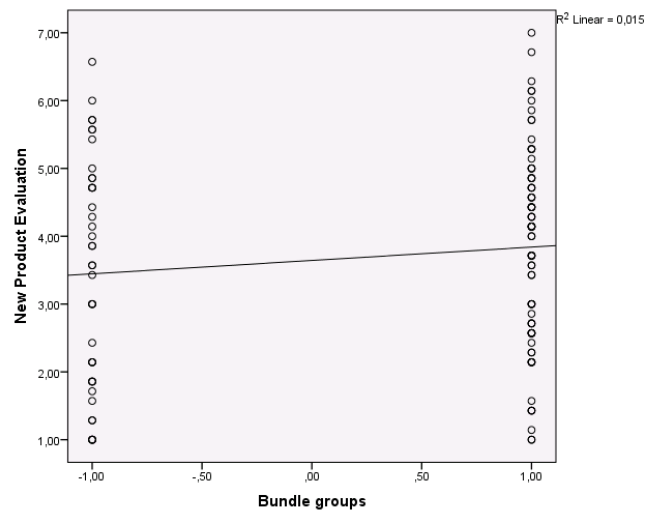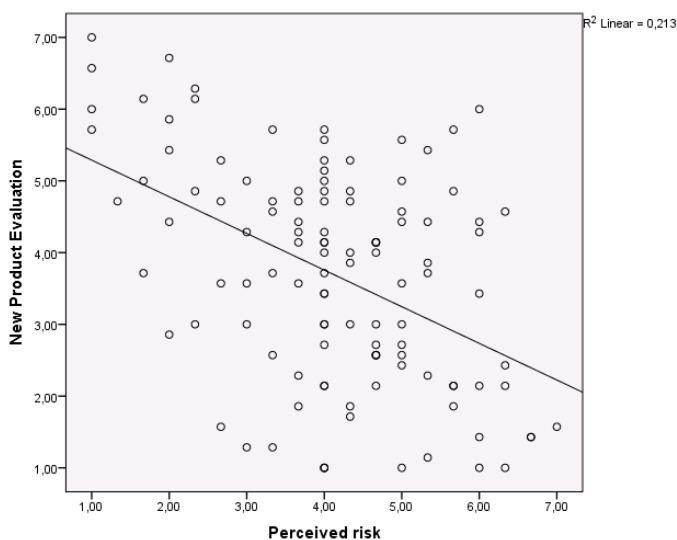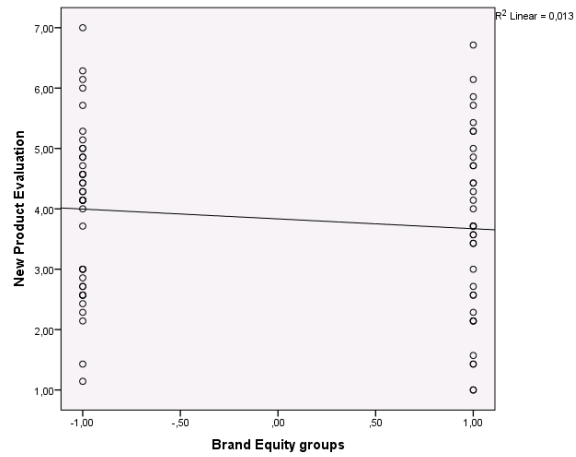
**Assumption 8:**
The graph shows a normal distribution, and the skewness and kurtosis are adequate.
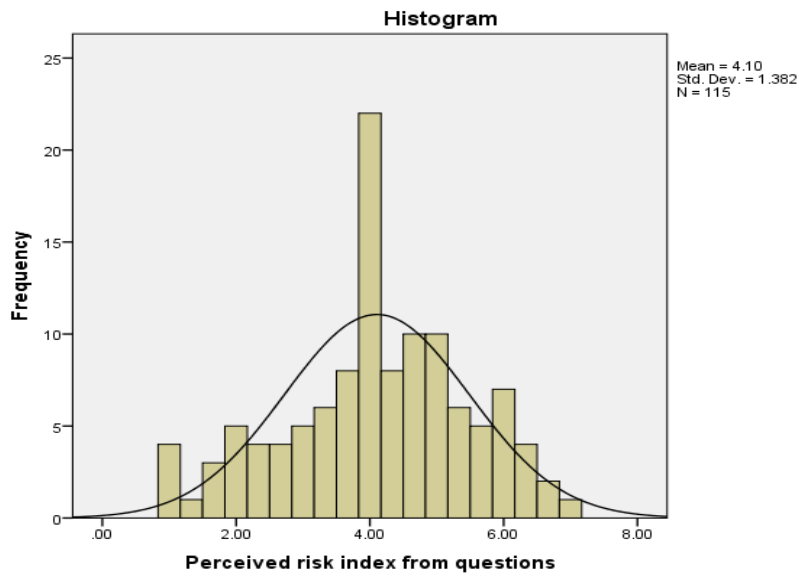


| Descriptive Statistics | N | Mean | Std. Deviation | Skewness | | Kurtosis | |
|---|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| Perceived risk | 115 | 4.1043 | 1.38240 | -.291 | .226 | -.303 | .447 |
| Valid N (listwise) | 115 | | | | | | |

## Appendix J: Hypotheses Testing

### Hypothesis H1a and H2a (one-way ANOVA)

| Hypothesis | | N | Mean | Df | F | Sig |
|---|---|---|---|---|---|---|
| **H1a** | Alone | 40 | 3,45 | 1,113 | 1,737 | ,190 |
| | Bundle | 75 | 3,84 | | | |
| **H2a** | Low BE | 39 | 4,00 | 1,73 | ,947 | ,334 |
| | High BE | 36 | 3,67 | | | |

*Levenes test*

| IV | Levene Statistic | Sig |
|---|---|---|
| **Bundle** | 2,28 | ,134 |
| **Brand Equity** | ,449 | ,505 |

### Hypotese H1b (regression)

Risk: bundle→evaluation

| Model | | B | Std | Beta | t | Sig | df |
|---|---|---|---|---|---|---|---|
| **1** | Constant | 3,668 | ,134 | | 27,437 | ,000 | 2,112 |
| | Bundle | -,694 | ,129 | -,453 | -5,393 | ,000 | |
| | Risk | ,115 | ,134 | ,072 | ,856 | ,394 | |
| | $R^2$ | .218 | | | | | |
| | Adjusted $R^2$ | .204 | | | | | |
| **2** | Constant | 3,657 | ,135 | | 27,058 | ,000 | 3,111 |
| | Bundle | -,668 | ,135 | -,437 | -4,954 | ,000 | |
| | Risk | ,121 | ,135 | ,076 | ,898 | ,371 | |
| | Bundle*Risk | -,089 | ,135 | -,058 | -,657 | ,512 | |
| | $R^2$ | .221 | | | | | |
| | Adjusted $R^2$ | .200 | | | | | |

a. Dependent Variable: New product evaluation

**Hypotese H2b (regression)**

| Model | | B | Std | Beta | t | Sig | df |
|---|---|---|---|---|---|---|---|
| **1** | Constant | 3,773 | ,145 | | 26,060 | ,000 | 2,72 |
| | **Risk** | -,751 | ,147 | -,514 | -5,119 | ,000 | |
| | Brand equity | -,129 | ,144 | -,090 | -,894 | ,374 | |
| | $R^2$ | .276 | | | | | |
| | Adjusted $R^2$ | .256 | | | | | |
| **2** | (Constant) | 3,775 | ,146 | | 25,868 | ,000 | 3,71 |
| | **Perceived risk** | -,751 | ,148 | -,514 | -5,085 | ,000 | |
| | Brand equity | -,132 | ,146 | -,091 | -,902 | ,370 | |
| | Risk_brand equity | -,030 | ,148 | -,020 | -,202 | ,841 | |
| | $R^2$ | .277 | | | | | |
| | Adjusted $R^2$ | .246 | | | | | |

a. Dependent Variable: New product evaluation


**Additional analyses**

**No bundle- high BE**

| Model | | B | Std | Beta | t | Sig | Df |
|---|---|---|---|---|---|---|---|
| **1** | (Constant) | 3,598 | ,167 | | 21,497 | ,000 | 2,73 |
| | **Risk** | -,675 | ,167 | -,429 | -4,045 | ,000 | |
| | Nobundle-HighBE | ,048 | ,168 | ,031 | ,288 | ,774 | |
| | $R^2$ | .187 | | | | | |
| | Adjusted $R^2$ | .165 | | | | | |
| **2** | (Constant) | 3,589 | ,169 | | 21,259 | ,000 | 3,72 |
| | **Risk** | -,680 | ,168 | -,432 | -4,052 | ,000 | |
| | Nobundle-HighBE | ,054 | ,169 | ,034 | ,319 | ,751 | |
| | Risk_AloneRadisson | -,101 | ,168 | -,064 | -,599 | ,551 | |
| | $R^2$ | .191 | | | | | |
| | Adjusted $R^2$ | .157 | | | | | |

a. Dependent Variable: New product evaluation

**Homologizer: bundle-nobundle**

| Cut point | Variable value | Correlation | N | Z | P (two-tailed) |
|---|---|---|---|---|---|
| Bundle: -1 | NPEvaluaiton-Risk | -.353 | 40 | 1.01 | 0.3125 |
| Bundle: 1 | NPEvaluaiton-Risk | -.518 | 75 | | |

```
FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$=(Group_bundle=-1).
VARIABLE LABELS filter_$ 'Group_bundle =-1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

CORRELATIONS
 /VARIABLES=NPEvaluation Risk
 /PRINT=TWOTAIL NOSIG
 /MISSING=PAIRWISE.

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$=(Group_bundle =1).
VARIABLE LABELS filter_$ 'Group_bundle =1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.


CORRELATIONS
 /VARIABLES=NPEvaluation Risk
 /PRINT=TWOTAIL NOSIG
 /MISSING=PAIRWISE.

FILTER OFF.
USE ALL.
EXECUTE.
```

**Homologizer: Brand Equity**

| Cut point | Variable value | Correlation | N | Z | P (two-tailed) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| BE: -1 | NPEvaluaiton-Risk | -.514 | 39 | 0.01 | 0.992 |
| BE: 1 | NPEvaluaiton-Risk | -.520 | 36 | | |

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$=(BrandEquity_groups=-1).
VARIABLE LABELS filter_$ 'BrandEquity_groups=-1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

CORRELATIONS
 /VARIABLES=NPEvaluation Risk
 /PRINT=TWOTAIL NOSIG
 /MISSING=PAIRWISE.

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$=(BrandEquity_groups=1).
VARIABLE LABELS filter_$ 'BrandEquity_groups=1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

CORRELATIONS
 /VARIABLES=NPEvaluation Risk
 /PRINT=TWOTAIL NOSIG
 /MISSING=PAIRWISE.

FILTER OFF.
USE ALL.
EXECUTE.

**Homologizer (bundle evaluation: risk → New product evaluation)**

First the variables tested for homologizer effects were analysed with a frequency analysis to find a cut-point.

**Statistics**

|  |  | Perceived risk index from questions | Bundle Evaluation (1-7) |
|---|---|---|---|
| N | Valid | 115 | 75 |
|  | Missing | 0 | 40 |
| Mean |  | 4,1043 | 4,3524 |
| Median |  | 4,0000 | 4,4286 |
| Mode |  | 4,00 | 3,57[a] |

a. Multiple modes exist. The smallest value is shown

| | Cut |
|---|---|
| Bundle evaluation | Median (4.4) |
| Perceived risk | Median (4.0) |

| Cut point | Variable value | Correlation | N | Z | P (two-tailed) |
|---|---|---|---|---|---|
| Bundle Evaluation: <4.4 | NPEvaluaiton-Risk | -.623 | 35 | -1.2 | 0.2301 |
| Bundle Evaluation: >=4.4 | NPEvaluaiton-Risk | -.414 | 40 | | |

| Cut point | Variable value | Correlation | N | Z | P (two-tailed) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Perceived risk: >4 | NPEvaluaiton-Bundle Evaluation | -.748 | 30 | 0.87 | 0.3843 |
| Perceived risk: <=4 | NPEvaluaiton-Bundle Evaluation | -.637 | 45 | | |

## **SYNTAX**

FILTER OFF.
USE ALL.
EXECUTE.

DATASET ACTIVATE DataSet1.
USE ALL.
COMPUTE filter_$=(BEvaluation>=4.4).
VARIABLE LABELS filter_$ 'BEvaluation>=4.4 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

CORRELATIONS
 /VARIABLES=NPEvaluation Risk
 /PRINT=TWOTAIL NOSIG
 /MISSING=PAIRWISE.

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$=(BEvaluation<4.4).
VARIABLE LABELS filter_$ 'BEvaluation<4.4 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

CORRELATIONS
 /VARIABLES=NPEvaluation Risk
 /PRINT=TWOTAIL NOSIG
 /MISSING=PAIRWISE.

FILTER OFF.
USE ALL.
EXECUTE.

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$=(Risk<=4).
VARIABLE LABELS filter_$ 'Risk<=4 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

CORRELATIONS
 /VARIABLES=NPEvaluation BEvaluation
 /PRINT=TWOTAIL NOSIG
 /MISSING=PAIRWISE.

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$=(Risk>4).
VARIABLE LABELS filter_$ 'Risk>4 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

CORRELATIONS
 /VARIABLES=NPEvaluation BEvaluation
 /PRINT=TWOTAIL NOSIG
 /MISSING=PAIRWISE.

FILTER OFF.
USE ALL.
EXECUTE.

## Perceived Risk

| Model | | B | Std | Beta | t | Sig | df |
|---|---|---|---|---|---|---|---|
| | Constant | 5,800 | ,400 | | 14,506 | ,000 | 1,113 |
| **1** | **Risk** | -,511 | ,092 | -,462 | -5,531 | ,000 | |
| | $R^2$ | .213 | | | | | |
| | Adjusted $R^2$ | .206 | | | | | |

a. Dependent Variable: New product evaluation index

**Bundle evaluation → NP Evaluation**

| Model | | B | Std | Beta | t | Sig | df |
|---|---|---|---|---|---|---|---|
| **1** | (Constant) | ,398 | ,422 | | ,943 | ,349 | 1,73 |
| | Bundle evaluation | ,791 | ,093 | ,706 | 8,511 | ,000 | |
| | $R^2$ | .498 | | | | | |
| | Adjusted $R^2$ | .491 | | | | | |
| **2** | (Constant) | ,940 | ,535 | | 1,757 | ,083 | 2,72 |
| | Bundle evaluation | ,840 | ,097 | ,750 | 8,678 | ,000 | |
| | Destination Evaluation | -,143 | ,088 | -,140 | -1,619 | ,110 | |
| | $R^2$ | ,516 | | | | | |
| | Adjusted $R^2$ | ,502 | | | | | |

a. Dependent Variable: New product evaluation index

**Interaction: BEvaluation_Risk**

| Model | | B | Std | Beta | t | Sig | df |
|---|---|---|---|---|---|---|---|
| **1** | (Constant) | 3,798 | ,106 | | 35,859 | ,000 | 2,72 |
| | Perceived risk | -,514 | ,111 | -,352 | -4,610 | ,000 | |
| | Bundle evaluation | ,883 | ,110 | ,610 | 7,998 | ,000 | |
| | $R^2$ | ,612 | | | | | |
| | Adjusted $R^2$ | ,602 | | | | | |
| **2** | (Constant) | 3,838 | ,108 | | 35,482 | ,000 | 3,71 |
| | Perceived risk | -,543 | ,112 | -,372 | -4,844 | ,000 | |
| | Bundle evaluation | ,903 | ,110 | ,624 | 8,195 | ,000 | |
| | BEvaluation_Risk | ,158 | ,104 | ,114 | 1,522 | ,132 | |
| | $R^2$ | ,625 | | | | | |
| | Adjusted $R^2$ | ,609 | | | | | |

a. Dependent Variable: New product evaluation

**Mediator (Sobel): Bundle Evaluation→Risk→New Product Evalaluation**

| | NPEvaluation | Perceived risk | Bundle evaluation |
|---|---|---|---|
| NPEvaluation | 1 | -,462** | ,706** |
| Perceived risk | -,462** | 1 | -,273* |
| Bundle evaluation | ,706** | -,273* | 1 |

**Mediator:BEvaluation**

| Independent | Dependent | B | DS | Test statistics | Std Error | P |
|---|---|---|---|---|---|---|
| Bundle Evaluation | New Product Evaluation | .791 | .093 | -2.33 | .087 | .0297 |
| Perceived risk | Bundle Evaluation | -.257 | .106 | | | |

**Mediator: Perceived risk**

| Independent | Dependent | B | DS | Test statistics | Std Error | P |
|---|---|---|---|---|---|---|
| Perceived risk | New Product Evaluation | -.511 | .092 | 2.22 | .0665 | .026 |
| Bundle Evaluation | Perceived risk | -.289 | .119 | | | |