Copenhagen Business School

Strategic Market Creation

Risky Business

How online business can lower critical perceived risk factors among consumers and achieve accelerating Word-of-Mouth

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Abstract

Society is becoming more and more digitalized, where people to a large extent have moved away from brick-and-mortar stores and adopted online shopping. In this digitalized world, paid media are getting less effective for businesses and more and more annoying for consumers. Because word-of-mouth (WOM) is shown to be more effective online than paid media and because perceived risk is a determent factor in consumer decision-making in online shopping, I have found it interesting to examine the relationship between these two important constructs, in relation to Danish women's online clothes shopping. The investigation is especially relevant for online shop startups, where I examine whether the lowering of perceived risk may lead to H1) new customers, H2) WOM and H3) an accelerating WOM. The hypotheses have been measured through quantitative analysis as a cross-sectional design, where I have surveyed 50 Danish women in the street of Copenhagen. Correlations between the two constructs have been tested through a Pearson Correlation analysis, with addition measures of relationship and significance to ensure high internal consistency of my results.

My findings show a strong relationship between perceived risk and new customer acquisition and WOM, where the findings for the relationship between lowering of perceived risk and accelerating WOM has an especially high significance and high internal consistency. The findings have massive and very favorable implication for online clothes shop startups and online business in general, and because there are no prior studies that deals with this particular relationship, this thesis contributes with valuable preliminary research that can move this area of study further, which would benefit online shop businesses and consumers alike.

Because of surprising results for the measure of perceived risk and because of a lack of measurement consistency in the literature, I have search for validity errors in my measure of perceived risk, where importance findings include how people moderate perceived risk through the level of involvement they engage in through information search, where they are able to alter the probability of ending up with the wrong product, according to how important a risk factor are to them.

Introduction

Startup Obstacles - Capital, First Customers and Traction

Most startups fail. We hear this to a point that the failure is almost the expectation, which may keep many potential entrepreneurs from even trying. According to Weinberg and Mares (2014), the high failure rate is due to the startups incapability to attract the first customers to gain traction and therefore advice startups to integrate traction thinking in the development of their product or service. They further advice startups to use their framework, which involves choosing a clear marketing direction which is integrated into the startups product/service development, and follow up with Ries (2004) lean startup method, which involves the development of a Minimum Viable Product (MVP) that can be tested by potential customers and further regulated until market alignment. Weinberg and Mares (2014) argue that there should be one focused marketing direction to be most efficient and in order to find the right marketing method, one should test the market through small batch tests. Similarly Ries (2004) suggests with his MVP method a "not finished yet" product that can be further developed in cooperation with potential customers. Using these two framework together in the creation of an innovative online startup is valuable because it increases the chances for a startup to create something customers want and to achieve customer satisfaction. This means that the market should be tested in two stages: The first stage is to find the best marketing method for the proposed venture through research of the proposed market. The second stage is to integrate the found method into the development of the product/service and to further test the product/service through a MVP on the proposed market, where the product/service and marketing method is further developed in cooperation with the customers.

This is of particular importance as a startup without a tested product does not earn any money and is subsequently working with very limited resources."

Traditional Marketing versus Word-of-Mouth (WOM)

Marketing can be subdivided into three distinct subcategories: 1) paid media as advertising, which is controlled by the company 2) owned media, which is the media the company is in control over through their website and/or other channels and 3) social earned media, as WOM and free press, which is not directly generated by the company and therefore more or less out of control of the company (Stephen and Galak, 2012).

There has been extensive research on paid, traditional marketing, which has been found to have an effect on sales and new signups, but many researchers question the efficiency because of the high cost associated with it and because of a crowded marketspace (Gensler et al., 2013). Traditional marketing has in recent years become intrusive to a larger extent because of "free" online services like Facebook who earns their income through paid advertising. Consumers are bombarded every day to a point where advertisements are a blind spot (Chaffey and Ellis-Chadwick, 2016). In an online context sites overloaded with paid advertising become very slow and needs updating. Users are not patient in these situations, and switch if the site does not load fast enough (Ibid.).

Stephen and Galak (2012) examined how paid and social earned media affected sales and new signups and found that the impact of paid media was immediately larger, but that social earned media has a significantly higher effect long term, meaning sales and new signups carried on in a long period of time, which is referred to as elasticity. Trusov and Pauwel (2008) examined the effect of social earned media in comparison to paid media, by studying a social networking site. They found that WOM has a much stronger effect on new customer acquisition than traditional paid media has. Their study showed that WOM has approximately 20 times higher elasticity than marketing events, with a long-run elasticity of 0.53 compared to 0.026 for paid media. While the carryover effect from marketing events significantly affects new signups for only five days, WOM activity continues and impact signups for as much as 21 days, where 10 referrals resulted in 5 new signups in the course of three weeks. An important limitation in Trusov and Pauwels (2008) research is that they have not been able to distinguish between natural WOM versus WOM that is stimulated by the company. WOM has shown to be effective both in relation to new customer acquisition, where Katz and Lazarsfeld (1955) found that WOM was seven times more effective than paid media in persuading customers to switch brands, and in relations to long-term value, where Villanueva, Yoo and Hanssens (2008) found WOM to add nearly twice as much long-term value for the firm.

In combination the research shows that WOM has a clear advantage over paid traditional media for online startups, because it is the most effective method for new customer acquisition, customer retention and traction. Furthermore innovative online startups are in a favorable position to trigger and emphasize WOM, as they can develop their product, site and/or service with both traction thinking and a clear WOM marketing focus, in mind.

Perceived Risk and Customer Satisfaction

The most effective WOM comes from real customer satisfaction (Anderson, 1998, Babin et al., 2005, File & Prince, 1992, de Matos & Rossi, 2008, from Lang, 2014) and startups should therefore focus on customer satisfaction in the development of their product/service. While it is possible to increase customer satisfaction through a variety of means, including making a better product/service, this thesis will focus on the increase of customer satisfaction through a decrease in dissatisfaction. According to Ghotbabadi and Baharun (2016) the lowering of the different risk factors a consumer perceives in a shopping context or

"perceived risk" leads to customer satisfaction, and dissatisfaction factors can therefore be found through the concept of perceived risk. This is because risk is inherently something negative: a fear of something negative happening. One may look at different perceived risk factors as different small problems, problems that can serve as an inspiration to innovations, to find solutions to these problems by lowering the risk factors. So, if the lowering of perceived risk leads to customer satisfaction and customer satisfaction leads to WOM, lowering perceived risk may lead to WOM. The lowering of perceive risk with a focus on customer satisfaction and WOM is well suited to be integrated into the development of an online shopping site and severely cuts cost of marketing. I therefore find it interesting to investigate the relationship between the lowering of perceived risk and WOM. Since customer satisfaction is a determinant of WOM, I will not investigate customer satisfaction per se, but acknowledge that customer satisfaction is present if WOM is present.

Because perceived risk is inherent in online shopping and because people perceive risk higher for a website they have never used before, lowering perceived risk is also necessary to be competitive in online shopping as a startup to attract the first customers and to gain traction.

Research Motivation

My motivation for investigating the relationship between the lowering of perceived risk and WOM for innovative online startups is that I am starting a company and have co-developed a business model that incorporates the lowering of perceived risk with the intention of exceeding customer expectation and subsequently be rewarded through WOM. The business model is based upon a primary innovation within online shopping for clothes, in addition to many secondary innovations centered on the lowering of different risk factors. The business venture suffers from a lack of capital and it is therefore critical to develop a business plan that utilizes scarce resources efficiently, where waste is eliminated (Ries, 2004). Because traditional marketing is both expensive and inefficient, traditional marketing is waste and must be eliminated and because our solutions/innovations are based upon problems (risk factors), I am interested in investigating whether the lowering of these risk factors can lead to WOM, by testing the proposed marketing/website development method and give us more knowledge about where to focus our resources. We are in the early stages of development of the business model where the concreate development/coding of the actual site have not yet started. The findings can then be integrated into the development of the website and further be tested in relation to a MVP at a later time. This thesis will therefore focus on the first phase in the startup process, where a marketing method is tested and further aligned.

Risk is perceived differently in relation to different settings and it is therefore important to focus perceived risk research into the area of interest. My area of interest is online shopping for clothes, more directed, unique designer clothing for women. Our startup country is Denmark, which is why I am interested in perceived risk from a Danish context. The investigation is therefore of personal interest, where - from an entrepreneur's point of view - I investigate if the lowering of different risk factors may lead to new customers and traction through WOM, by surveying potential customers for my intended startup. While the business plan of my startup has some concrete solutions for decreasing perceived risk, they need to be prioritized according to effect. While it would be interesting to conduct the study targeting the particular solutions, the subject matter is of much larger value to startups in general, without the specifics, and my research question is therefore as follows:":

Can the lowering of perceived risk lead to new customers and traction through WOM for Danish online clothes shopping startups?

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Importance of Study

The research area is of personal interest, because the result will be used directly in further development of a business venture in the area of online shopping for unique designer clothing, directed at Danish women.

The research however is also of interest for other startups that want to integrate traction thinking in their website development. But because people perceive risk differently in different settings, it is important to note that the research applies only to a Danish online clothes shopping context, which is what both the literature review and method is centered around. It should also be noted that the sample tested is specifically women that have subjectively been perceive to be interested in unique design clothing, and the result can therefore not be generalized beyond this sample in the specifics. For effective results, startups should conduct their own survey to test their potential market, using a similar approach. Because of the exceptional value of customer satisfaction and true WOM, such findings would be useful for startup to get closer at meeting their customers' needs, which may be rewarded through WOM that reduce marketing expenses in addition to providing new customers and traction.

Because there is no prior research that directly investigates if the lowering of perceived risk will lead to new customers and traction for startups and because perceived risk and WOM are both widely used concepts to understand consumer behavior, it is also the intent of the study to inspire further research of these valuable concepts in combination. The findings may give interesting indications that may be valuable for businesses and therefore may deserve further – and more generalizable - study.

Delimitations

It is important to note that the scope of the study is initial and exploratory research on the relationship between people's perceived risk and WOM, both to evaluate the effectiveness of different perceived risk reductions in isolation and the effectiveness in said reductions on WOM. As such the research deals with the step before solutions are created, where it is the aim to find the most essential risk factors within the area of interest and investigate whether the lowering of these risk factors lead to new customers and traction through WOM. From there, managers can use the findings as inspiration to create their own solutions to the found problems (e.g. risk factor reductions).

Structure

The thesis is structured as a research paper. (i) It starts with a literary review, where relevant research on perceived risk is outlined, both to narrow down the concept for investigation and to develop the hypothesis based on relevant research on perceived risk and WOM. (ii) Methodological considerations are formed, where the right way to measure perceived risk is explored and subsequently used to develop a survey. Sample considerations are then outlined and later reflected on in regards to validity. Next it is outlined how analysis of the gathered data will be performed through correlation analysis, which is further reflected upon in regards to reliability. (iii) Results are presented and discussed further. In the discussion section, results will be discussed through validity and reliability concerns and end with thoughts on future research and managerial implications. (iiii) Findings are concluded on.

Literature Review

In the following literature review, relevant research about perceived risk and WOM will be used to form the concept for further investigation. Perceived risk is initially defined in general, which gives insight into how perceived risk can be measured. Next, the different risk dimensions relevant to online shopping are defined. Last, prior research on the connection between perceived risk and WOM is outlined, on the basis of which hypotheses are formed.

The purpose of the literature review is to focus the investigation on the risk factors and elements important in the study. To know how perceived risk can be investigated within the area of interest and to form the concept under investigation.

The area of interest is online shopping within the product category apparel and clothes, directed at Danish design interested women who are moderate to heavy users, in relation to a Danish shopping site.

Perceived Risk

Perceived risk was first coined by Bauer (1960) and has become a common way of explaining consumer behavior. Bauer (1960) defined perceived risk as the consumers' perception of the likelihood of unpredictable result when they engage in purchasing behavior, which may have a negative influence on the consumer. Cox (1967) later described perceived risk as adverse consequences that occur when individuals have problems identifying the best purchase option to achieve their objectives, and are worried that the product will not meet their expectations after they purchase it. This means that perceived risk both comprises the probability of loss resulting from the purchase and the importance of that loss (Cox, 1967).

The theory of perceived risk has a significant role in the understanding of consumer behavior, because it enables marketers to understand their customers' needs and to empathically see the world through their customers' eyes, which has intuitive appeal (Mitchell, 1999). Perceived risk also offers a more comprehensive picture of consumer behavior because people are more concerned about making a mistake than to maximize utility in purchasing (Ibid.). A focus on perceived risk reduction can also serve as an inspiration to innovation, where new service, features or products can be created to fit customers' needs (Ibid.).

Perceived Risk in Online Shopping

Perceived risk is a critical determinant when consumers make decisions in regard to online shopping, which is related both to customer attitude, purchase intentions and customer satisfaction (Chang & Wu, 2012). The concept is regarded in the literature as a multidimensional construct (Griffin & Viehland, 2011), whose

dimensions include performance, psychological, physical, financial and social risks. In the context of electronic commerce, additional dimensions have been identified which include: source, privacy, security, time loss and convenience risks (Choi & Lee, 2003, Forsythe et al., 2006). Unlike traditional shopping, online shopping has greater levels of overall perceived risk. Studies has shown that perceived risk not only has a negative effect on consumers attitude towards online shopping, but also exerts a significant influence on their willingness to shop online, which means that reducing perceived risks will increase a consumers willingness to purchase a product online (Michell , 1999, Zeba, 2016). In relation to online shopping in general, Griffin and Viehland (2011) lists seven dimensions of perceived risk: (See table 2.1).

Risk Dimension	Definition
Performance	Risk of poor functional performance of the product/service.
Psychological	Risk that the purchaser will be disappointed by poor product choice
Social	Risk of lower social esteem among the purchaser's peers.
Financial	Risk of monetary loss because of a poor product choice
Time	Risk that the amount of time to purchase a product, including delivery, adjustments, repairs or replacement will be excessive.
Physical	Risk to the health or safety of the purchaser.
Security	Risk of the misuse of personal financial information (e.g., credit card fraud), as part of the process of completing the online transaction

(Table 2.1: Definitions of Griffin and Viehland, 2011, seven dimensions of perceived risk)

As can be seen from the list, security risk does not include the protection of personal information (*privacy risk*), which has been found to be an important dimension in online shopping (Dillon, Buchanan & Al-Otaibi, 2014). This dimension of risk is a rising concern for many users of online shopping portals because they are becoming more and more aware of the fact, that many companies are using their personal information for marketing purposes and monitoring customers in a way that is perceived as intrusive (Ibid.). Another important dimension of risk which is lacking in Griffin and Viehlands (2011) list is *source risk*, which relates to the concern that the consumer will suffer because the business from which they buy product is not trustworthy (Dillon, Buchanan & Al-Otaibi, 2014). Privacy and source risk will therefore be added to the list of risk dimensions, to get a comprehensive picture of perceived risk. This gives nine risk dimensions for further investigation: product performance, psychological, social, financial, time/inconvenience, physical, security/transaction, source and privacy risk (See table 2.2).

Risk Dimension	Definition
Performance	Risk of poor functional performance of the product/service.
Psychological	Risk that the purchaser will be disappointed by poor product choice
Social	Risk of lower social esteem among the purchaser's peers.
Financial	Risk of monetary loss because of a poor product choice
Time	Risk that the amount of time to purchase a product, including delivery, adjustments, repairs or replacement will be excessive.
Physical	Risk to the health or safety of the purchaser.
Security	Risk of the misuse of personal financial information (e.g., credit card fraud), as part of the process of completing the online transaction
Source	Risk that the online shopping site is fraudulent.
Privacy	Risk that personal information will be shared with a third party.

(Table 2.2, Griffin and Viehland, 2011 with additions from Dillon, Buchanan & Al-Otaibi, 2014)

Moderating Factors and Boundaries of Investigation

Perceived risk varies according to different moderating factors and it is therefore important to establish the boundaries for investigation and account for how these factors affect perceived risk and thereby the investigation. As outlined in the introduction the area of interest is perceived risk in a Danish online shopping context. Because perceived risk varies between countries and cultures (Ko, Jung, Kim & Shim, 2004, Zendehdel, Paim & Delafrooz, 2016), it is necessary to look into how risk is perceived in a specifically Danish context. The study is further focused on women's perceived risk in online shopping, which has been found to differ from men (Rajini & Krithika, 2017, Garbarinoa & Strahilevitzb, 2002, Dillon, Buchanan & Al-Otaibi, 2014). These are classification variables that are personal attributes and tend to remain static or evolve slowly through a person's lifetime (Chaffey & Ellis-Chadwick, 2016, p. 76). Another important moderating factor to perceived risk is the *past experience* an individual has with online shopping, which as opposed to classification variables is a character variable that is in constant change. Past experience is found to be one of the most important factors in e-commerce (Wang, Gu & Aiken, 2010).

Perceived risk also varies with product type, where the area of interest is clothes and apparel. In this section, the highest risk factors for each risk dimension in regards to online shopping for clothes will be outlined, which are also the risk factors that will be investigated in relation to WOM.

Culture and Country

Perceived risk varies between country and culture, which among other things are connected to the populations past experience with online shopping and rules and regulations in the online shopping market within the country in question. Culture differences also have an effect. When Ko, Jung, Kim and Shim (2004) compared Korean and American internet users they found that both had a similar aggregated degree of perceived risk towards online shopping, but that there was a cultural difference in response to different dimensions of perceived risk: where Korean users had a higher perceived social risk and Americans had a higher perceived financial, time and psychological risk. Performance risk was the highest rated perceived risk dimension in both groups. This research indicated that collectivism/individualism is a moderating factor, which is supported by Zendehdel, Paim and Delafrooz (2016).

In relation to the area of interest, it is important to note that the investigation includes only Danish women shopping on Danish site, as this has implications for how risk is perceived. As the Danish consumers' past experience with online shopping is high, perceived risk is generally lower than it would be in a less digitized society. This is substantiated by a survey made by Eniro Denmark, which shows that 82 % of the respondent generally felt safe using Danish shopping sites, while only 37 % felt safe using foreign shopping sites (Eniro, 2015) This is, among other things, because the Danish consumer personal data and credit card information is protected from fraudulent websites through Danish and EU laws and regulations (emearket.dk, Taenk.dk). "E-mærket" is an assurance for the Danish consumer of a safe shopping experience and that the shopping site is following all rules and regulations in the area of e-commerce (e-mærket.dk) and therefore a good way for a Danish website to brand itself as trustworthy. E-mærket is both the online shopping certification that is best known by the Danish consumers (71.1 %) and the most trusted (57.2 %) (Ibid.). The trustworthiness of Danish shopping sites amongst Danish consumers may especially affect source, privacy and security/transfer risk positively, because these are the dimensions of risk the consumers mainly are protected from in Denmark. Indicating that these dimensions of risk are lower than product performance, financial, time and psychological risk, which are higher both in individualistic societies (Zendehdel, Paim & Delafrooz, 2016) and specifically in regards to online shopping for apparel and clothes (Griffin & Viehland, 2012, Yu, Lee, & Damhorst, 2012).

Past Experience

An individual's past experience with online shopping has been found to affect how the individual perceives risk in an online shopping context (Doolin et al., 2005, Wang, Gu & Aiken, 2010). In relation to this it is important to separate between *general* and *specific risk*. The *general risk* is the risk of shopping online categorically, and having made purchases online will reduce this risk The *specific risk* is an individuals perceived risk in regards to a particular website, where the perceived risk will be affected by the individuals past experience with the *specific* site.

Past experience is an important moderating factor to consider, because of the significant effect past experience has on perceived risk, and because the target of interest for this thesis is design interested women who has moderate to high past experience with online shopping for clothes.

Past Experience Effect on General Perceived Risk

Denmark is a highly digitized society and the Danish consumers have past experience with online shopping in high regard. According to Statistics Denmark, 87% of the Danish population in the age range 16-74 have shopped from a Danish online site in the past year, 67% have shopped clothes or sporting goods. Furthermore these percentages are still growing, up from 82% and 54% respectively in 2013. This means that the Danish consumers past experience with online shopping and for clothing in particular is quite high, which reduces perceived risk among the Danish population in regards to online shopping in general. As this lowers the perceived risk of shopping online in general, it implicitly lowers the risk of trying a new site in the same risk pool – e.g. a new site in Denmark.

Past Experience Effect on Specific Perceived Risk

While Danes perceive the risk of trying a new site lower than less digitized societies, an individual will perceive the risk of using a site which the individual has used before, even lower (Doolin et al., 2005). The less the shopping site actualizes the individual's initial perceived risk, the more it will result in a good shopping experience that may leads to trust and customer retention. Because of the lower perceived risk associated with using a site one has past experience with, people tend to use the same site again and again once they have found a site they have connected a trusting bond with (Ibid.). The Danish consumers past experience in online shopping in general, affects how the Danish consumer perceive risk when entering a shopping site she has never used before, positively (Ibid.). But it still means that a shopping site that an individual has no past experience with is inhibited with higher perceived risk, than a site an individual *has* past experience with. Therefore, to be competitive as a startup in an already mature market, the individual's initial perceived risk for using the new site needs to be reduced, to tempt the potential customer to the site. The customers' first experience with the site is critical for customer retention (Ries, 2014). It is in this process, trust is formed if the individual's initial perceived risk is not actualized, more so if the website can exceed the customer's expectation by lowering perceived risk further.

Gender

Prior research has indicated gender to be a moderating factor in relation to perceived risk in online shopping, where a number of studies have found that women are more likely to have concerns related to risks in online shopping than men (Rajini & Krithika, 2017, Garbarinoa & Strahilevitzb, 2002, Dillon, Buchanan & Al-Otaibi, 2014). The higher risk women perceives in relation to online shopping, is amongst other factors related to women preferring to buy clothes and cosmetics online, which is connected to higher perceived risk than search products like movies and personal computers, which men prefer to buy online (Dillon, Buchanan & Al-Otaibi, 2014). This difference can also be seen in Denmark, where according to Statistic Denmark, women to a larger extent buy apparel and clothes than men, while men buy more music, film and electronics (See table 2.3, next page).

Women	2012	2013	2014	2015	2016	2017	2018
Clothes, sport and outdoor gear	58	58	61	62	64	71	70
Music, film (DVD, CD)	32	33	35	25	23	43	44
Books, newspapers	32	35	29	30	35	37	34
Electronic	23	21	18	19	19	19	20
Video- and computer games	16	16	12	12	20	34	31
Men	2012	2013	2014	2015	2016	2017	2018
Clothes, sport and outdoor gear	45	51	54	55	59	62	60
Music, film (DVD, CD)	44	43	41	29	28	53	52
Books, newspapers	30	30	24	25	28	31	33
Electronic	37	39	41	41	41	39	42
Video- and computer games	30	33	30	30	42	52	50

(Table 2.3, extracted data from statistikbanken.dk/BEBRIT08)

Apart from the greater overall risk perceived by women, some research has found that there are gender differences in risk dimensions, where product performance and financial risk have been found to have greater influence on women's intentions to shop online, compared to men's (Ibid.), which again may be connected to the fact that women prefer to buy apparel and clothes online.

Despite research that has found that women have greater perceived risk when shopping online, recent research indicates that women are twice as likely to buy products online as men, so not only has the gender gap narrowed in regards to how many users there are online, but there has been a significant turnaround in the terms of women's willingness to shop online (Rajini & Krithika, 2017). Women's willingness to shop online is greater when having a site recommended by a friend, which reduces their perceived risk more than for men (Garbarinoa & Strahilevitzb, 2002). Not only is online shopping in general connected to higher perceived risk, women perceive higher risk in an online shopping context and are more influenced by recommendations from likeminded than men, which shows the importance of investigating the connection between the lowering of perceived risk and WOM in a female perspective.

Critique

Much of the research associated with differences in perceived risk between genders does not take into account that men and women prefer to buy different type of products (Garbarinoa & Strahilevitz, 2004, Rajini & Krithika, 2017), which strongly affects perceived risk. Women prefer to buy apparel and clothes online, which has an overall higher perceived risk associated with it and are associated with different dimensions of risk than movies and personal computers, which men prefer to buy. Research which has not taken product category into account may therefore be inconclusive. Different research which has taken product category into account when measuring the difference between men and women are also conflicting. Griffin and Viehland (2004) investigated perceived risk according to different demographic

factors, including gender, and found no significant difference between men and women. Dillon, Buchanan & Al-Otaibi (2014) investigated perceived risk across gender and product type (apparel and music) and found that women had higher perceived risk and a lower intention to shop online for both product categories, where the significance of difference was highest for apparel. Unfortunately they have only included six dimensions of risk in their investigation, with social risk missing, which is an important risk dimension in regards to clothing.

Product Type

Prior research has found that perceived risk differs according to product type, where Nelson (1974) separated product types into two parts: search products and experience products. Search products are products where the consumer can evaluate the quality before purchase. Experience products are products where the consumer cannot evaluate the quality before purchase, like apparel and clothing (Dillon, Buchanan & Al-Otaibi, 2014). The overall risk associated with online shopping for experience products are higher than with search products (Ibid.). Because of the intangibility of apparel products like clothing online, perceived product performance risk is especially high in comparison to many other products (Choi & Lee, 2003, Forsythe et al., 2006, Yu, Lee, & Damhorst, 2012). The high perceived risk associated with apparel and clothes, further substantiates the importance of my research.

Clothing - The Fit and Size Concern

Fit and size are the most important considerations consumers make in apparel purchase decisions and are the biggest concern in online shopping for clothes (Forsythe et al., 2006, Yu, Lee, & Damhorst, 2012, Kim & Damhorst, 2013). This is because fit and size are directly related to physical comfort for the individual and to how the individual is viewed in a social context, two factors which directly influences the individuals' body image and self-esteem (Kim & Damhorst 2013). Fit and size problems are also a concern in offline shopping because of a lack of a standardized sizing system among retailers, which creates frustration and confusion among consumers, because sizes can be different from retailer to retailer (Ibid.). The problem is even more severe in an online shopping context, because of the inability to try on the garment for fit, which increases the consumer's perceived risk (Ibid.). The uncertainty of fit and size due to the different sizing systems that the consumer has experienced in offline shopping, has contributed to an explosion of product returns, where it is usual for consumers to buy a product online in different sizes and return the sizes that do not fit (Binkley, 2012). These product returns are a problem for retailers because of the shipping cost involved to retain customer loyalty, and the waste of resources in the process. The perceived risk associated with fit and size of garment, seen in the light of increasing online sales, has serious implications for the fashion industry (Kim & Damhorst, 2013). There are various interesting innovative

technologies, which e-retailers have implemented in order to decrease consumers perceived risk caused by the inability to try on the garment, such as virtual models. But not only are these technologies often expensive for the e-retailer, the effect is uncertain (Ibid.).

Fit and Size Related to Risk Dimensions

Fit and size are associated with product performance risk, but are also interconnected with psychological, financial, social and time risks, which the fit and size concern affects to a large extent. As to psychological and social risk, fit and size influences the individuals' self-concept as a social object and a clothing piece that fits well on the body, maximizes the appearance of the individual and projects a positive impression to oneself and to others (Kim & Damhorst, 2013). Because of the inability to try on for fit and size in an online apparel shopping context, psychological and social risk increases when consumers have to depend on their imagination of how the product will look on them, by evaluating if the clothing piece will fit their respective body-images. In this evaluation process they consider whether the clothing reflects their self-image and how it would look on them in the eyes of others (Ibid.). The imagining of fit and size that the consumer has to make in online shopping for clothes includes concerns that the consumer have to make a guess about the fit of the clothes. Their guess may not be correct, which affects financial and time risk in relation to return and/or re-ordering (Ibid.). It will affect financial risk substantially if the consumer has concerns that she may a) forget b) be too lazy c) will not find the time, to return a product that does not fit and will stay untouched in the closet.

Risk Factors within the Area of Interest

The fit and size concern is an important aspect of perceived risk, which also has an effect on other risk dimensions, which are those dimensions of perceived risk that especially differ in relation to different product categories. In the following, an outline will be made of the important risk factors in each of the nine risk dimensions according to the moderating factors that shape the study concept within the area of interest. The most important risk factor within category chosen for further investigation, will be mentioned last.

Performance Risk

Apart from the substantial fit and size concern when buying clothes online, product performance risk is also associated with a concern about the quality of the product, which is related to a) a concern about how long the product will stay in the original quality after washing and drying, b) a concern that the clothing will change shape after wearing it and c) a concern that the seams will go up after a short time of usage (Yu, Lee & Damhorst, 2012). In offline shopping, consumer can reduce the quality concern by touching and feeling the quality of the fabric and checking the quality of the seams. This is not possible in online shopping, which increases perceived risk. Consumer also want to know how the product feels on the body, whereby softness and texture of the clothing piece is an important factor (Ibid.), which is also not possible to determine for the consumer beforehand in an online shopping context. These are perceived risks that are the consequence of shopping online and are therefore not solvable as such. The fit and size concern can be aided through innovation. Since this also is considered to be the highest risk factor in performance risk and is solvable, it is worth further investigation on how a lowering of this risk factor may affect WOM.

Psychological Risk

Psychological risk is associated with the disappointment an individual will feel if the product fails to meet her expectations, which is highly connected to product performance risk because of the guess the consumer has to make in the purchase decision and the risk that the guess may not be correct. But psychological risk also contains an element which relates only to this risk dimension, which is the concern that the garment may not be a good identity fit. Individuals use clothes and products to build their identity, for themselves and towards others (Berger, 2014, Yu, Lee & Damhorst, 2012, Kim & Damhorst, 2013). In this regard the consumer may have concerns whether the product will fit their identity or their desired identity, which is also related to the concern that the clothing piece will fit with the rest of their wardrobe and their style in general.

Social Risk

The personal identity fit can be considered simultaneously within a social context, because the building of identity is simultaneously the presentation of the self in relation to others (Goffman, 1967). It is therefore important to people that their purchase is accepted in a social context and that it present a favorable impression of the individual to others and triggers favorable attitudes among their peers (Kim and Damhorst 2013). People form both individual and social identity through clothes and fashion and it is an important element in social identity construction (Saucier, 2015). Consumers try to reduce the social risk dimensions by looking to others for what is socially acceptable and what would be looked favorable upon by others (Berger, 2013). Sources consumers may look to for social validation of acceptability are: their peers, fashion magazines, bloggers, popular culture and/or sub-cultures. Commonly, people adopt a particular style that is pre-accepted within a popular culture and/or sub-cultures as a way to lower perceived social risk.

Financial Risk

Financial risk is closely related to the above because if the clothing does not fit, does not enhance the consumers' personality or fails in any other way to meet the consumers' expectations; there is a risk that the consumer may suffer a financial loss. The amount of money perceived as a financial risk, will vary

between consumers, as it is the amount that is worth less than their perceived time-value of returning the product – e.g. not many would return an ill-fitting pair of socks, while most would return an ill-fitting evening gown. Financial risk also incorporates return policies and an easy and free return will lower financial risk, which many online shopping sites have adapted (Boozt.com, Zalando.dk).

Time Risk

Return and reordering takes time and are therefore also related to time risk. But in its essence, time risk incorporates the process from clicking into a shopping site to having the right product at hand. A lot of shopping sites have a lot of products and information which is poorly sorted, increasing the time it takes for the consumer to find what she is looking for. Consumers try to lower their perceived risk by finding information about the product (Dowling & Staelin, 1994, Cho & Lee, 2005). If the needed information is lacking in the shopping site, consumers try to find information elsewhere on the internet (Berger, 2014), which again increases time risk. The time risk involved in the search process can therefore be reduced by providing information and to provide an effortless search process.

Physical Risk

Physical risk can also be related to the buying of clothes online, but is the lowest perceived risk in this product category (Griffin & Viehland, 2014). This risk dimension is more related to cosmetics because many consumers have concerns that their skin may not appreciate the product and get a negative reaction to the product. In relation to clothes, some consumer may have concern about chemicals in the fabric, causing irritation to the skin or in other ways be harmful to the individual's health. This concern is overall low but may be high in certain communities which only buy organic products. Because of the concern for climate change and pollution, there is a mega trend in Scandinavia for sustainable products (nordeainvestmagasinet.dk), which may result in a general higher perceived physical risk among Danish women.

Security Risk

In regards to security/transfer risk, the business standard in Denmark is very high and many Danish webshops are marked with the Danish "E-mærket", which ensures the consumer a safe shopping experience by committing e-businesses to comply to rules and regulations made by the Danish government and EU, and to follow E-mærkets guidelines when it comes to payment methods (Taenk.dk). In order to gain trust it is therefore important to be registered with E-mærket, which commits the online site to follow rules and regulation. If the site still breaks rules and regulations, the consumer can get legal counsel through Emærket. But even though the Danish population generally trusts Danish shopping sites, there may still be concerns related to hacking and fraudulent sites that intends to steal financial information.

Source Risk

Even though source risk is a big concern in online shopping, Danish consumers may expect a Danish online shopping site they engage in to behave according to the business standard, because of the overall good reputation of Danish online shopping sites (Trendsonline.dk). According to a survey made by trendsonline.dk, 69 % of Danish consumer trust the site if they have easily accessible delivery information, 62 % if they have clear contact info, 62 % if the site is marked with E-mærket and 45 % if the webshop has positive reviews (Ibid.). In regard to reviews, this number is higher for young people between 18-34 years, where the number is 57 %. Source risk is directly related to the reputation and trustworthiness of the shopping site and following these points would be beneficial to gaining trust with Danish consumers.

Privacy Risk

Regarding privacy risk, there is a rising concern that private information is sold to other parties and a feeling of powerlessness by the consumer in the lack of control over their privacy (Dillon, Buchanan & Al-Otaibi, 2014). Research has indicated that consumers are willing to pay extra for the protection of their personal information (Ibid.), but many may just "accept" their powerlessness over personal information because they in many cases get convenience in return. The European Union has passed a new privacy act concerning businesses, which obligates them to protect their customers' personal information. Denmark also has its own privacy act, which also needs to be followed (Datatilsynet.dk). Because of this knowledge, Danish consumers may not perceive this risk as being as high as in other countries where customers are not protected as well. But on the other hand have there been several stories in the press about privacy leak and companies that do not follow the legislation, which may affect this risk dimension.

Definitions within the Boundaries of Investigation

Table 2.3 shows the risk factors within each risk dimension that will be further investigated and are the risk factors the social survey will be built upon. These risk factors are considered to be the most important aspects of risk within the category and are also risk factors that can be lowered in an online shopping context. The survey will be directed at Danish design interested women with medium to high past experience with online shopping for clothes.

Risk Dimension	Risk Factor
Performance	The risk that the clothing will not fit.
Psychological	The risk that the clothing does not fit the individuals' identity, which is related to the individuals' style and wardrobe
Social	The risk that the individual's peers do not like the clothing, resulting in a lower social esteem.
Financial	The risk of losing money on return.
Time	The risk of losing time spent finding the right product
Physical	The risk of health/skin issues because of toxins in the fabric.
Security	The risk of misuse of personal information (e.g, credit card fraud), as part of the process of completing the online transaction.
Source	The risk that the online shopping site is fraudulent.
Privacy	The risk of loss of privacy; that personal information is being shared with unknown third parties

(Table 2.4, risk factors within the area of interest)

Lower Perceived Risk and Motivation for WOM

The reason why the lowering of perceived risk leads to WOM has to do with exceeding the customers' expectation, which leads to customer satisfaction (Chaffey & Ellis-Chadwick, 2016). Through customer satisfaction, the company is rewarded in WOM (Lang, 2014). Because people share commonalities in their perception of risk, like the fit and size concern, lowering risk factors that people share will lead to WOM because it is common ground. Berger (2014) argues that common ground conversations go more smoothly

and lead the sharer to look good because the conversation leads the conversational partners to perceive more interpersonal similarities (Berger, 2014). Useful Information is also an element that leads people to share WOM based on lower perceived risk. This is because by sharing the information, the sharer solves a problem for the receiver (Ibid.). According to Berger (2014) and Wonjnicki and Godes (2008), people share WOM to shape the impression others have of them and of themselves through impression management. Impression management includes self-enhancement which is acknowledged as a fundamental human motivation, because people like to be perceived positively and being presented in a light that garner such impression. To accomplish this, people signal certain characteristics, knowledge or expertise in a specific area and communicate topics that self-enhance (Berger, 2014). By sharing useful information based on common ground, the sharer is put in the light as smart, helpful and in-the-know.

Research has shown that self-enhancement leads people to share more positive WOM than negative (Berger & Milkman, 2012). This happens because people do not want to be perceived as a negative person and spreading positive WOM makes them look better and show that they make good choices (Berger, 2013). In relation to this it is important to note that both highly satisfied and highly dissatisfied customers are more likely to share WOM (Anderson, 1998). This is also substantiated by Bergers (2014) findings that the feeling of arousal increases the transmission of WOM. This is because the sharer infers that the content is more engaging and entertaining for the receiver, making the sharer look good in the process (Berger, 2014). If the conversational partners feels the same way, sharing based on emotion strengthen and deepen the relationship. High arousal content has a higher chance for being shared and includes the feelings of awe, excitement and amusement, where low arousals simply include contentment (Berger, 2013).

This means that the higher the customer satisfaction, the higher the chances for positive WOM, which in turn might mean that the bigger the problem that is solved for the customer the higher the customer satisfaction will be. People perceive different risk dimension differently, where some risk dimensions are higher than others and it is therefore proposed in this study: that the higher the individual perceives the risk of a risk dimension to be, the higher the positive effect, both in regards to try a new site for the first time and in regards to motivation for WOM, which leads to hypothesis 1 and 2:

H1: The higher people's perceived risk for a risk dimension, the higher the probability is for people to visit a website for the first time on the background of a reduction of the perceived risk of that risk dimension.

H2: The higher people's perceived risk for a risk dimension, the higher the probability is for people to spread WOM on the background of a reduction of the perceived risk of that risk dimension.

Since hypothesis 1 is a condition for hypothesis 2 and because WOM theory indicates that the larger the problem that is presumed solved or lowered is, the larger an effect on an individual's probability to visit a site for the first time will be. According to Chang and Wu (2012), stimuli that arouse a positive affective impression, even stimuli prior to an event, will lead the decision maker to evaluate the event positively.

The Connection between Perceived Risk, Trust, Loyalty and WOM

Trust is an important factor in online shopping and the lack of trust has been a major barrier to online shopping in general (Chang et al., 2013). Zeba & Ganguli (2016) found that perceived risk is decreased by trust and that trust towards a specific online shopping site can be increased through WOM. Moreover they found that WOM increases online purchase intentions. Alam & Yasin (2010) also found that WOM is the most influential promotional strategy on consumer behavior and that WOM has a significant positive effect on trust. In this process, consumers develop positive feelings towards the online shopping site, which results in positive online shopping intentions. As mentioned earlier, Garbarinoa & Strahilevitzb (2002) found that women are more influenced by WOM recommendation than men and that it lowered their overall perceived risk before entering the shopping site. Because online shopping is inhibited by perceived risk, Zeba & Ganguli (2016) recommend online retailers to foster trust among consumer through the triggering of WOM, which follows: *Positive WOM* \rightarrow *Trust* \rightarrow *Lower Perceived Risk*

The findings of Zeba & Gangulis (2016) and Garbarinoa & Strahilevitzbs (2002) research which shows that positive WOM results in lower perceived risk for an individual, is interesting in relation to the research question and substantiates the research because their finding the inverse of what this study suggests: *Lower Perceived Risk* \rightarrow *Positive WOM*. As mentioned previously, trust is built in the shopping process provided that perceived risk has not been actualized, whereby trust must follow perceived risk and put into the equation: *Lower Perceived Risk* \rightarrow *Trust* \rightarrow *WOM*

Loyalty is another aspect which may be put into the equation, because loyalty is linked to customer satisfaction (Griffin, 1997), which can arise from a lowering of perceived risk. In an online shopping context, loyalty is a consequence of trust, because using the same site repeatedly results in lower perceived risk and thus trust from the individual, while changing to another site has a constant site specific risk and therefore a relatively higher emotional cost for said individual. Loyalty is also a key aspect of WOM (Bain & Company), where many researchers directly measures loyalty by the amount of recommendations to others (Griffin, 1997, Zeithaml, Berry & Parasuraman, 1996, Hsieha & Tsaob, 2013). According to Griffin (1997), loyalty also incurs regular repeat purchases, an increase in identifying the shopping site as a preferred vendor when shopping and immunity to the promotional activities of competitors. This means that *if* positive WOM can be generated by lowering perceived risk, not only will it affect the gain of new customers, as hypothesis 1 suggests, but customer retention through loyalty will also be a consequence. Because loyalty is a consequence of trust and is a key aspect of WOM, loyalty must be put into the equation after trust and before WOM: Lower Perceived Risk \rightarrow Trust \rightarrow Loyalty \rightarrow Positive WOM

This equation may be linked with Zeba & Ganguli (2016) and Garbarinoa & Strahilevitzb (2002) findings where positive WOM leads to trust that leads to lower perceived risk, which together makes the equation: Lower Perceived Risk \rightarrow Trust \rightarrow Loyalty \rightarrow Positive WOM \rightarrow Lower Perceived Risk, which can be connected into a circle:



(Figure 2.1: Positive feedback loop, own creation)

This means that *if* positive WOM can be gained by reducing the perceived risk of risk dimensions, new customers from referrals will have a more positive attitude towards the company and start out with a lower perceived risk. In this customer shopping experience process, perceived risk may be reduced even further, which may increase trust, loyalty and trigger WOM to an even larger extent than for the customer who used the shopping site without a referral - essentially creating a positive feedback loop. This will have massive and very favorable implications for startups, because in this model WOM grows exponentially, with each iteration increasing the WOM transmitters and recipients. This leads to the third hypothesis, which suggests that a person is more motivated to spread WOM because of the lower perceived risks she experiences, if she has the site referred by a friend beforehand.

H3: People who had a site recommended by a friend, is more motivated to share WOM if perceived risk of relevant risk dimensions is lowered, than people who enter the site without referral.

Methodological Considerations

Research Design

The literature review has lead to three hypotheses, which will be tested through a cross-sectional research design.

H1: The higher people's perceived risk for a risk dimension, the higher the probability is for people to visit a website for the first time on the background of a reduction of the perceived risk of that risk dimension.

H2: The higher people's perceived risk for a risk dimension, the higher the probability is for people to spread WOM on the background of a reduction of the perceived risk of that risk dimension.

H3: People who had a site recommended by a friend, are more motivated to share WOM if the perceived risk of relevant risk dimensions are lowered, than people who enter the site without referral.

Cross-sectional research design is often referred to as social survey design (Brymann & Bell, 2011:53-54) and entails the collection of data on two or more cases at a single point in time (Ibid.). The collected data from the different cases can then be examined to detect patterns of association (Ibid.). As hypothesis 1 and 2 implies, there are two cases to investigate: 1) the measure of people's perceived risk for all the risk factors found in the literature review, and 2) the measure of whether the lowering of these risk factors will lead to new visitors (H1) and WOM (H2). With the collected data it is possible to test whether there is a correlation between the two variables. In regard to hypothesis 3, it will be tested whether the sample perceives risk lower for a new shopping site, if she has had the site referred to by a friend and furthermore, if her perceived risk is further reduced after visiting the new shopping site and last, if this leads to a higher motivation to spread WOM than without a referral. This way, it can be tested whether the lowering of perceived risk leads to an accelerating WOM.

The research will also be of an exploratory character. This is because there is no previous research that handles the particular case in question, which includes how the lowering of perceived risk may have a positive effect on 1) new customer acquisition, 2) WOM and 3) if this effect is accelerating. Because of resource constraints, it is only possible to investigate the concepts relationship on a small group of people through a social survey design, with the specific goal of testing the validity in regards to the the area of interest. While this means that the specifics of the results cannot be generalized to a larger population, a positive result in this particular case would increase the likelihood of a generally applicable model and therefore act as an inspiration for further, larger and more generalizable study. As such, while a single social survey is not enough to get a thoroughly comprehensive picture of the interconnectedness of these

two large concepts, the value of demonstrating a positive relationship in a single case is a substantial and valuable contribution to the study of both concepts. The research should therefore be seen as exploratory in that it explores both how perceived risk and the lowering of perceived risk can be measured, as well as the connection between this concept and the motivational effect it has on people visiting a new site for the first time and subsequent WOM. Despite a large amount of research of perceived risk, there is not a clear path on how perceived risk can be measured most effectively. In the following a step back will therefore be taken, to look into the definition of perceived risk and thereby give a better understanding of how perceived risk can be measured.

How to Measure Perceived Risk

Upon reviewing the literature, it is hard to find any consistency in how perceived risk is measured. The reason for the lack of consistency in the literature is the many varieties in the definition scientists apply to the construct of perceived risk, which has resulted in many cases of incomparability and/or conflict of findings between studies (Jacoby & Kaplan, 1971). To figure out how to best measure perceived risk, it is therefore necessary to take a step back and look at the very definition of perceived risk, which is a construct comprised of two factors (often referred to as "dimensions", but to avoid confusion this thesis will refer to them as "components"): the *probability of loss* and the *importance of that loss* (Cox, 1967). Bauer (1967) also defines perceived risk as comprised of two components, but as uncertainty and unwanted consequences. Uncertainty has been defined as probability of loss and unwanted consequences as importance of that loss (Dillon, Buchanan & Al-Otaibi, 2014), making the two definitions identical. The definition is unsurprising because risk has been measured as a construct comprised of two components for ages in the insurance industry, the stock market and other industries. The definition of risk found in the Oxford English Dictionary which applies to "risk factor" or "Expectation Value" used to compare level of risk is:

"The probability of something happening multiplied by the resulting cost or benefit if it does. (This concept is more properly known as the "Expectation Value" or "risk Factor" and is used to compare level of risk)" (Oxford English Dictionary).

Per the definition of perceived risk it is clear that the correct way to measure perceived risk is to separately measure how an individual perceive the importance of a loss *and* how an individual perceive the probability for that loss and nominally multiply them with each other.

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Critique - Definition Inconsistencies

In spite of the clear evidence that perceived risk should be measured as a construct comprised of two components, many researchers have boiled the two components of perceived risk into a singular construct with one component. Surprisingly most research papers on the construct initially define perceived risk as a two-component construct per Bauer (1967) and/or Cox (1967) in their literature review, but conduct their data gathering as if it were a singular construct. A good example is Dillon, Buchanan and Al-Otaibi (2014) whom initially defines perceived risk as a two-component construct and thereafter mentions that other researchers has chosen one of the two components in their measurements:

"Bauer (1967) defined perceived risk as a two-dimensional structure comprising uncertainty and adverse consequences. A number of researchers have used the uncertainty dimension (e.g., Shimp & Bearden, 1982; Toh & Heeren, 1982), which has been defined as an individual's probabilistic beliefs (Peter & Tarpey, 1975). Taylor (1974) has defined the adverse consequences dimension as the importance of loss." (Dillon, Buchanan & Al-Otaibi, 2014)

They later claim they are using the definition from Bauer (1967), but only select one component of the definition in their measurements, the opposite component from the researchers mentioned in their paper.

"The definition of perceived risk used in this study is based on Bauer (1967). It is the degree to which an individual believes that purchasing goods and services from online retailers could have unwanted consequences." (Dillon, Buchanan & Al-Otaibi, 2014).

As can be seen from the quotes, for researchers to choose one of the two components is common practice by researchers of perceived risk. There are also examples of researchers who start out by defining perceived risk as a two-component construct, leading us to believe that it is also how it has been measured. But when looking into their survey, they have constructed their questions using a single component (Hsieha and Tsaob, Raijini and Krithika, 2017, Ko, Kim and Shim, 2004). Other researchers have not included the survey questions they have used for data collection, making their methodology opaque, however based on their results and from the lack of discussion of the dual components, it can be alleged that their questionnaires are using a single component (Griffin and Viehland; 2011). As these researchers neither divulge nor discuss their use of a single component, it is important to point out this severe flaw in perceived risk research, as the validity of the research where only one component is used, is highly questionable. The reason is that the variance of importance and probability reveal different information about the individual's perceived risk; considering the nominal multiplication of components, if one of the components equals zero, the perceived risk aggregate will be zero and therefore an irrelevant risk dimension. The lower one (or both) of the component(s) is/are, the more irrelevant the risk dimension. The higher both of the component values are, the more critical the risk dimension. This important information cannot be found by boiling a two-component construct into one. There are also other sources of information and/or patterns that cannot be found by only using one component of the definition, which would be relevant to moving the research on perceived risk along.

A related issue is that some researchers seem to have chosen to consider both components interchangeable representations of perceived risk, changing them between the risk dimensions – as can be seen from some of the few articles that include their questionnaire (Hsieha and Tsaob, Raijini and Krithika, 2017, Ko, Kim and Shim, 2004, Dillon, Buchanan & Al-Otaibi, 2014). The effect of this error is apparent if we consider that in a non-specific market, we would intuitively expect the importance of financial risk to be high, while the probability is low, as a market where both was high would not exist for long, while we would expect the importance of privacy in a Facebook age to be considered relatively low, while the probability is more or less 100%. It therefore seems to indicate a mix of components being used when a study show both to be high, as can be seen in Dillon, Buchanan & Al-Otaibi (2014) where both are high; looking at their questionnaire, it is clear that they are not asking about the same risk component between risk dimensions. Barring sound reasoning and explicit explanation, studies where both are high or both low, are therefore similarly suspect in their analysis and conclusions. This lack of consistency in the literature of perceived risk have resulted in many cases of incomparability and/or conflict of findings between studies (Jacoby & Kaplan, 1971) and creates difficulties in the field of perceived risk research to move the research along by building on previous research. Even when researchers' measure perceived risk as a twocomponent construct, it is hard to know if measuring according to the established measurement method is the best way, because the researchers' incapability to compare findings with other perceived risk researchers. This concept will therefore be explored deeper in the discussion section.

Survey Construct

Survey Construct - Part 1

Part one of the survey is constructed exclusively to measure how the sample perceives the risk factors found in the literature review (Table 2.3) and will be used to collect data for the first concept (marked in bold) in H1 and H2:

H1: **The higher people people's perceived risk for a risk dimension,** the higher the probability is for people to visit a website for the first time on the background of a reduction of the perceived risk of that risk dimension.

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H2: **The higher people people's perceived risk for a risk dimension,** the higher the probability is for people to spread WOM on the background of a reduction of the perceived risk of that risk dimension.

The second concept of H1 and H2 will be measured through part 2 of the survey, which will be subsequently tested for correlation.

The first part of the survey is developed according to table 2.3, where every risk dimension with the included risk factor is measured as a two-component construct. In this part the individual is first asked how important a risk factor is to them, following what the individual perceives the probability to be for a risk factor to materialize, which will be measured through an 11-point scale (including a null value – e.g. no importance or 0% probability). An 11-point scale is chosen to get as broad picture of the samples' perceived risk as possible and to better detect variations, than would be possible with a fewer points. In particular it is important to be able to measure both 0% and 100%, while leaving enough options for granularity in between these extremes.

Risk Dimension	Risk Factor
Performance	The risk that the clothing will not fit.
Psychological	The risk that the clothing does not fit the individuals' identity, which is related to the individuals' style and wardrobe
Social	The risk that the individual's peers do not like the clothing, resulting in a lower social esteem.
Financial	The risk of losing money on return.
Time	The risk of losing time spent finding the right product
Physical	The risk of health/skin issues because of toxins in the fabric.
Security	The risk of misuse of personal information (e.g, credit card fraud), as part of the process of completing the online transaction.
Source	The risk that the online shopping site is fraudulent.
Privacy	The risk of loss of privacy; that personal information is being shared with unknown third parties

(Table 2.3, risk factors within the area of interest)

The definition of perceived risk includes negatives, e.g. the *probability of loss* and the *importance of that loss* (Cox, 1967), but according to Bryman and Bell (2011:258), one should avoid negatives when asking questions because it can be easy for the respondents to miss the negative and respond opposite the intended. Instead questions have been constructed using the affirmative, to avoid this potential bias (See Appendix 1). Instead of asking:

"What do you think the probability is for the delivered clothing **not** to fit you in fit and size?"

They have been asked:

"What do you think the probability is for the delivered clothing to fit you in fit and size?"

This means that the 11-point scale will need to be reversed when calculating the risk factor of the findings.

There are more risk factors in perceived risk literature in relation to online shopping for clothes, which could be included in the research. The reason only the most important factor for every dimension has been chosen, is to make the survey shorter and easier to understand for the respondents. As can be seen from appendix 1, the survey questions from part 1 is connected to part 2, in which the respondents are inquired about a lowering of a particular risk component for a particular risk factor. By adding more risk factors to each risk dimension, part 2 would become too long and chaotic and the respondents could easily lose focus and add to the risk of bias. It would also add to the already large amount of data, measuring perceived risk as a two-component construct already gives. Because perceived risk in an online shopping context includes nine risk dimensions and because these nine risk dimensions needs to be measured as a two-component construct, 18 datasets are generated per respondent to test for correlation. Therefore, to avoid calculation mistakes and to keep a good overview over the collected numbers, the data needs to be limited.

Survey Construct - Part 2

In part 2 of the survey, the respondent is guided to imagine that the risk factor introduced in part 1, is lowered for them. This is done by making an introduction to every risk factor, where the respondent are to imagine a Danish startup that is selling unique designer clothing online have lowered the particular risk factor for them. All of the introductions can be seen in appendix 1 and an example from performance risk can be seen above:

"A Danish startup, selling unique designer clothing online, have made an innovation that makes sure the clothing is the right fit/size for you, without the necessity to try the clothing beforehand" (Example of introduction translated from Danish, Part Two, Performance, Appendix 1).

While the question has been formed with a particular startup in mind, it could relate to any startup selling unique designer clothing online and thus primes the respondents to think outside of their usual clothes vendor. It is important that the respondent do not think of a site she usually shops from or has shopped from before, because it will affect her perceived risk. By asking the respondent to think of a Danish startup who is selling *unique* designer clothing online, this bias is limited because it is something abstract, which will limit the error that she think of a particular site. Making her think of unique designer clothing, may further limit the bias that she will think of a particular brand.

Hypothesis 1

After introducing the respondent to the lowered risk factor, a question is asked that intends to measure whether the respondent has a higher probability to try the site based on the lowered risk factor:

"If you heard about or read about the companies innovation, what is the probability for you to try the shopping site on a scale from 0 to 10, where 0 is never and 10 is absolutely?" (Question 1a, translated from Danish, Part Two, Performance, Appendix 1).

The question does not specify where the respondent has gotten information about the new shopping site, but to try a new shopping site a necessary condition is to receive information about the site beforehand, to know it exist. The question aims to measure if the lowering of perceived risk leads to new customers and where the potential customer gets her information, is in this case irrelevant.

Hypothesis 2

The second question intends to measure whether the lowering of the risk dimension leads to WOM after the customer have experienced a lowering of the risk factor:

"If you experienced that the innovation worked and the delivered clothing had just the right fit, what is the probability for you to tell your friends about the site, on a scale from 0 to 10, where 0 is never and 10 is absolutely?" (Question 1b, translated from Danish, Part Two, Performance, Appendix 1).

According to model 2.1, trust needs to be built before WOM can happen, which is why the question incorporates that the individual have tried the innovation and that the innovation worked, before asking whether she would recommend the site based on that innovation.

Hypothesis 3

H3: People who had a site recommended by a friend, are more motivated to share WOM if the perceived risk of relevant risk dimensions are lowered, than people who enter the site without referral.
H3 will partly be tested by measuring the correlation between the first and the second question in part 2. As mentioned, the first question does not specify where the respondents have received information about the site. An additional question has been developed, to ensure a high internal consistency:

"If you experienced that the innovation worked and the delivered clothing had just the right fit, would there be a higher probability for you to recommend the site to friends, if a friend recommended the site to you first?" (Question 1c, translated from Danish, Part Two, Performance, Appendix 1).

Unlike the other questions in the survey, this question does not have an 11-point scale, just a yes or no option and is meant to strengthen the internal reliability of the findings.

Sample

As was described in the introduction under topic delimitation, this thesis measures *Danish women's* perceived risk in relation to *online shopping for clothes* from *Danish shopping sites* and how their perceived risk is related to trying a new site and WOM. The survey is further conducted on women where clothes is of particular high interest and whom would fit into the category of moderate to heavy users of online shopping. Moderate to heavy users are chosen because they have more extensive experience and are thus less prone to be overly biased by one-off good or bad experiences, ensuring more consistent and unbiased replies. One good or bad experience will not have as strong effect on perceived risk for a moderate to heavy user, as it would be for a new user (Tversky & Kahneman, 2002, Chang & Wu, 2012). As was outlined the literature review, perceived risks are lowered and stabilizes over time with user experience, which is why the measurements of moderate to heavy users is more stable and accurate than of light users. Another reason for choosing high interest and experience respondents is that we would expect the market in total to move towards their behavioral patterns, as lighter or non-users gradually become more experienced. As it is only possible to survey a limited number of people, the focus has been on the consistency and long-term validity of responses, in the group most likely to demonstrate a relationship between perceived risk and WOM.

In conducting the sampling, quota sampling method has been used. Quota sampling is intensively used in commercial research, which includes market research and political opinion research, (Bryman & Bell, 2011). This is because with quota sampling the researcher is trying to reflect a population of people in a specific category which the research is aimed at. Quota sampling are therefore not conducted randomly, but carefully selected by the interviewer. When the group of people (called quotas) is defined, the interviewer finds people who fit into these categories.

The quotas are first and foremost defined as Danish women who have a high interest in clothes in general and are moderate to heavy users of online shopping for clothes. To find people who fit into this category of quotas, the following criteria have been devised which needs to be satisfied before a person is approached:

- a) The clothing she is wearing looks new
- b) The clothing she is wearing looks expensive and of good quality
- c) The overall look of the outfit seem to be matching in style and color

As mentioned in the beginning of this chapter, respondents will be surveyed face to face, to ensure the respondent is mentally present and understands the questions right, e.g. to avoid bias. To further avoid bias, the respondents have no prior relationship with the surveyor. This is because being in a prior relationship could lead to "pleasing" behavior, where respondents give the "right" answers. The "right" answers in this context could be to give a high score on questions which relates to wanting to visit the site or wanting to tell others about it. Instead, people in the streets of Copenhagen fitting the criteria have been approached. If a person fits the criteria, the person will be approached and initial verification that she indeed has a special interest in clothing will be performed in the following introduction:

"Hi, may I disturb you for a moment? I am looking for women with good style and an interest for fashion and clothing for a small survey for my thesis and I was thinking that you may be just right!

The survey is about what is important for you in relation to online shopping and how the improvement of your issues can lead to loyal customers who spread word-of-mouth."

As can be seen from the introduction, it is used to a) verify that this individual indeed does have a high interest in clothes and fashion and b) to verify that she is shopping online. A compliment has also been incorporated to increase the chances of an interview.

To make sure she is a moderate to heavy user of online shopping, the survey is started with two verifying questions: 1) "Have you ever shopped online?" and 2) "How often do you shop online?" The criteria for continuing the survey is that the respondent shops online for clothes at least 1-5 times a year. 1-5 times a year may seem low, but should be enough to ensure consistency in perceived risk.

The sample size has been limited to 50 women, as a compromise between limited resources and ensuring no undue effect of outliers.

Validity

Validity of research is the matter of how certain we can be that the researcher really has measured the concept in question (Brymann & Bell, 2012), and is comprised of three parts:

1) Has the hypothesis been constructed from theories that are relevant for the concept in question (construct validity)?

2) Does the measurement method reflect the content of the concept in question (face validity)?

3) Is the selected sample relevant for the concept in question (concurrent validity)?

Construct Validity

Concept Construct

The concept for investigation has been formed through the literature review, where the prior research of the different moderating factors has been outlined. The outline of the moderating factors that form the concept: country/culture, past experience, gender and product type has included indications of how they will affect the investigation in general, and their effect on perceived risk specifically. The literature has been used to find the relevant risk dimensions of online shopping and finding the most important risk factors of said risk dimensions. The risk factors have subsequently been used as the foundation for the survey. As these risk dimensions and risk factors are practically a consensus within the subfield, the construct validity of this part of the research is high. However the combination of the specifics of the moderating factors applicable in the survey, the risk dimensions, risk factors and perceived risk, stands untested in a Danish context, as does the potential circularity of perceived risk \rightarrow WOM \rightarrow perceived risk in any context. While untested, the literature behind the concept construct makes the aggregate construct validity high, and to be substantiated further by this thesis.

Hypothesis Development

The development of hypothesis 1 and 2 are mainly based on Berger (2013, 2014) and subsequently backed up by additional research giving an indication of the effect on WOM of lowering perceived risk. Because there is limited research beyond Berger on WOM at the individual level - in particular the motivation of an individual to spread WOM - it has been necessary to lean heavily on the Berger for the development of the hypothesis. As Berger is the foremost expert on the motivational factors at the individual level and because his research has demonstrated that the lowering of some risk dimensions have a larger *effect* than other risk dimensions, the construct validity of testing the hypotheses on individual risk dimensions are of high construct validity. The construct validity of hypothesis 3 is also high; because of the large amount of research the hypothesis is constructed around, which also substantiates H1 and H2. This research has been used to construct an argument that strongly indicates that the lowering of perceived risk has an accelerating effect on WOM.

To construct the concept with a high validity, prior research within the area of interest has been reviewed and criticized when questionable.

Both perceived risk and WOM are large complex study areas, that are grounded in human psychology and therefore highly subjective, it is not feasible to delve too deeply into their even more complex cross-pollination. It is therefore necessary to restrict the concept around a few moderating factors; specifically the interactions between risk dimensions that overlap and affect each other is beyond the scope of the survey, while they will be considered in the analysis of the results.

Face Validity

Survey Part 1

The critique in the literature review of definition inconsistencies revealed that the core concept of "risk perception", often suffers from a lack of face validity, as a lot of the research uses a single of the two risk components when studying perceived risk. To ensure face validity this study therefore explicitly tests both risk components: the probability of loss and the importance of that loss. While this means that this study has a higher face validity than other studies, it unfortunately also makes validation of the results through the lens of prior research impossible.

Additionally there may still be validity flaws in regards to the definition of perceived risk as a twocomponent construct, because is not necessarily the best way to measure perceived risk. While the definition is essentially taken from the definition of risk, perceived risk may be more of an abstract construct as it relates to human psychology and the human brain, in turn making the definition of perceived risk too simplistic. In particular the nominally correct combination of the components by multiplying them with each other seems suspect at best. While previous research has not explored this issue, questioned the definition and moved forward to find the best way to measure perceived risk, it has been necessary to measure perceived risk in line with what the agreed definition is. However by handling perceived risk as a two-component construct, this thesis should be better able to deal with the ambiguity than studies handling perceived risk as a one-component construct. Mainly because the extra component to analyze gives a more thorough understanding of how individuals perceive risk, but also because studying perceived risk is completely different from studying probability of loss or importance of loss in isolation. In essence: while the face validity of this study is a good as it gets, there is good reason to suspect that the face validity of the nominal measurement of "perceived risk" is categorically pretty poor.

Survey Part 2

Part 2 of the survey, where the respondents are asked to imagine that a factor of perceived risk is lowered, may also carry some validity flaws, as there is no way to verify that the respondents stated reaction, would materialize in reality. To increase face validity, it would be necessary to construct a web-shop with the lowered risk factors and collect real data on consumer behavior. Not quite feasible within the framework of an exploratory study, the validity of the study is as high as possible.

Concurrent Validity

Choice of Sample

While the sample is not representative of people in general, it is both relevant and fairly representative for the concept in question and the prospective customers of a website selling designer clothing. The sample relevance to this exploratory study stems from their high interest and moderate to heavy use of online shopping for clothes. These are the people for whom the concept in question has the highest relevancy, and thus the highest chance of answering in the affirmative, while having an extensive enough experience with the subject matter to give fairly stable responses. While an affirmative result has large implications to websites catering to Danish women interested in purchasing design clothing online, as an exploratory study of the interaction circle of WOM and perceived risk, a significant result demonstrating its mere presence in *any* sample would be sufficient to signify that it should be studied further, either as it applies to other subsegments or to the population at large.

Sampling Method

Quota sampling is a target of critique among academic researchers, which points out that a quota sample cannot be representative because the choice of respondents is left to the interviewer, which may be based on superficial characteristics (Brymann & Bell, 2011, p. 193). What would be seen as superficial characteristics in other cases are in this case signifiers of an interest in said superficiality – e.g. clothing – meaning that what would be bias in other cases, cuts to the core of the concept in question. This revealed and easily spotted interest in clothes is therefore a reasonable way of finding survey respondents.

Quota Samplings and Statistics

It is also argued that it is not permissible to calculate standard error of the mean from a quota sample because a non-random sample makes it impossible to calculate the range of possible values of a population (Ibid. p. 194). Other writers argues that: on the other hand a non-random sample such as quota sampling should not act as a barrier to calculate standard error of mean, because significance as a source of error is small when compared to the possible errors that may arise in surveys (Ibid.). Quantitative analysis is also generally criticized when used in social science, as the inherent complexity of humans and their constant changes individually and in groups, makes looking for a single objective and measurable truth a fool's errand. It is argued that research that only applies a quantitative method in their social science research, will miss valuable information that could be found through an additional qualitative research design. However as this is an explorative study, a quantitative method can give valuable information for further research, and while the study should not be considered a final word on the matter, it can act as inspiration. So while errors do occur with this method, they must be considered of secondary importance to the importance of exploring the relationship between the concepts at all. To accomplish this goal calculating a standard of error of mean is a necessity, and while the argument that the sample is not random and therefore not representative and in turn the result cannot said to apply wider than the specific sample, demonstrating the relationship in *any* sample, is valuable.

However to accommodate the potential bias, the survey will be conducted in rapid succession; e.g. respondents are chosen as rapidly as possible after each other. While this does not remove the bias, it does decrease its potential to disrupt the results. For the same reason the criteria of selection has been specified to an extent where the results should be fairly replicable – considering the subject matter – for other researchers looking to verify the results.

Hypothesis Measure and Reliability

In this section, the correlation measurement method utilized and its reliability will be outlined.

Hypothesis 1 and 2

Correlation analysis

H1 and H2 will be tested through a Pearson correlation test, which is suitable for interval/ratio variables (Brymann & Bell, 2012). First a null hypothesis will be set up, which assumes there is no correlation, against the hypothesis which assumes there is a correlation.

H1₀: There is no correlation between people's perceived risk of a risk dimension, and how high the probability is for those people to visit a website for the first time on the background of a reduction of that perceived risk.

 $H1_1$: The higher people's perceived risk for a risk dimension, the higher the probability is for people to visit a website for the first time on the background of a reduction of the perceived risk of that risk dimension.

H2₀: There is no correlation between people's perceived risk of a risk dimension, and how high the probability is for those people to spread WOM on the background of a reduction of that perceived risk.

 $H2_1$: The higher people's perceived risk for a risk dimension, the higher the probability is for people to spread WOM on the background of a reduction of the perceived risk of that risk dimension.

The measure of the perceived risk of the risk dimensions from part one, will be tested for correlation with the measure of the reduced perceived risk of the same risk dimension in part 2 of the survey. As exemplified below, perceived risk is measured through both probability and importance:

"What do you think the probability is for the delivered clothing to fit you in fit and size?"

"How Important is it for you that the delivered clothing fits you in fit and size?"

H1 is tested through the correlation between the respondents' perceived risk and question 1a, for every risk dimension:

"If you heard about or read about the companies innovation, what is the probability for you to try the shopping site on a scale from 0 to 10, where 0 is never and 10 is absolutely?" (Question 1a, translated from Danish, Part Two, Appendix 1).

Hypothesis 2 is tested for correlation between the respondents' perceived risk and question 1b, for every risk dimension:

"If you experienced that the innovation worked and the delivered clothing had just the right fit, what is the probability for you to tell your friends about the site, on a scale from 0 to 10, where 0 is never and 10 is absolutely?" (Question 1b, translated from Danish, Part Two, Appendix 1).

Perceived risk will be measured through importance and probability, which will be multiplied by each other to calculate *aggregated* perceived risk for a risk dimension. The aggregated risk is subsequently normalized to be comparable to a 0-10 scale, by dividing by 10. To be able to properly analyze the findings correlation analysis will be performed on importance, probability and aggregated risk. The inconsistency in the literature on measurement methods for perceived risk has necessitated looking at the different components separately, while keeping in mind that the aggregated risk is nominally the correct measure, simultaneously with having little backing in the literature. This step improves and granulates the analysis of the data, both in regards to part 1 and part 2 of the survey.

T-test and T-value

To examine the statistical significance of the results a t-test will be conducted. The purpose with a t-test is to examine whether the mean in the two populations in the two variables that the correlation analysis is conducted, can be assumed to be identical (Ibid.). To conduct a t-test, the population from where the sample was selected must be assumed to be normal distributed, which is assumed to be the case for the population from where the sample will be collected. The higher the number is, the more statistical significant the result. But the t-value calculated from the t-test does not give us an indication about the significance of the result alone. It needs to be compared to the t-critical score, which is calculated in relation to the level of maximum significance (<0.05) and the number of observations. If the t-value is higher than the t-critical value, the null hypothesis can be rejected (Ibid.).

P-value

To further examining whether the findings are stable, I calculate the p-value, which is the probability for the calculated correlation to have happen by chance (Ibid.). The number shows the percentage of chance for this to happen and the lower the number the higher the significance of the results.

Gower Analysis

Conducting a Pearson correlation analysis may give errors, especially if there is a high agreement and a low variance between the respondents' answers (Barret, 2010). A Pearson correlation analysis measure if the variance in answers in one scale, fluctuates with the variance of another. If there for example is a high

agreement between the respondents where the respondents tend to answers 10 or 9, with an occasional 7, the occasional 7 would have a large influence on a Pearson correlation analysis and may measure the correlation to be low when in actual fact the relationship is strong (Ibid.). This happens as a consequence of the mathematics behind Pearson that merely calculates whether the variance that is on one scale, follows the variance of the other. While an unlikely scenario, two scales where all answers are 9 or 10, but always 9 when the other is 10 and inversely always 10 when the other is 9, would show a strong negative correlation. To avoid this error type, the Gower analysis has been added, which measures the level of agreement between the two scales, specifically by dividing the sum of the differences between the two scales, by the number of observations, and subtracting the result from 1. In a sense it can be considered a percentage of total similarity between the scales.

Hypothesis 3

H3 will be tested by making the same correlation and Gower analysis as conducted for H1 and H2, between the first and second question in part two of the survey, where a null hypothesis has been set up that assumes there is no correlation, to the hypothesis that assumes there is a correlation:

H3₀: *People who had a site recommended by a friend, are no more motivated to share WOM if the perceived risk of* relevant risk dimensions are lowered, than people who enter the site without referral.

H3₁: People who had a site recommended by a friend, are more motivated to share WOM if the perceived risk of relevant risk dimensions is are lowered, than people who enter the site without referral.

The correlation is tested between the first and question 1a in part 2 of the survey:

"If you heard about or read about the company's innovation, what is the probability for you to try the shopping site on a scale from 0 to 10, where 0 is never and 10 is absolutely?" (Question 1a, translated from Danish, Part Two, Performance, Appendix 1).

And

"If you experienced that the innovation worked and the delivered clothing had just the right fit, what is the probability for you to tell your friends about the site, on a scale from 0 to 10, where 0 is never and 10 is absolutely?" (Question 1b, translated from Danish, Part Two, Performance, Appendix 1).

The above example is taken from performance risk and is the way all the nine risk dimensions is tested. But question 1b does not clarify if this information has been transmitted through WOM, other social earned media sources or paid media. This means that only the first part of the null hypothesis is tested: *"People"*

who had a site recommended by a friend, no more motivated to share WOM if perceived risk of relevant risk dimensions are lowered", and not whether there is a difference between how information about the website is acquired.

As was outlined in the section: Survey Construct - Part 2, an additional question was asked to avoid this bias, asking the respondent directly if it would be more likely that she would recommend further if another friend recommended the site to her first:

"If you experienced that the innovation worked and the delivered clothing had just the right fit, would it be a higher probability for you to recommend the site to friends if a friend recommended the site to you first?" (Question 1c, translated from Danish, Part Two, Performance, Appendix 1).

The question has a simple yes/no option and will be measured through percentages of yes. If there is more than 50% yes, then there is overall a higher probability for the respondents to spread WOM about their shopping experience if the information comes from a friend. The result of the two measures in combination will be used to analyze if the null hypothesis can be rejected.

Result

Following are the results of the survey of 51 women conducted in the streets of Copenhagen from 15/06/18-15/07/18. One outlier has been removed due to eccentric answers and is therefore not included. The respondent had the attitude that she did not want to share anything valuable with her friends because she want to keep it to herself and are therefore a rare example of a person that does not spread positive WOM.

The survey has been tabulated and subsequently analyzed using a fairly extensive model in Excel, while only the results are shown here.

Result - H1 and H2

H1 and H2 have been tested for each of the nine risk dimensions. The tCritical value is calculated to be 2.0106 for a level of significance of <0.05 which will be compared to the t-test value to determine if the null hypothesis can be rejected or must be accepted for the particular risk dimension. To further ensure a high reliability, Gower is used as an additional measurement, because it shows the level of agreement between the respondents as opposed to the correlation of variance of Pearson (see methodological consideration for further explanation).

While some researchers have measured perceived risk as the importance of a loss and some researchers have measured perceived risk as probability of a loss, the same statistical test has been performed for both these two measuring methods in this study to get a more comprehensive picture of perceived risk.

In the following the results will be presented through a table that shows the correlation between aggregated risk, importance and probability, to question 1a and 1b in part 2 of the survey, where the relationship between perceived risk and 1a is the measure of H1 and the relationship between perceived risk and 1a, measure H2. Because Gower is a way to find correlation where Pearson calculates in error that there is none, Gower will only be mentioned when a null hypothesis is accepted.

Performance

Max significance	0,05	Statistical to st	Aggregated Risk		Importance of loss		Probability of loss	
tCritical	2,0106	Statistical test	1a	1b	1a	1b	1a	1b
		Gower	0,4309	0,3964	0,9455	0,9473	0,4455	0,4109
Deutennes		Correlation	0,3393	0,1961	0,4221	0,3053	0,2992	0,1696
Performance		P-value	0,0139	0,1636	0,0018	0,0277	0,0312	0,2295
		t-test	2,4986	1,3852	3,2255	2,2213	2,1723	1,1920

(Table 4.3, results for H1 and H2: Performance risk)

Aggregated

1a: The relationship between aggregated performance risk and 1a is relatively strong. The null hypothesis is rejected and hypothesis 1 is accepted with a t-test value of 2.4986, above the tCritical value of 2.0106. The results have a low probability of have happened by chance, with a p-value of 0.0139.

1b: The relationship between aggregated performance risk and 1b is lower and in this case the null hypothesis is supported and hypothesis H2 is rejected, with a t-test value of 1.3852.

Importance of Loss

1a: As we move on to the relationship of importance and 1a, the result shows a strong relationship with a ttest value of 3.2255. If perceived risk was to be measured as the importance of a loss, the null hypothesis for H1 would be rejected and hypothesis H1 would be accepted. The result is also significant, with a strong p-value of 0.0018.

1b: The relationship between importance and 1b is also strong, but not as strong as for 1a. The t-test value of 2.2213 is still above the tCritical value. There is significance to the results with a p-value of 0.0277. By this measurement method, the null hypothesis would be rejected and H2 would be accepted.

Probability of Loss

1a: The relationship between probability of a loss and 1a shows similar results as aggregated, but with slightly lower values. The t-test value of 2.1723 is above the tCritical value of 2.0106, meaning that if perceived risk could be measured as probability of loss, the null hypothesis would be rejected and hypothesis H1 would be accepted. The results are significant with a p-value of 0.0312.

1b: For 1b, the relationship is weaker, and with a t-test value of 1.1920 the null hypothesis would be accepted and H2 would be rejected. The Gower value of 0.4109 does not change this result.

Psychological

Max significance	0,05	Statistical tast	Aggr	Aggregated Risk			ce of loss	Probability of loss		
tCritical	2,0106	Statistical test	1a		1b	1a	1b	1a	1b	
		Gower	0,	3280	0,2589	0,9164	0,8764	0,3545	0,2855	
Devekologiaal		Correlation	-0,	1649	-0,1083	0,3557	0,1547	-0,2591	-0,1846	
Psychological		P-value	0,	2427	0,4448	0,0097	0,2736	0,0636	0,1901	
		t-test	-1,	1585	-0,7546	2,6368	1,0845	-1,8585	-1,3016	

(Table 4.3, results for H1 and H2: Psychological risk)

Aggregated

1a: For psychological risk, the relationship between aggregated risk and 1a is oddly fairly negative. This can be seen from the correlation value of -0.1649 and t-test value of -1.1585, where the tCritical value is 2.0106. The Gower value also shows a very weak relationship, with a value of 0.3280. With a p-value of 0.2427, the results are not significant. In this case, the null hypothesis is accepted and hypothesis 1 is rejected.

1b: The relationship between aggregated risk and 1b is also negative, but not to the extent as the relationship to 1a. The t-test value of -0.7546 means the null hypothesis is accepted and hypothesis 2 is rejected. Gower also shows a weak relationship with a value of 0.2589.

Importance of Loss

1a: The relationship between importance and 1a shows a much higher relationship than for aggregated, with a t-test value of 2.6368, above the tCritical value of 2.0106, which means that the null hypothesis would be rejected and H1 would be accepted. The result is highly significant with a p-value of 0.0097. The Gower value shows an even higher relationship that the Pearson correlation analysis does, with an almost perfect relationship value of 0.9164. In this case the Pearson correlation analysis may have missed relevant information about the relationship between the two variables, because the respondents have tended to answer in the high end of the scale (see appendix 5).

1b: There is a weaker relationship between importance of loss and 1b. In this case the null hypothesis would be accepted and hypothesis 2 would be rejected with a t-test value of 1.0845, below the tCritical value of 2.0106. The results are not significant, with a p-value of 0.2736. However the Gower value of 0.8764 tells us that there is a relationship and considering the very high similarity of results, we should accept hypothesis 2.

1a: The relationship between probability of loss and 1a shows a similar result as for aggregated and 1a, with an even stronger negative relationship between the two variables with a t-test value of -1.8585. The Gower value of 0.3545 does not show a hidden relationship. In relation to probability of a loss as a measure of perceived risk, the null hypothesis would be accepted and hypothesis 1 would be rejected.

1b: This is also the case for 1b, with a t-test value of -1.3016 and a p-value of 0.1901. Gower also shows a no relationship of 0.2855.

Social

Max significance	0,05			Aggregated Risk		Importan	ce of loss	Probability of loss		
tCritical	2,0106	Statistical test	1a		1b	1a	1b	1a	1b	
		Gower		0,4085	0,2940	0,8745	0,7818	0,4600	0,3527	
Social		Correlation		-0,1513	-0,0937	0,4306	0,4371	-0,4789	-0,4384	
SUCIAI		P-value		0,2842	0,5087	0,0014	0,0012	0,0003	0,0012	
		t-test		-1,0606	-0,6522	3,3055	3,3670	-3,7794	-3,3793	

(Table 4.3, results for H1 and H2: Social risk)

Aggregated

1a: For social risk, the relationship between aggregated and 1a is negative, with a t-test value of -1.0606. The null hypothesis is therefore accepted and hypothesis 1 is rejected. Gower has a value of 0.4085 and is not high enough to assume there is a hidden positive relationship between the two variables.

1b: The relationship between aggregated risk and 1b also shows a negative relationship, with a t-test value of -0.6522. Like with 1a the null hypothesis is accepted and hypothesis 2 is rejected. The p-value of 0.5087 tells us that there is a relatively high chance that the results have happened by chance. The Gower value of 0.2940 is also very low leading to the conclusion that there is no reason to assume that there is a relationship between the two variables.

Importance of Loss

1a: The relationship between importance and 1a tells a quite different story. Here the relationship is strong with a t-test value of 3.3055, above the tCritical value of 2.0106. The results are significant with a p-value of 0.0014, telling us that it is very unlikely that the results have happened by chance. If perceived risk was to be measured as importance of a loss, as some researchers do, the null hypothesis would be rejected and hypothesis 1 would be accepted.

1b: The relationship between importance of loss and 1b is almost the same as importance of loss and 1a, with a t-test value of 3.3570 and a p-value of 0.0012, meaning the null hypothesis would be rejected and H2 would be accepted.

1a: For social risk, the relationship between probability of a loss and 1a shows the lowest t-test value of all the risk dimensions, with a negative value of -3.7794. If perceived risk was to be measured as probability of loss, as some researchers do, the null hypothesis would be accepted with significance. Not only are the results not in support of hypothesis 1, they demonstrate a strong effect going the opposite direction, while it is also extremely unlikely that the result have happened by chance, with a p-value of 0.0003. The Gower value of 0.4600 does not demonstrate a similarity of results.

1b: The results are almost the same for 1b, with a t-test value of -3.3793. The results are significant, with a p-value of 0.0012. Similarly Gower does not demonstrate a similarity, with a value of 0.3527.

Financial

Max significance	0,05	Statistical test	Aggregate	ed Risk	Importan	ce of loss	Probability of loss		
tCritical	2,0106	Statistical test	1a	1b	1a	1b	1a	1b	
		Gower	0,5315	0,5424	0,8418	0,8382	0,5491	0,5527	
Financial		Correlation	0,2910	0,2768	0,4985	0,5114	0,2563	0,2186	
Financiai		P-value	0,0364	0,0470	0,0002	0,0001	0,0667	0,1195	
		t-test	2,1071	1,9956	3,9840	4,1227	1,8369	1,5519	

(Table 4.4, results for H1 and H2: Financial risk)

Aggregated

1a: For financial risk, the relationship between aggregated and 1a is relatively weak but significant with a t-test value of 2.1071, just above the tCritical value of 2.0106. The null hypothesis is rejected and hypothesis 1 is accepted.

1b: The relationship between aggregated financial risk and 1b is almost identical to aggregated financial risk and 1a, but the null hypothesis must in this case be accepted and H2 must be rejected with a t-test value of 1.9956. But, with a maximum level of significance of <0.06, H2 would have been accepted with a tCritical value of 1.9262. The Gower value is in a bit higher for 1b than for 1a, with a value of 0.5424, which does not demonstrate similarity.

Importance of Loss

1a: Importance shows a much stronger relationship between the two variables. According to this measurement method of perceived risk, the null hypothesis would be rejected and H1 would be accepted, with a t-test value of 3.9840. The results are significant with a p-value of 0.0002.

1b: The relationship between importance and 1b is even stronger, with a t-test value of 4.1227 and with even higher significance, with a p-value of 0.0001. With importance of loss as the definition of perceived risk, the null hypothesis would be rejected and H2 would be accepted.

1a: The relationship between probability of loss and **1**a is similar to the relationship between aggregated and **1**a, but weaker. In this way of measure perceived risk, the null hypothesis would be accepted and H1 would be rejected with a t-test value of **1**.8369. Gower shows no hidden relationship with a value of **0**.5491.

1b: The relationship between probability and 1b is even weak, with a t-test value of 1.5519. With this definition of perceived risk, the null hypothesis would be accepted and H2 would be rejected. Gower shows no hidden relationship, with a value of 0.5527.

Time

Max significance	0,05	Statistical test	Aggregate	d Risk	Importan	ce of loss	Probability of loss		
tCritical	2,0106	Statistical test	1a	1b	1a	1b	1a	1b	
		Gower	0,4173	0,3936	0,9109	0,9273	0,4236	0,4000	
Time		Correlation	0,3300	0,2610	0,2843	0,2156	0,2964	0,2353	
Time		P-value	0,0169	0,0617	0,0411	0,1248	0,0329	0,0931	
		t-test	2,4220	1,8731	2,0543	1,5295	2,1502	1,6776	

(Table 4.5, results for H1 and H2: Time risk)

Aggregated

1a: The relationship between aggregated time risk and 1a is relatively high, with a t-test value of 2.4220, above the tCritical value of 2.0106. The null hypothesis is therefore rejected and H1 is accepted. The p-value of 0.0169 gives high significance to the results.

1b: For 1b, the results are weaker, with a t-test value of 1.8731 and a p-value of 0.0617. In this case the null hypothesis is accepted and H2 is rejected. This is barely, where a maximum level of significance of <0.07, would accept H2 with a tCritical value of 1.8532. The Gower value of 0.3936 shows no hidden similarity.

Importance of Loss

1a: There is a disagreement between the Pearson correlation analysis and Gower on the relationship between importance and 1a. Gower shows an almost perfect relationship, with a value of 0.9109 and the correlation value shows a fairly weak relationship of 0.2843. The t-test value of 2.0543 is still just above the tCritical value and therefore the null hypothesis would be rejected and H1 would be accepted.

1b: Again is there a disagreement between the Pearson correlation analysis and Gower. According to the Pearson correlation analysis, the null hypothesis would be accepted and hypothesis 2 would be accepted, with a t-test value of 1.5295. But the Gower analysis shows an almost perfect relationship with a value of 0.9273, showing an even higher relationship than for 1a. In this case it is important to note that information

is missed by the Pearson correlation analysis because the respondent had a tendency of answering in the high end of the scale (see appendix 4).

Probability of Loss

1a: With probability of loss as a measurement method for perceived risk, the null hypothesis would be rejected and H1 would be accepted with a t-test value of 2.1502.

1b: The same is not the case for the relationship between probability and 1b. The t-test value of 1.6776 is below the tCritical value of 2.0106 and the null hypothesis would in this definition of perceived risk, be accepted and H2 would be rejected. The Gower value of 0.4000 is in line with the Pearson correlation analysis.

Physical

Max significance	0,05			Aggregated Risk		Importance of loss		Probability of loss		
tCritical	2,0106	Statistical test	1a		1b		1a	1b	1a	1b
		Gower		0,7267		0,6260	0,8655	0,7982	0,7982	0,7236
Dhysical		Correlation		0,5169		0,2691	0,6200	0,4299	0,3078	0,0797
Physical		P-value		0,0001		0,0537	0,0000	0,0015	0,0264	0,5741
		t-test		4,1835		1,9359	5,4747	3,2986	2,2417	0,5543

(Table 4.6, results for H1 and H2: Physical risk)

Aggregated

1a: The relationship between the aggregated physical risk and 1a is strong, with a t-test value of 4.1835 and with exceptional significance, showing a p-value of 0.0001. The null hypothesis is therefore rejected and hypothesis 1 is accepted.

1b: For 1b, the t-test value fails to climb above the tCritical value of 2.0106, with a t-test value of 1.9359. The null hypothesis is accepted and hypothesis 2 is rejected. The Gower value of 0.6260 is not high enough to accept H2 despite the Pearson correlation analysis. But with a maximum level of significance of <0.06, H2 would be accepted with a tCritical value of 1.9262.

Importance of Loss

1a: The relationship between importance and 1a is exceptionally strong, with a t-test value of 5.4747.

The chance for this result to have happen by chance is also very low, with a p-value of 0,000001. With importance as a measure of perceived risk, the null hypothesis would be rejected and hypothesis 1 would be accepted.

1b: 1b also shows a high correlation to importance, with a t-test value of 3.2986 and with a significance of 0.0015. Also in this case would the null hypothesis be rejected and H2 would be accepted.

1a: The relationship between probability and 1a is also relatively strong. The t-test value of 2.2417 is above the tCritical value of 2.0106 and hypothesis 1 is accepted.

1b: If perceived risk was to be measured as probability of loss, the null hypothesis for 1b would be rejected, with a low t-test value of 0.5543. The result cannot be considered significant, with a p-value of 0.5741. However there is some disagreement between Pearson and Gower which shows some similarity between results with a value of 0.7236. This is related to a relatively strong agreement between the respondents, who have answered within a short range in the 10 point scale (see appendix 5)

Security

Max significance	0,05	Statistical tast	Aggregate	ed Risk	Importan	ce of loss	Probability of loss		
tCritical	2,0106	Statistical test	1a	1b	1a	1b	1a	1b	
		Gower	0,7800	0,8364	0,3691	0,2945	0,7800	0,8364	
Coouritu		Correlation	0,4966	0,5098	0,0477	0,0095	0,4966	0,5098	
Security		P-value	0,0002	0,0001	0,7372	0,9466	0,0002	0,0001	
		t-test	3,9635	4,1056	0,3306	0,0660	3,9635	4,1056	

(Table 4.7, results for H1 and H2: Security risk)

Aggregated

1a: The relationship between 1a and aggregated security risk is high and with significance, with a t-test value of 3.9635 and a p-value of 0.0002. The null hypothesis is rejected and hypothesis 1 is accepted.

1b: The relationship is even higher between aggregated security risk and 1b, with a t-test value of 4.1056 and is highly significant with a p-value of 0.0001. The null hypothesis is therefore rejected and hypothesis 2 is accepted.

Importance of Loss

1a: This is not the case for the relationship between importance and 1a, where the t-test value is 0.3306. This is far below the tCritical value of 2.0106. The result cannot be said to be significant, with a p-value of 0.7372. The weak relationship is also in line with the Gower analysis, which shows almost no similarity with a value of 0.3691. Neither would result in an accepted hypothesis 1.

1b: 1b shows an even weaker relationship, with a t-test value of 0.0660 and a Gower value of 0.2945, with a low significance of 0.9466. Neither would result in an accepted hypothesis 1.

Probability of Loss

1a: The relationship between probability and 1a is exactly the same as the relationship between aggregated security risk and 1a. This is because of the respondent has tended to answer 0 for probability and 10 for importance, which together equals 0 (see appendix 5).

1b: The same is also the case for 1b, where the relationship is exactly the same as for aggregated.

Jource

Max significance	0,05	Statistical tast		Aggregate	d Risk	Importan	ce of loss	Probability of loss		
tCritical	2,0106	Statistical test	1a		1b	1a	1b	1a	1b	
		Gower		0,6215	0,6305	0,8255	0,8109	0,6582	0,6655	
Source		Correlation		0,3178	0,2789	0,5432	0,5626	0,1932	0,1487	
Source		P-value		0,0217	0,0453	0,0000	0,0000	0,1699	0,2926	
		t-test		2,3220	2,0119	4,4823	4,7152	1,3645	1,0421	

(Table 4.8, results for H1 and H2: Source risk)

Aggregated

1a: The relationship between aggregated source risk and 1a is relatively strong with a t-test value of 2.3220, which is above the tcritical value of 2.0106. The null hypothesis is therefore rejected and H1 is accepted.

1b: While the Pearson correlation analysis shows a weaker relationship for 1b than for 1a, H2 is still – although barely – accepted, with a t-test value of 2.0119.

Importance of Loss

1a: A much higher relationship can be seen for the relationship between importance and 1a, with a t-test value of 4.4823. In relation to this measurement method for perceived risk, the null hypothesis would be rejected and H1 would be accepted. The result is significant with a p-value of 0.00003.

1b: An even higher relationship can be seen between importance and 1b, with a t-test value of 4.7152. The result is highly significant, with a p-value of 0.00001. Also in this case the null hypothesis would be rejected and hypothesis 2 would be accepted.

Probability of Loss

1a: The Pearson correlation analysis shows no relationship with a t-test value of 1.3645, and with a value of 0.6582 Gower does not show similarity either. In this case hypothesis 1 would be rejected.

1b: The relationship is even weaker for 1b, with a t-test value of 1.0421. With a value of 0.6655, Gower is not enough to question the Pearson correlation analysis.

Privacy

Max significance	0,05	Statistical tast	A	Aggregated Risk			ce of loss	Probability of loss		
tCritical	2,0106	Statistical test	1a		1b	1a	1b	1a	1b	
		Gower		0,8213	0,7882	0,6709	0,6382	0,7582	0,7073	
		Correlation		0,6101	0,5538	0,4977	0,5065	0,3204	0,2474	
Privacy		P-value		0,0000	0,0000	0,0002	0,0001	0,0206	0,0770	
		t-test		5,3352	4,6079	3,9753	4,0700	2,3434	1,7690	

(Table 4.9, results for H1 and H2: Privacy risk)

Aggregated

1a: The relationship between aggregated source risk and 1a is exceptionally strong with a t-test value of 5.3352, far above the tcritical value of 2.0106. The result is also exceptionally significant; the probability for the result to have happened by chance is 0,000002 %. Leaving no doubt that the null hypothesis can be rejected and H1 is accepted.

1b: The relationship between aggregated source risk and 1b is also exceptionally strong, but not as strong as the relationship between aggregated source risk and 1a. The t-test value of 4.6079 is far above the tCritical value and the result is significant with a p-value of 0.00002. The null hypothesis can therefore be rejected and H2 is accepted.

Importance of Loss

1a: There is a weaker relationship between importance and 1a, than in relation to aggregated risk, but the relationship is still strong with a t-test value of 3.9753 with a significance value of 0.0002. With importance as the measurement for perceived risk, the null hypothesis is rejected and H1 is accepted.

1b: The relationship between importance and 1b are also strong, with a t-test value of 4.0700 and a p-value of 0.0001. Again, with importance as the measurement for perceived risk, the null hypothesis would be rejected and H2 would be accepted.

Probability of Loss

1a: The relationship between probability and 1a is weaker, but with a t-test value of 2.3434 the null hypothesis is rejected and H1 is accepted.

1b: The Pearson correlation analysis shows a weak relationship between probability and 1b, with a t-test value of 1.7690 and is below the tCritical value of 2.0106. While Gower shows a fairly low similarity with a value of 0.7073. With probability of loss as the definition of perceived risk, the null hypothesis would be accepted and H2 would be rejected.

Overview

In the following, I will present an overview of the acceptance and rejection of H1 and H2 in relation to the different risk dimensions. This overview will be given for aggregated risk, importance of loss and probability of loss, but it is important to note that it is only *aggregated risk* that can be considered a measure perceived risk and it is therefore only in relation to aggregated risk that there is an actual acceptance or rejection of the hypothesis.

Aggregated

Table 4.10 shows the results for aggregated risk and the risk dimensions, ranked according to what the sample perceives as the highest risk. The table also shows which of the risk dimensions where H1 and H2 can be accepted or has been rejected. The ranking of the risk dimensions is important, because the higher the risk dimension is ranked, the stronger the effect on a) visit the site for the first time and b) WOM, on the background of a lowering of that risk dimension.

Risk Dimension	Aggregated Risk	Hypothesis 1	Hypothesis 2
Performance	3,10	Accepted	Rejected
Physical	2,79	Accepted	Rejected
Privacy	2,61	Accepted	Accepted
Financial	2,57	Accepted	Rejected
Time	2,47	Accepted	Rejected
Source	1,73	Accepted	Accepted
Psychological	1,23	Rejected	Rejected
Social	1,05	Rejected	Rejected
Security	0,74	Accepted	Accepted

(Table 4.10, acceptance and rejections of H1 and H2: Aggregated risk)

Hypothesis 1

Hypothesis 1 has largely been accepted, but is rejected for social and psychological. These are interesting results, because for social and psychological risk, the results are slightly negatively correlated. Meaning that the lower people's perceived risk is for these risk dimensions, the higher their motivation to visit the site for the first time on the background of a reduction of that risk dimension. These results are surprising and the low rank for these risk dimensions is also surprising. We would expect these two risk dimensions to be ranked much higher in regards to buying clothes online, particularly for the sample, which has a special interest in clothes and obviously cares about how they look, both in relation to themselves and others. This will be discussed further in the discussion section.

Performance is associated with the highest perceived risk and a reduction of this risk dimension would therefore have a high effect of people's motivation to visit a site for the first time. Security, on the other

hand, has a very low perceived risk score and a further reduction of this risk dimension would not have a significant effect.

Hypothesis 2

It is important to note that hypothesis 1 is a condition for hypothesis 2, because people have to have visited a site before one can spread WOM about their experience. This can also be seen from table 4.1.1, where none of the risk dimensions accepted for H2, has been rejected for H1. For hypothesis 2, only three risk dimensions have been accepted; source, privacy and security risk. Privacy and security risk are accepted with exceptionally high significance. The commonalities for security and privacy are that they are both related to data, while the commonality for source, privacy and security risk is that they are all related to trust. In relation to ranking, privacy seem to have a medium high effect, source a medium effect and security a low to none effect on WOM.

It is interesting to note that physical, financial and time risk was almost accepted and with a maximum level of significance of <0.07 these risk dimensions would all be accepted, leaving performance, psychological and social risk as rejected, more in line with H1.

Importance

Risk Dimension	Importance	Hypothesis 1	Hypothesis 2
Security	9,98	Rejected	Rejected
Time	9,66	Accepted	Rejected
Performance	9,40	Accepted	Accepted
Financial	9,22	Accepted	Accepted
Psychological	8,62	Accepted	Rejected
Source	7,34	Accepted	Accepted
Social	6,50	Accepted	Accepted
Privacy	6,32	Accepted	Accepted
Physical	5,52	Accepted	Accepted

(Table 4.11, acceptance and rejections of H1 and H2: Importance)

Hypothesis 1

For importance has all of the risk dimensions, except security, been accepted with high significance. This is exceptional results and clearly shows that the there is a relationship between how important people perceive a risk dimension to be and how willing they are to visit a site, on the background of a reduction of that risk dimension. While it may seem odd that security as the highest ranked is the only one rejected, this is partially exactly why – only one respondent replied anything but 10 (and the response was a 9) – leaving almost no variance to correlate. As Gower did not demonstrate similarity, we however also know that while

the importance is rated very high, security is not considered strongly motivating to visiting a website by the sample.

Hypothesis 2

For the result collected for importance of loss, it can be seen that there is a close relationship between how important people perceive a risk dimension and their willingness to spread WOM, on the background of a reduction of that risk dimension. Security has been rejected, which also is in line with the low Gower value. Physiological and time are rejected according to the Pearson correlation analysis, but have however very high Gower values. This is because the Pearson correlation analysis measure variances and how the variances in the answers correlates between the two variables. The respondents have in this case responded in the high end of the scale, but occasionally in the lower end. This affects the Pearson correlation analysis a great deal. The Gower analysis shows the similarity of the responses between the two variables to such an extent that there is indeed an almost perfect relationship between the two variables, with a Gower value of 0.9273 for time and 0.8764 for psychological. All of the accepted risk dimensions have been accepted with exceptionally high significance (See appendix 4).

Probability

Risk Dimension	Probability	Hypothesis 1	Hypothesis 2
Physical	4,78	Accepted	Rejected
Privacy	4,04	Accepted	Rejected
Performance	3,26	Accepted	Rejected
Financial	2,76	Rejected	Rejected
Time	2,54	Accepted	Rejected
Source	2,26	Rejected	Rejected
Social	1,70	Rejected	Rejected
Psychological	1,52	Rejected	Rejected
Security	0,74	Accepted	Accepted

(Table 4.12, acceptance and rejections of H1 and H2: Probability)

Hypothesis 1

In regards to hypothesis 1, probability share commonalities with aggregated, but with fewer acceptances. The accepted risk dimensions lie in the high end of the scale, except security. As can be seen from table 4.12, these are physical, privacy, performance and time risk. Physical and time risk are the highest rated risk dimensions in regards to probability, but are the lowest rated risk dimensions in regards to importance. Similar to aggregated risk, there is fairly strong negative correlation to psychological and a very strong negative correlation to social risk.

Hypothesis 2

In regards to hypothesis 2, only security is accepted. Probability has a tendency to lie in the low end of the scale, with security as the lowest. In aggregate it seems that the probability component of risk, has no significant effect on respondents' WOM.

Max significance	0,0001	Performance	Psychological Social	Costal	Financial	Time	Dhusiaal	Co ouritu i	Courses	Duitana
tCritical	4,2435			Financiai	nme	Physical	Security	Source	Privacy	
Gower		0,9618	0,9200	0,8818	0,9382	0,9691	0,8745	0,9218	0,9273	0,9345
Correlation		0,5580	0,6177	0,6128	0,8684	0,8983	0,8056	0,9439	0,8598	0,9390
P-value		0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
t-test		4,6592	5,4423	5,3724	12,1344	14,1643	9,4208	19,8044	11,6667	18,9092

Result – H3

(Table 4.13, results H3)

Table 4.13 shows the results of a Gower and a Pearson Correlation analysis of the relationship between question 1a and 1b in part 2 of the survey for all of the risk dimensions. The maximum level of significance and the tCritical value can be seen in the upper left corner of the table. Because of the exceptional results, I have changed the maximum level of significance from <0.05 to <0.0001.

As can be seen from table 4.13, the calculated Pearson correlation value is exceptionally strong, where the lowest correlation value is for performance, psychological and social risk. The Gower analysis shows more stable result throughout the different risk dimension than the Pearson correlation analysis. In this case there is generally very high agreement.

All of the risk dimensions score a t-value higher than the tCritical value, where performance risk has the lowest score and security risk has the highest score. In this case Gower is an important measure, because as can be seen from the table, performance has the highest score in relation to a Gower analysis and therefore gives a more comprehensive picture of the findings. The exceptionally high Gower and t-test values means that the null hypothesis can be rejected and hypothesis 3 can be accepted.

The low p-values on all of the risk dimensions shows that the results are extremely unlikely to have happen by chance. This substantiates the results and gives credibility to the reliability of the findings.

The results are further substantiated through the results from question 1c, from part 2 of the survey. This question is constructed to add validity the findings, by making sure what was intended to be measured is being measured.

Table 4.14 shows the results for question 1a, 1b and 1c, from part 2 of the survey. As can be seen from the table there is an average of 75% of the respondent that answered "yes" to question 1c and there is a link between how high the respondent have answered in 1a and 1b and how high the percentage is in 1c. As

can be seen, the results are especially strong for performance, psychological, social and time risk, where 100% of the respondents have answered yes to question 1c. These strong results, substantiates and gives internal consistency to the findings.

Diele Dimensione	Part 2				
RISK DIMENSIONS	1a	1b	1c		
Performance	9,36	9,74	100%		
Psychological	8,62	9,38	100%		
Social	7,56	8,82	100%		
Financial	7,72	7,60	92%		
Time	8,88	9,14	100%		
Physical	5,44	6,42	76%		
Security	3,04	2,22	22%		
Source	5,74	5,62	58%		
Privacy	2,98	2,74	26%		
Average	6,59	6,85	75%		

(Table 4.14, results for 1a, 1b and 1c: Survey Part 2)

Discussion

In this section the results for hypothesis 1, 2 and 3 will be discussed. Starting out with a discussion of the significant result of H3 and what this means relative to H1 and H2. Because the results for H3 are so significantly true and should substantiate H1 and H2 to a degree, the validity and reliability of the findings for H1 and H2 will be subsequently explored. Starting out with discussing the results of H1 and H2 relative to aggregated risk and analyzing the results in regards to how the different risk dimensions influence each other. Because aggregated risk has given some surprising results, another critical look will be taken into the measurement method of perceived risk and whether actually reflects the content of the concept in question. Max and average, as two alternative ways of measuring perceived risk, have therefore been explored and correlations to 1a and 1b have been calculated to discuss and analyze if these alternative measures would be better for measuring perceived risk. The findings in regard to Importance of Loss and Probability of Loss will also be discussed and whether the measure of these two-components of perceived risk should be analyzed separately to understand the whole. To further explore validity flaws in the findings, a critical look into the way the survey is constructed and the way the questions were asked, will be taken; both to explore whether sampling error may have occurred through these and/or whether sampling error may have occurred through the choice of sample.

The findings for H1, H2 and H3 will then be discussed in relation to further research and managerial implications.

Hypothesis 3

Hypothesis 3 was accepted for all of the risk dimensions with exceptionally high significance. This establishes that the lowering of perceived risk has a significant positive effect on people's willingness to spread WOM and substantiated Zeba & Ganguli (2016) research, who found that WOM leads to the lowering of people's perceived risk. This means that the acceptance of hypothesis 3 establishes the circularity of WOM and perceived risk: the lowering of perceived risk leads to a positive feedback loop.

These findings also substantiates H1 and H2 because this tells us that there is a very strong correlation between people visiting the site on the background of risk reduction and their willingness to spread WOM when they have experienced the risk reduction for themselves. The effect is very strong for performance, psychological, social and time risk, which are the risk dimensions that rated highest for 1a and 1b and are the risk dimensions where 100% of the respondent answered yes to question 1c. The correlation is even stronger for security, privacy and source risk, but because these three risk dimensions are lowest rated in question 1a and 1b, the effect will be thereafter. Because H3 substantiates H1 and H2, the results and rating of the different risk dimensions would be expected to be in line with the findings for H3, but it only substantiates that there is a higher probability to visit the site for the first time on the background of a reduction of a risk dimension and that experiencing the risk reductions will lead to WOM, not if this is linked to how high an individual initially perceive a risk dimension and thereby the effect of the solution.

Hypothesis 1 and 2

Because the findings of H1 and H2 were expected to show results similar to H3, these results will be explored accordingly and explanations to the differences will be sought in the following.

Perceived Risk Measurement

In the following section the results in regards to aggregated risk will be discussed, and the explanations for the surprising results will be explored through the influencing effect the different risk dimensions have on each other. Aggregated risk as the best way to measure perceived risk will also be questioned and Importance of Loss, Probability of Loss, Max and Average risk will be discussed as they relate to the findings, as alternative measures of perceived risk.

Aggregated Risk

Measuring perceive risk as a two-component construct, comprised of importance of a loss and probability of a loss is necessary to see the full picture of perceived risk, but multiplying the two components with each other have given some surprising results, especially in the ranking of the risk dimensions (see table 4.10). The expectation was that psychological and social risk would be ranked where physical and privacy risk is ranked and vice versa, which would intuitively/by experience be how high clothing interest women who are moderate to heavy users would rank them.

Risk Dimension	Aggregated Risk	Hypothesis 1	Hypothesis 2
Performance	3,10	Accepted	Rejected
Physical	2,79	Accepted	Rejected
Privacy	2,61	Accepted	Accepted
Financial	2,57	Accepted	Rejected
Time	2,47	Accepted	Rejected
Source	1,73	Accepted	Accepted
Psychological	1,23	Rejected	Rejected
Social	1,05	Rejected	Rejected
Security	0,74	Accepted	Accepted

(Table 4.10, acceptance and rejections of H1 and H2; aggregated risk)

Considering the strength of the H3 results, it was also surprising that H2 was rejected for so many risk dimensions, with only privacy, source and security risk being accepted. But it is worth noting that if the maximum level of significance is increased to <0.07, three more risk dimensions can accept H2 and makes more sense in relation to which risk dimensions that have accepted H1. It is not normally acceptable research practice to just increase the maximum level of significance to get a hypothesis accepted and will not be done here, it can in this case however be argued to give a more truthful picture of the relationship between perceived risk and WOM, because testing for outliers demonstrated that if respondent 31 is

extracted, time and financial risk is accepted for H2 and if respondent 25 is extracted, physical risk is accepted as well. This means that only two respondents are responsible for the rejection of H2 for physical, financial and time risk. However even if respondents 31 and 25 are outliers in regards to the respective risk dimensions, they are not consistent outliers, like respondent 2, which was extracted from the research and is therefore not included in the findings.

This still means that H2 is rejected for physical, financial and time risk, but the above outlines why there is reason to assume that this coincidental and that a larger study would show that H2 for these risk dimensions would be accepted.

Risk Mitigation

Having discussed the surprising physical, financial and time risk results, this still leaves performance, social and psychological risk as rejected, which is also unexpected given the strong result from H3.

The most surprising and interesting findings for aggregated risk is related to psychological and social risk, both due to their low ranking and their fairly negative correlation to question 1a and 1b. H1 and H2 have been rejected for both, but the negative relationship tells us that the lower the perceived risk is for these risk dimensions, the higher the motivation for a) visit the site for the first time and b) spread WOM, on the background of a reduction of the risk dimension. This may seem counterintuitive, but can be explained through the level of risk mitigation an individual makes to lower specific risk factors. An example of this is information search or "involvement" and there are extensive studies that have found, with significant results, that there is a relationship between perceived risk and involvement (e.g., Chaudhuri, 2000, Dholakia, 2001, Hsu & Lee, 2003, from Chang & Wu, 2012). The higher a person perceives a risk dimension, the higher the involvement in information search, which lowers the person's perceived risk in relation to this risk factor (Zaichkowsky, 1985, from Chang & Wu, 2012). Consumers' start with an initial level of perceived risk and if this risk factor is considered relevant and important enough, this risk factor is lowered by mitigating perceived risk through information search. Consumers individually mitigate perceived risk to a smaller or larger extent, through the level of involvement. The higher the level of involvement in the decision making, the more accurate results and accurate results leads to customer satisfaction (Chang & Wu, 2012). But the process takes effort and time, time and effort they would rather save, which is why time risk is highly affected. The key is therefore accurate results with less time.

Information search lowers the *probability* of inaccurate results according to the importance of the risk factor. It can therefore be assumed that due to the wording of the survey, respondents have imagined that they implicitly do what they always do: decrease probability when it is important. In the case of

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psychological and social risk, the mitigating effect may be related to the *time* people have used in the searching process of finding just the right clothing piece. It is in this case worth noting that the question on perceived risk related to performance, psychological and social risk was asked in regards to the *delivered clothing piece* (see appendix 1), which gives them a chance to alter probability with information search. This is also substantiated by comments received in the data collecting process. One was surprised by the question related to psychological risk and probability, because when the clothing piece is delivered, she will know the clothing piece fits her style and wardrobe because she has spent time to ensure this.

Three other respondents said that they used a lot of time finding clothes that fit their need one way or another. This is further substantiated by the fact that time risk is a risk dimension rated high in importance, which in turn is related to the time it takes for them to find what they are looking for, time they would rather save. This effect may affect psychological and social risk to a great extent, both as far as their low ranking on aggregated perceived risk and their correlation to question 1a and 1b. This also makes sense considering the impression from surveying and talking to the respondents, where it was clear that how they felt in their clothes was important to them. The mitigating effect may be strongest for psychological and time risk, as the respondents may have rated social risk in regards to probability lower than what it truly is, because they want to be perceived as individualistic people whom choose their own style. Social risk may therefore have been reflected more by psychological risk: feeling good about their own appearance reflects how they feel socially. The fact that the same individual has answered in the high end of the scale under social risk in part 2, indicates that they in actual fact perceive this risk as higher. In this context it should also be noted that psychological and social risk are two sides of the same coin, because identity is dynamic in relation to a social group, which both needs to be preserved in relation to one self and the social group (Goffman, 1967).

Performance risk is also affected by the mitigating effect through time risk, but because this risk factor is not currently solved in the market, it mostly affects financial risk. Financial risk has also been rated relatively high, which is related to a company's return policy. A few of the women surveyed commented that they bought more than one size to be sure that they found the right fit the first time. The clothing that did not fit was returned. Because the sample has a special interest in clothing and are moderate to heavy users of online shopping (See appendix 3), they tend to be a group of people that includes a high level of information search when shopping clothes online and they mitigate performance, psychological and social risk, which affects time and financial risk. This is also substantiated by the results for H3, which documents the reaction to the lowering of the risk factors. Security is also rated high for importance and low for probability and because the survey is based on a Danish shopping site and because 70% of the respondents prefer shopping form a Danish shopping site (se appendix 2), the sample implicitly decrease security risk probability by shopping from a Danish shopping site because of the high business standard.

Conclusions on Aggregated risk

Involvement as a mitigating factor can explain much of the surprising results for aggregate risk and demonstrates the importance of measuring perceived risk as a two-component construct. But the surprising results and the difference in results from H3, still gives food for thought in relation to the question of whether perceived risk is best measured by calculating importance of loss and probability of loss with each other. This question remains, because the best way of measuring perceived risk has not been handled or explored at all in the literature. It is reasonable to assume that because perceived risk is deeply anchored in peoples' feelings and psychology, people do not think as an insurance agent, where importance of loss and probability of loss can be simply multiplied with one another. The problem with this construct is that it is just adopted from how a risk factor or expectation value is calculated. This makes sense in on the stock market or in an insurance company, but the question is if it really is the best way to find out how people perceive risk psychologically. Because of this, two alternative ways of how perceived risk could be measured are explored and findings are analyzed in regards to the two constructs.

Average

In relation to how perceived risk can be measured, it is still important to note that perceived risk *does* contain both the importance of a loss and the probability of a loss and by just using one of the two components, information will be lost. The question is therefore how they can be brought together. This may very well be by multiplying them with each other, but another way which may fit better with how people think, is to calculate the average between the two dimensions. The Pearson correlation analysis and Gower analysis can be seen in appendix 4 and the ranking of perceived risk in relation to average and the acceptance and rejections of H1 and H2 can be seen in table 5.1 below. The ranking of the risk dimensions fits better with my expectations on which risk dimension that would be rated highest in relation to online shopping for clothes, except the low ranking of psychological and social risk. But if we consider the mitigating effect time has on psychological and social risk, this is less surprising. Similarly psychological and social risk are rejected, which can again be explained through time risk as a mitigating factor. Performance is also rejected for H2, but if the maximum level of significance is increased to <0.055, H2 is accepted. This may therefore be a coincident and a larger study may show the acceptance of H2 in relation to performance risk.

Risk Dimension	Average	Hypothesis 1	Hypothesis 2
Performance	6,33	Accepted	Rejected
Time	6,10	Accepted	Accepted
Financial	5,99	Accepted	Accepted
Security	5,36	Accepted	Accepted
Privacy	5,18	Accepted	Accepted
Physical	5,15	Accepted	Accepted
Psychological	5,07	Rejected	Rejected
Source	4,80	Accepted	Accepted
Social	4,10	Rejected	Rejected

(Table 5.1, acceptance and rejections of H1 and H2: Average)

Max

The possibility that people perceive risk as Max has also been explored, meaning that the part of perceived risk that is perceived as highest between importance and probability, is how people perceive risk. In other words, if people perceive a risk dimension to be very important to them, it is this aspect that counts in how they perceive that risk dimensions and if people perceive the probability to be highest, this is the aspect that counts in how they perceive the risk dimension. This proposition is based upon the notion that the aspect in people's mind that is largest is the aspect that people think about and care about the most. As could be seen with involvement as a mitigating factor, a risk dimension of high importance is altered through probability.

The Pearson correlation analysis and Gower analysis can be seen in appendix 5 and the ranking of perceived risk in relation to Max and the acceptance and rejections of H1 and H2 can be seen in table 5.2 below. Except security, which is rated as the highest risk dimensions, the rating fits well with expectations, given that time risk is a strong mitigating factor of psychological, social and performance risk. Time and psychological risk are also rejected for H2, but because of a high Gower analysis (0.9273 for time risk and 0.8764 for psychological risk) this may be the result of a flaw in the Pearson Correlation analysis. Security risk, which is rejected for H1 and H2, showed almost no variance for Importance and therefore results in a weak relationship which is further substantiated by Gower showing no relationship. Except for these, all of the risk dimensions have been accepted with exceptionally high significance. The issue with using Max are however also demonstrated, as the numbers are almost exactly the same as for importance, and delving into which number is the maximum value, we unsurprisingly find that mostly max = importance.

Risk Dimension	Max	Hypothesis 1	Hypothesis 2
Security	9,98	Rejected	Rejected
Time	9,66	Accepted	Rejected
Performance	9,40	Accepted	Accepted
Financial	9,24	Accepted	Accepted
Psychological	8,62	Accepted	Rejected
Source	7,34	Accepted	Accepted
Privacy	6,80	Accepted	Accepted
Social	6,52	Accepted	Accepted
Physical	6,08	Accepted	Accepted

(Table 5.2, acceptance and rejections of H1 and H2: Max)

Importance of Loss

According to the findings, importance is the dominating factor in perceived risk and is clearly the factor that is closest correlated to people's motivation to visit a site and spread WOM, on the background of a reduction of the risk dimension, with exceptional significance. Importance is also in the high end of the scale, showing us that if the risk dimension is lowered, this would have a high effect on the relationship to question 1a and 1b, especially in regards to performance, time, financial and psychological risk. One of the reasons for the high score in importance may be that the risk factors that are especially important to the sample, has been correctly identified. With the exceptional results, it is tempting to ignore the fact that perceived risk is a two-component construct and do as other researchers have done and boil the two-component construct down to one. But in this case it is important to note that even with the obvious correlation, importance of loss is not perceived risk, only how important people perceive a risk dimension to be. This does not mean it is not valuable information that can be used by startups in selling clothes online, but it does not give us the whole picture on perceived risk. How important a risk factor is to an individual will affect to which degree the individual will alter the risk factor through the lowering of probability.

Risk Dimension	Importance	Hypothesis 1	Hypothesis 2
Security	9,98	Rejected	Rejected
Time	9,66	Accepted	Rejected
Performance	9,40	Accepted	Accepted
Financial	9,22	Accepted	Accepted
Psychological	8,62	Accepted	Rejected
Source	7,34	Accepted	Accepted
Social	6,50	Accepted	Accepted
Privacy	6,32	Accepted	Accepted
Physical	5,52	Accepted	Accepted

(Table 4.11, acceptance and rejections of H1 and H2: Importance)

For probability of loss, H1 and H2 are largely rejected, but as we learned from involvement as a mitigating factor, this is the part of the two-component construct that people can alter according to how important the risk factor is to the individual. Security risk can be altered by shopping from a Danish shopping site, which lowers the probability and psychological and social risk can be lowered by information search, which is why the probability of these risk factor are very low, which also may relate to source risk. Performance is medium-high because it is hard to guard against this risk factor in an online shopping context, because the fit and size problem has not been solved. Time is high because of the time the respondent use to lower performance, psychological and social risk. Physical and privacy risk is rated high for probability, which may be because people are becoming more and more aware of the lack of privacy online and the many toxins they are come in contact with every day, also through fabrics, but seems to accept this fact due to low importance.

Risk Dimension	Probability	Hypothesis 1	Hypothesis 2
Physical	4,78	Accepted	Rejected
Privacy	4,04	Accepted	Rejected
Performance	3,26	Accepted	Rejected
Financial	2,76	Rejected	Rejected
Time	2,54	Accepted	Rejected
Source	2,26	Rejected	Rejected
Social	1,70	Rejected	Rejected
Psychological	1,52	Rejected	Rejected
Security	0,74	Accepted	Accepted

(Table 4.12, acceptance and rejections of H1 and H2; probability)

Potential Measurement Errors

Parallel with importance of loss which has been rated in the high end of the scale, the respondents have had a tendency to answer in the lower end of the scale when it comes to probability. This means that potential measurement errors may have occurred in relation to the Pearson correlation analysis, which is why Gower is used as an additional measure that assure a high intern consistency to my findings.

Measuring perceived risk as a two-component construct is important to avoid potential measurement errors. But looking at aggregated risk in isolation does not give a comprehensive picture of perceived risk, the different risk dimension results needs to be analyzed with an eye to mitigating factors. Because risk dimensions are altered according to importance and regulated through probability, both dimensions needs to be analyzed separately as well as aggregated.

The Survey

The questions asked in the survey may have affected the mitigating effect for performance, psychological and social risk, where the question asked concern the *delivered clothing*. This means that some information is missed in the survey, as to what the respondents have done before purchase to make sure she will be happy with the delivered clothing piece. Actions performed to mitigate the importance and probability to performance, psychological and social risk, when delivered. According to Pires, Stanton, & Eckford (2004), perceived risk happens prior to information search and decision making. This has been taken into account by making an introduction that lead the respondent to imagine she is *about to* enter a Danish shopping site for the shopping of clothes. This may have been forgotten by respondents and information missed because of that.

The survey question related to physical risk, where respondents were asked about the importance and probability for the clothes to be produced without the use of harmful chemicals, may have resulted in a higher ranking of this risk dimension than what the respondent in reality perceive this risk to be. This is because "harmful chemicals" seem frightening and therefore the respondent may have answered higher than they would if they had been asked about the importance and probability for their skin to react negatively to the fabric of the clothes. This was considered when the questions were constructed, but because people's health can be affected by the chemicals without a skin reaction, this change was not implemented. More and more people are aware of the toxins that surround them, but it is still not something that is normal to go around thinking about. People still use hygiene products, buy clothes and eat food that is filled with toxins. People usually do not think of this before it is pointed out to them. This may be a problem in perceived risk research in general, because it is aspects of risk people do not really worry about in their everyday life, but when it is pointed out to them, they are reminded of the risk, which may result in a higher ranking of the risk than they in reality perceive the risk to be in their everyday life.

Only one risk factor was chosen for every risk dimension. The risk factor chosen is considered to be the most important risk factor for the respective risk dimension as far as online shopping for clothes is concerned. There are other risk factors related to the different risk dimensions and if these where included, the results may have been different. But to keep the research pertinent, only the most important and realistically solvable risk factors were included. For example performance risk related to the inability to touch and feel the product before ordering is an inherent attribute of online shopping and therefore not solvable.

Asking Questions

It is also relevant to consider if errors have occurred in the way the survey have been conducted and how the questions have been asked. Because perceived risk is individual and personal, the respondents may have trouble considering their answers in their own time when a researcher is standing in front of them. If the respondents have had the ability to take their time at home, they may have answered differently. The problem with this survey method, is that it would not have been possible to make sure the respondents had understood the question right and missed additional comments received in the surveying.

Limitations of Social Survey Design

To fully understand how the different risk dimensions influence each other and how the respondents mitigate perceived risk, more thorough research is needed in the form of in depth interviewing. This could be based on the clues received in the course of this survey, in the form of comments and the survey results. Interesting question in this regard is how financial and time risk affects performance, psychological and social risk and if (and why) physical and privacy risk seem overrated. Additional interviews have not been possible in this thesis, both due to time and resource restrictions but also because of the space limitations of a master thesis.

Perceived risk has shown itself to be a complicated research area, because it is a two-component construct which includes many risk dimensions and where some of these risk dimensions are overlapping. This means that to fully be able to understand how people perceive risk, it is also important to investigate the effect risk dimensions have on each other. Because perceived risk is deeply anchored in people's psychology, focusing solely on quantitative analysis will invariable miss valuable information.

Sample

The main characteristics of the sample is that they are individuals with a high interest in clothes and that they are medium to heavy users of online shopping for clothes and are therefore prospective customers of a website selling designer clothing. Their high level of experience ensures stable results, but their high interest may be the reason for a potential measurement error, because they tended to rate importance in the high end of the scale, which results in errors in the Pearson correlation analysis. On the other hand the high importance ratings could be because the risk factors identified were well chosen for their importance. Similarly the sample characteristics may have influenced how the respondents rated probability of loss, which they mostly rated as low. Because clothes and fashion is very important to these individuals, they have lowered probability due to a pronounced utilization of mitigation by using a lot of time before purchase to make sure risks are not actualized. This indicates that the sample is people that have a high level of involvement on their decision making for clothes purchases, to make the optimal choice and
according to Chang and Wu (2012) are therefore more likely to trust their choices and from there form positive beliefs in regard to the purchase decision. But this has affected how low the respondents have rated probability of loss in regards to psychological and social risk, which also affected the Pearson correlation analysis.

A sample where the respondents have a more normal relationship to clothes and fashion would show less involvement, which could result in fewer errors in the Pearson correlation analysis.

Generalizability

The generalizability of the study in the specifics is nominally fairly low; the sample is limited and specifically defined, but due to the strong results in regards to perceived risk \rightarrow WOM \rightarrow perceived risk, there is good reason to suspect that at a minimum the same phenomenon would be found in the broader population. In actual terms there are reasons to suspect that the results may be more generalizable than the specifics would lead us to believe. While the sample chosen are moderate to heavy users, the fairly low criteria of 1-5 purchases annually does not place them substantially out of the mainstream. Meanwhile this amount of purchases ensures that they are not too affected by singularly good or bad experiences. While that is more common for light users and a sample that more accurately included more of these users to reflect the population at large would certainly be affected by this, it would not make for more valid results in anything but the shortest term. As the wider populations' experience base grows, it would be expected that their perceived risk perception would emulate the sample. In a sense the generalizability of the study should grow over time. Either way, as finding respondents based upon the criteria was very easy - where the next potential respondent was found within minutes – it should be noted that women living up to the criteria are fairly common in Copenhagen, which makes generalizability more likely. That said, some eccentricities in the answers are to be expected, compared to people with a less extensive relationship to clothing. In particular "normal" people would probably not engage in the same extent of risk mitigation as the sample, spending hours to find just the right outfit. In this regard, the results are not, nor will they ever be fully generalizable.

As discussed, physical, time and financial risk was on the borderline to be accepted for aggregated risk in relation to H2 and performance risk was almost accepted for Average, also in regards to H2. For these risk dimensions, there is a strong indication that a larger sample would show acceptance of H2 and means that a sample of 50 has been insufficient. A larger sample would also be preferable for H3, but the exceptionally significant results make it extremely unlikely that it is not only true for the sample in question, but the total population as well.

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Further Research

This study has explored different aspects of perceived risk research, but further research is still needed to fully understand perceived risk, and how different risk dimensions influence each other through the mitigating effects people engage in to reduce risk. Most importantly perceived risk needs to be further explored as a two-component construct and integrate human psychology in investigating how perceived risk can be measured most accurately. This study indicates that aggregate risk is a good way to measure perceived risk, but that the results needs to be analyzed according to the strong mitigating effect information search has on perceived risk. Because indications of risk mitigation can be read out of how important an individual perceives a risk factor to be and affects probability, perceived risk should be analyzed both as aggregate risk and as the two components separately. While this study touched upon average and max as alternative measures, they and other possible ways to combine the components should be studied.

Perceived risk in regards to online shopping has rarely been explored in the literature. This is odd because in online shopping, perceived risk is the main determinant for consumer decision. Important moderating factors, such as product type and involvement has also been largely ignored, which affects perceived risk a great deal. Further research on the moderating factors affecting perceived risk in an online shopping context, is therefore sorely needed.

The results for questions 1a and 1b are as interesting as the results for H3, where the risk dimension ratings findings for 1a and 1b, was more in line with what is considered to be important risk factors in relation to online shopping for clothes, and therefore what was expected. The reason for this may be that when the risk factor is imagined lowered, the respondents stop imagining mitigating the risk beforehand. This way mitigating factors may have been extracted and the more pure perceived risk could have appeared. An interesting thought for further research is that perceived risk without the mitigating effect may be measured through measuring the effect of a lowering of the risk factor.

Managerial Implications

H3 was accepted with exceptionally significant results and showed that the lowering of perceived risk has a strong effect on WOM and that this effect is accelerating, meaning that as the customer base grows, the WOM effect will increase exponential. It is important to note that this effect will only actualize if a startup can live up to the lowered perceived risk allegations made for each risk dimensions in part 2 of the survey. According to the findings from part 2 of the survey, a startup will gain the most by focusing on making risk reductions solutions for performance, psychological, social, financial and time risk. These risk dimensions have a high influence on each other, where the focus on solving the fit and size problem would not only reduce performance risk, but also psychological, social, financial and time risk.

The results from aggregate risk did not give the strong results for H1 and H2 as for H3, but still showed relatively strong results, especially for H1, which strongly indicate that the lowering of perceived risk can attract new customers to a site and showed that this effect is especially strong for performance risk. The results from aggregated risk also gave insight into how the respondents individually mitigate perceived risk in the decision process. The sample showed a mitigating effect on both psychological, social and performance risk by using time to find the right product before they order. In this regard it is clear that people that have a high interest for clothes and fashion use a lot of time finding the right product, time they would rather save. The implication is therefore that startups should focus on constructing their site with effective search functions, to make it easier for their customer to find what they are looking for. It is in this context also important that the site provides a flawless user experience, without delays (Chaffey & Ellis-Chadwick, 2016). If the user feels a feeling of flow in the shopping process of flow, time risk is eliminated until order (Ibid.). In this case, time risk is only relevant in relation to delivering. Flawless and entertaining search function, where these search functions include: 1) finding the right size/fit, 2) finding the right style and 3) finding the right style within a social group. If this information is easy to find through user friendly and entertaining search functions, the experience may put the customer in a state of flow (Ibid.).

If the fit and size problem is solved, financial risk is also significantly lowered, provided that the customer has experienced the good fit for herself and trust the shopping site to provide the right fit for her every time. For the concerns new customers may have, online companies should therefore provide free return. But if the fit and size problem is solved, a free return policy would cost less than for other companies, because there will be fewer returns.

When customers start spreading WOM, source risk will automatically be lowered and will accelerate the effect even more. It is therefore not necessary to focus on source risk in itself, because if new customer

acquisition and WOM can be achieved through the above mentioned, source risk will automatically we lowered by the accelerating effect of WOM.

Because H3 showed the low accelerating effect of privacy and source risk and because of the high business standard, performing above the business standard is not necessary, including being connected to E-mærket or Trustpilot. But because privacy is rated relatively high for aggregate risk, showing the customer respect and information on what her data will be used for, would have a positive effect on the customer, which may lower source risk further. It is especially important not to perform *below* the business standard in relation to security and privacy, because it may lead to an accelerating negative WOM. Because Danish consumers expect Danish online shopping sites to be secure, realizing that it is not may provoke a strong negative reaction that is worth talking about.

Conclusion

Looking back to the research question:

Can the lowering of perceived risk lead to new customers and traction through WOM for Danish online clothes shopping startups?

It can be concluded that the results found through the survey strongly suggests that the lowering of perceived risk will lead to new customers and traction for Danish startups and that this effect is accelerating. It has been tested if the lowering of perceived risk leads to: H1) new customers, H2) word-of-mouth and H3) the accelerating effect of word-of-mouth.

The findings for H3 are exceptionally significant and documented an accelerating word-of-mouth effect on lowering perceived risk, which has great value for online businesses. The findings showed performance, psychological, social, financial and time risk to be the most critical risk dimensions to focus on, if a startup wants to achieve an accelerating positive word-of-mouth, based on the lowering of risk factors. It is important to note that these risk dimensions substantiate each other, where effective search functions which include the lowering of performance, psychological and social risk, would also lower time risk. The fit and size problem is considered to be the most critical risk factor in clothes shopping online and highly affects psychological and social risk. If the clothing piece is the right fit, the clothes look good on the wearer and makes the wearer feel good in the clothes. This further affects psychological risk, which leads to more confidence in a social context. Finding shows that the lowering of this risk factor has a strong effect on an accelerating word-of-mouth.

This effect is also detected from the findings for H1 and H2. But because aggregated risk gave surprising results, which did not aligned with the findings for H3, different aspects were investigated which could be the reason for the misalignment. The most important findings were how perceived risk is mitigated by people's rate of involvement in information search. With information search, individuals can alter the *probability* for ending up with the wrong product according to how *important* the risk factor is for the individual. Because especially performance, psychological and financial risk is of high importance in relation to online clothes shopping, the sample mitigated these risk factors, by altering the probability of ending up with a clothing piece they could not wear. In this process there is a "tradeoff" effect, where time risk is traded for performance, psychological and social risk by a high level of involvement in information search, which takes time. In regards to performance, a few of the respondents confided that they buy more than one size and then return the wrong sizes, which affects financial risk. Because the research sample was comprised of women with a high interest for clothes, this mitigating effect may be higher than for people with a more normal interest in clothes.

These findings substantiate the findings for H3 and show the importance of a focus on lowering these risk factors in parallel, which can be done by making information related to performance, psychological and social risk easy to find, through search functions. When lowering these risk factors lead to an accelerating word-of-mouth, there will be an automatic lowering of source risk, because of WOM. Regarding security and privacy risk, lowering these risk dimensions further will not have a large effect on new customer acquisition and traction through an accelerating word-of-mouth, because of the high business standard in Denmark.

It is important to note that the findings can only be generalized to the population from where the sample was taken and that the sample was mostly selected based on subjective criteria. The sample size is also limited to 50, which have given strong indication of correlation and/or similarity, but a larger sample would be preferable for a clearer picture. There are validity errors in just asking respondents on how they would respond to the lowering of a risk factor, because we cannot know if the respondent would react this way in real life. The results are still significant and strongly indicate that the lowering of perceived risk leads to new customers and WOM, and therefore deserves further research with a larger sample that can be generalized to the larger population.

Another validity error is connected to perceived risk research's lack of consistency on how to measure perceived risk, which in a large extent results in incomparability and/or conflict of findings between studies. A research article on perceived risk commonly start their literature review by defining perceived risk as a two-component construct, which consists of importance of loss and probability of loss, but when

measuring method is considered, the two-component construct is boiled down to a single component. Different literature includes different risk dimensions in their research, which makes it even harder to compare findings. Perceived risk also varies according to many factors, where product type, online/offline, country/culture, past experience and involvement are important factors to consider when measuring perceived risk. Because of the inconsistency in these variables, it has not been possible to use prior research as a guiding point to develop the survey questions. It has instead been necessary to explore the concept of perceived risk further and how it can be measured correctly. This study has measured perceived risk as the current definition of the concept says: as a two-component construct, which involves importance of loss and probability of loss. These two dimensions are measured separately and further multiplied, to find aggregated risk. Because measuring perceived risk this way, gave surprising results that did not aligned with the results for H3, results have been thoroughly analyzed in regards to potential validity and reliability errors. One error was detected in relation to the Pearson correlation analysis, an error that can occur if the respondents have a high level of agreement in their responds. This is because a Pearson correlation analysis measures if the variance in answer on one scale, fluctuates with the variance of another and does not take the relative level of the answers into consideration, and therefore misses relationships between variables. To heighten internal reliability, Gower values have been used as an additional correlation analysis, which measures the level of agreement between scales. Subsequently relationships not detected in the Pearson correlation analysis, have been detected in the Gower analysis. To further explore potential errors in the measure of perceived risk, a correlation analysis has been conducted on two potential ways of joining the two components of perceived risk: average and max, which have been discussed in relation to the results. Both average and max shows indications that these constructs are more in line with human psychology, than aggregated risk, which is the method normally used to calculate risk in industries like the insurance industry and the stock market.

More research is needed to understand perceived risk as a two-component construct and how these two components should be measured and analyzed. The findings for H1 and H2 shows the importance of measuring perceived risk as a two-component construct and how it should be analyzed in relation to the two components, to understand the results. Because perceived risk is a critical determinant in consumer's decision making in online shopping, further research on how perceived risk can best be measured as a two-component construct in relation to critical moderating factors, is therefore sorely needed to move perceived risk research further.

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Appendices

Appendix 1 – Survey Construct

Introduktion

0 a) Har du nogensinde handlet online?

- **0 b)** Har du nogensinde handlet *tøj* online?
- 0 c) Hvis ja, hvor tit handler du tøj online årligt?
- 0 d) Når du handler tøj online, hvor foretrækker du at virksomheden er fra?

Første Del

Gennem den første del af spørgeskemaet skal du forestille dig at du skal til at handle designer tøj fra et **dansk shopping site** som du aldrig har handlet med før.

Preformance

1 a) I en skala fra 0-10, hvor 10 er meget vigtigt og 0 er ikke vigtigt, hvor vigtigt er det at det leverede tøj passer dig i størrelse og pasform?

1 ab) I en skala fra 0-10, hvor 0 er 0% og 10 er 100 %, hvad tror du sandsynligheden er for at det leverede tøj passer dig i størrelse og pasform?

Psychological

2 a) I en skala fra 1-10, hvor 10 er meget vigtigt og 1 er ikke vigtigt, hvor vigtigt er det at det leverede tøj passer ind i din stil og garderobe?

2 ab) I en skala fra 0-10, hvor 0 er 0 % og 10 er 100 %, hvad tror du sandsynligheden er for at det leverede tøj vil passe ind i din stil og garderobe?

Social

3 a) Når du viser dine veninder dit nye tøj, hvor vigtigt er det at de kan li´ det, i en skala fra 1-10, hvor 10 er meget vigtigt og 1 er ikke vigtigt?

3 ab) I en skala fra 0-10, hvor 0 er 0 % og 10 er 100 %, hvad tror du sandsynligheden er for at dine veninder vil ku li' dit nye tøj?

Financial

4 a) I en skala fra 1-10, hvor 10 er meget vigtigt og 1 er ikke vigtigt, hvor vigtigt er nem og gratis returnering.

4 ab) I en skala fra 0-10, hvor 0 er 0 % og 10 er 100 %, hvad tror du sandsynligheden er for at du vil miste penge på returnering?

Time

5 b) I en skala fra 1-10, hvor 10 er meget vigtigt og 1 er ikke vigtigt, hvor vigtigt er det at du kan navigere nemt på sitet og hurtigt finde det du leder efter (produkt, information om produkt)?

5 ba) I en skala fra 0-10, hvor 0 er 0 % og 10 er 100 %, hvad tror du sandsynligheden er for at du kan navigere nemt rundt på sitet og hurtigt finde det du leder efter?

Physical

6 a) I en skala fra 1-10, hvor 10 er meget vigtigt og 1 er ikke vigtigt, hvor vigtigt er det at tøjet er produceret uden skadelige kemikalier?

6 ab) I en skala fra 0-10, hvor 0 er 0 % og 10 er 100 %, hvad tror du sandsynligheden er for at tøjet er produceret uden brug af skadelige kemikalier?

Security/transfer

7 a) I en skala fra 1-10, hvor 10 er meget vigtigt og 1 er ikke vigtigt, hvor vigtigt er det at dine finansielle data er godt beskyttet?

7 ab) I en skala fra 0-10, hvor 0 er 0 % og 10 er 100 %, hvad tror du sandsynligheden er for at dine finansielle data er godt beskyttet?

Source

8 a) I en skala fra 1-10, hvor 10 er meget vigtigt og 1 er ikke vigtigt, hvor vigtigt er virksomhedens rygte og troværdighed for at du føler dig tryg ved at handle med virksomheden?

8 ab) I en skala fra 0-10, hvor 0 er 0 % og 10 er 100 %, hvad tror du sandsynligheden er for at virksomheden har et dårligt rygte/er utroværdig?

Privacy

9 a) I en skala fra 1-10, hvor 10 er meget vigtigt og 1 er ikke vigtigt, hvor vigtigt er det at dine personlige dataikke bliver delt med tredje part?

9 ab) I en skala fra 0-10, hvor 0 er 0 % og 10 er 100 %, hvad tror du sandsynligheden er for at dine personlige data bliver delt med tredje part?

Anden Del

Preformance

A) En dansk startup sælger unikt designer tøj online og har lavet en innovation som gør det muligt at sikre sig at tøjet passer uden at man trænger at prøve tøjet først.

1a) Hvis du hørte eller læste om virksomhedens innovation, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er aldrig og 10 er helt sikkert?

1b) Hvis du selv oplevede at det virkede, hvad er sandsynligheden for at du vil fortælle dine venner om de,t i en skala fra 0-10, hvor 0 er aldrig og 10 er helt sikkert?

1c) Hvis du oplevet for dig selv at det leverede tøj havde det rigtige fit pga. innovationen, ville der være en højere sandsynlighed for at du vil fortælle dine venner om sitet hvis du har fundet sitet gennem en ven/bekendt?

Psychological

B) Den samme start-up har gjort det nemmere for dig at vælge tøj der passer ind i din øvrige stil og garderobe, så du nemmere kan finde tøj du vil ku lide.

1a) Hvis du hørte eller læste om at virksomheden havde et system til dette som virker, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er aldrig og 10 er helt sikkert?

1b) Hvis du selv oplevede at det virkede, hvad er sandsynligheden for at du vil fortælle dine venner om det i en skala fra 0-10, hvor 0 er aldrig og 10 er sikkert?

1c) Hvis du oplevede at systemet gjorde at du nemmere fandt tøj der passer ind i din stil og øvrige garderobe, ville der være en **højere** sandsynlighed for at du vil fortælle dine venner om sitet hvis du har fundet sitet gennem en ven/bekendt?

Social

C) Den samme start-up har gjort det nemmere for dig at vælge tøj der passer ind i en stil, så du nemmere kan finde tøj der passer ind i en stiltype (sporty, punk, nynordisk).

1a) Hvis du hørte eller læste om at virksomheden havde et system til dette som virker, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1b) Hvis du oplevede at systemet gjorde at du nemmere fandt tøj som andre synes du klæder, hvad er sandsynligheden for at du vil fortælle dine venner om det i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1c) Hvis du selv oplevede at det virkede, ville der være en **højere** sandsynlighed for at du vil fortælle dine venner om sitet hvis du har fundet sitet gennem en ven/bekendt?

Financial

D) Den samme startup garanterer at du ikke vil tabe penge på returnering af fejlkøb.

1a) Hvis du hørte eller læste om virksomhedens prisgennemsigtighed og garanti, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1b) Hvis du selv oplevede at det er rigtigt, hvad er sandsynligheden for at du vil fortælle dine venner om det i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1c) Hvis du oplevede for dig selv du aldrig tabte penge på fejlkøb eller via skjulte omkostninger, ville der være en **højere** sandsynlighed for at du vil fortælle dine venner om sitet hvis du har fundet sitet gennem en ven/bekendt?

Time

E) Forestil dig at online virksomheden har gjort det nemmere for dig at navigere på sitet så du hurtigere kan finde den rigtige farve, stil, størrelse og information.

1a) Hvis du hørte eller læste om at virksomheden præsterede på brugervenlighed og tidsbesparelse, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1b) Hvis du selv oplevede at du sparet spildtid ved at bruge sitet, hvad er sandsynligheden for at du vil fortælle dine venner om det i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1c) Hvis du oplevede for dig selv at du sparet spildtid ved at bruge sitet, ville der være en **højere** sandsynlighed for at du vil fortælle dine venner om sitet hvis du har fundet sitet gennem en ven/bekendt?

Physical

F) Det nye shopping site bruger kun tekstiler som er produceret i EU for at sikre at tøjet ikke indeholder skadelige stoffer og udbyder også økologisk tøj.

1a) Hvis du hørte eller læste dette om virksomheden, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1b) Hvis du selv oplevet at alt tøjet er lavet med tekstiler uden skadelige stoffer, hvad er sandsynligheden for at du vil fortælle dine venner om det i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1c) Hvis du oplevede for dig selv at tekstilerne var produceret i EU og at virksomheden også udbyder økologisk tøj, ville der være en **højere** sandsynlighed for at du vil fortælle dine venner om sitet hvis du har fundet sitet gennem en ven/bekendt?

Security/transfer

G) Forestil dig at dine finansielle data var sikrere hos denne virksomhed end hos en anden dansk virksomhed på grund af en firewall der bedre kan blokere for hackere.

1a) Hvis du hørte eller læste om denne innovation, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1b) Hvad er sandsynligheden for at du vil fortælle dine venner om sitet i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1c) Hvis du fik konstateret via brug af sitet at dine finansielle data var bedre sikret end noget andet sted, ville der være en **højere** sandsynlighed for at du vil fortælle dine venner om sitet hvis du har fundet sitet gennem en ven/bekendt?

Source

H) Den nye start-up er meget optaget af gennemsigtighed og fair handel og er derfor mærket med E-mærket og har en høj rating på trustpilot.

1a) Hvis du hørte eller læste at virksomheden præsterer på troværdighed, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1b) Hvis du selv oplevet virksomhedens troværdighed, hvad er sandsynligheden for at du vil fortælle dine venner om det i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1c) Hvis du oplever for dig selv at virksomheden er troværdig, ville der være en **højere** sandsynlighed for at du vil fortælle dine venner om sitet, hvis du har fundet sitet gennem en ven/bekendt?

Privacy

 Forestil dig at den nye startup gør mere end det der er påkrævet af den nye EU privatlivs lovgivning for at beskytte dine personlige oplysninger.

1a) Hvis du hørte eller læste om denne virksomheds privatlivs politik, hvad er sandsynligheden for at du vil prøve sitet i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1b) Hvis du selv oplevede at dine private oplysninger var bedre beskyttet end at andet site, hvad er sandsynligheden for at du vil fortælle dine venner om det i en skala fra 0-10, hvor 0 er 0 % og 10 er 100 % sikkert?

1c) Hvis du oplevede for dig selv at virksomheden gør mere end påkrævet af den nye EU privatlivs lovgivning for at beskytte dine personlige oplysninger, ville der være en **højere** sandsynlighed for at du vil fortælle dine venner om sitet, hvis du har fundet sitet gennem en ven/bekendt?

Appendix 2 - Answer-table

Introduction	
O a) Ja Nej	
0 b) Ja Nej	1a) 0 1 2 3 4 5 6 7 8 9 10
0 c) 0-1 1-5 5-10 10-15 15-20 >20	16) 0 1 2 3 4 5 6 7 8 9 10
0 d) DK EU Vesten Verden	
Part 1	1a) 0 1 2 3 4 5 6 7 8 9 10 1b) 0 1 2 3 4 5 6 7 8 0 10
Performance	
1a) 0 1 2 3 4 5 6 7 8 9 10	
1 ab) 0 1 2 3 4 5 6 7 8 9 10	Financial
Psychological	1a) 0 1 2 3 4 5 6 7 8 9 10
r_{3}	1b) $0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10$
2a) 012345078510	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
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3a 0 1 2 3 4 5 6 7 8 9 10	1a) 0 1 2 3 4 5 6 7 8 9 10 1b) 0 1 2 3 4 5 6 7 8 0 10
3ab) 0 1 2 3 4 5 6 7 8 9 10	
Financial	
4a) 0 1 2 3 4 5 6 7 8 9 10	Physical
4ab) 0 1 2 3 4 5 6 7 8 9 10	1a) $0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10$
	1b) 0 1 2 3 4 5 6 7 8 9 10
Time	$\frac{16}{16} = \frac{12}{16} = \frac{12}{16} = \frac{16}{16} = 16$
5a) 0 1 2 3 4 5 6 7 8 9 10	
5ab) 0 1 2 3 4 5 6 7 8 9 10	Security/transfer
,	1a) 0 1 2 3 4 5 6 7 8 9 10
Physical	1b) 0 1 2 3 4 5 6 7 8 9 10
6a) 0 1 2 3 4 5 6 7 8 9 10	1c) la Nei
6 ab) 0 1 2 3 4 5 6 7 8 9 10	
	Source
Securit <u>y/transfer</u>	1a) 0 1 2 3 4 5 6 7 8 9 10
7a) 0 1 2 3 4 5 6 7 8 9 10	1b) 0 1 2 3 4 5 6 7 8 9 10
7 ab) 0 1 2 3 4 5 6 7 8 9 10	1c) Ja Nej
Source	Privacy
8a) 0 1 2 3 4 5 6 7 8 9 10	1a) 0 1 2 3 4 5 6 7 8 9 10
8 ab) 0 1 2 3 4 5 6 7 8 9 10	1b) 0 1 2 3 4 5 6 7 8 9 10
	1c) Ja Ne
Privacy	
9a) 0 1 2 3 4 5 6 7 8 9 10	
9 ab) 0 1 2 3 4 5 6 7 8 9 10	
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Part 2	
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Appendix 3 - Results for Introduction

Question	Yes	No
0 a)	100%	0%
0 b)	100%	0%

Question	0-1 times	1-5 times	5-10 times	10-15 times	15-20 times	>20 times	
0 c)	0%	20%	50%	26,00%	4%	0%	

Question	Denmark	EU	Western world	World
0 d)	70%	28%	2%	0%

Appendix 4 - Results for Perceived Risk Measure

Risk Dimension	Importance	Probability	Aggregated Risk	Average	Max
Performance	9,40	3,26	3,10	6,33	9,40
Psychological	8,62	1,52	1,23	5,07	8,62
Social	6,50	1,70	1,05	4,10	6,52
Financial	9,22	2,76	2,57	5,99	9,24
Time	9,66	2,54	2,47	6,10	9,66
Physical	5,52	4,78	2,79	5,15	6,08
Security	9,98	0,74	0,74	5,36	9,98
Source	7,34	2,26	1,73	4,80	7,34
Privacy	6,32	4,04	2,61	5,18	6,80
Average	8,06	2,62	2,03	5,34	8,18

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Level of significance	0,05	Analysis	Impo	rtance	Proba	ability	Aggre	geret	Ave	rage	М	ax	1a
tCritical	2,010635	Allalysis	1a	1b	1a	1b	1a	1b	1a	1b	1a	1b	1b
		Gower	0,9455	0,9473	0,4455	0,4109	0,4309	0,3964	0,7245	0,6900	0,9455	0,9473	0,9618
Deuferman	Correlation	0,4221	0,3053	0,2992	0,1696	0,3393	0,1961	0,4307	0,2774	0,4221	0,3053	0,5580	
Performance		P-value	0,0018	0,0277	0,0312	0,2295	0,0139	0,1636	0,0014	0,0465	0,0018	0,0277	0,0000
		t	3,2255	2,2213	2,1723	1,1920	2,4986	1,3852	3,3061	2,0005	3,2255	2,2213	4,6592
		Gower	0,9164	0,8764	0,3545	0,2855	0,3280	0,2589	0,6773	0,6082	0,9164	0,8764	0,9200
Brychological		Correlation	0,3557	0,1547	-0,2591	-0,1846	-0,1649	-0,1083	0,1243	-0,0069	0,3557	0,1547	0,6177
rsychological		P-value	0,0097	0,2736	0,0636	0,1901	0,2427	0,4448	0,3798	0,9611	0,0097	0,2736	0,0000
		t	2,6368	1,0845	-1,8585	-1,3016	-1,1585	-0,7546	0,8682	-0,0481	2,6368	1,0845	5,4423
		Gower	0,8745	0,7818	0,4600	0,3527	0,4085	0,2940	0,6800	0,5709	0,8727	0,7836	0,8818
Social		Correlation	0,4306	0,4371	-0,4789	-0,4384	-0,1513	-0,0937	0,1951	0,2230	0,4093	0,4165	0,6128
SUCIAI		P-value	0,0014	0,0012	0,0003	0,0012	0,2842	0,5087	0,1657	0,1120	0,0026	0,0021	0,0000
		t	3,3055	3,3670	-3,7794	-3,3793	-1,0606	-0,6522	1,3783	1,5850	3,1080	3,1743	5,3724
		Gower	0,8418	0,8382	0,5491	0,5527	0,5315	0,5424	0,7973	0,7955	0,8436	0,8364	0,9382
Financial		Correlation	0,4985	0,5114	0,2563	0,2186	0,2910	0,2768	0,4476	0,4214	0,5133	0,5128	0,8684
Fillanciai		P-value	0,0002	0,0001	0,0667	0,1195	0,0364	0,0470	0,0009	0,0019	0,0001	0,0001	0,0000
		t	3,9840	4,1227	1,8369	1,5519	2,1071	1,9956	3,4677	3,2197	4,1433	4,1383	12,1344
		Gower	0,9109	0,9273	0,4236	0,4000	0,4173	0,3936	0,7236	0,7091	0,9109	0,9273	0,9691
Time		Correlation	0,2843	0,2156	0,2964	0,2353	0,3300	0,2610	0,3591	0,2793	0,2843	0,2156	0,8983
iiiie		P-value	0,0411	0,1248	0,0329	0,0931	0,0169	0,0617	0,0089	0,0449	0,0411	0,1248	0,0000
		t	2,0543	1,5295	2,1502	1,6776	2,4220	1,8731	2,6660	2,0152	2,0543	1,5295	14,1643
		Gower	0,8655	0,7982	0,7982	0,7236	0,7267	0,6260	0,8464	0,7609	0,8618	0,8200	0,8745
Physical		Correlation	0,6200	0,4299	0,3078	0,0797	0,5169	0,2691	0,5852	0,3371	0,6768	0,4642	0,8056
Filysical		P-value	0,0000	0,0015	0,0264	0,5741	0,0001	0,0537	0,0000	0,0145	0,0000	0,0005	0,0000
		t	5,4747	3,2986	2,2417	0,5543	4,1835	1,9359	4,9995	2,4803	6,3687	3,6314	9,4208
		Gower	0,3691	0,2945	0,7800	0,8364	0,7800	0,8364	0,6873	0,6164	0,3691	0,2945	0,9218
Security		Correlation	0,0477	0,0095	0,4966	0,5098	0,4966	0,5098	0,4926	0,5008	0,0477	0,0095	0,9439
		P-value	0,7372	0,9466	0,0002	0,0001	0,0002	0,0001	0,0002	0,0002	0,7372	0,9466	0,0000
		t	0,3306	0,0660	3,9635	4,1056	3,9635	4,1056	3,9219	4,0085	0,3306	0,0660	19,8044
Source		Gower	0,8255	0,8109	0,6582	0,6655	0,6215	0,6305	0,8418	0,8291	0,8255	0,8109	0,9273
		Correlation	0,5432	0,5626	0,1932	0,1487	0,3178	0,2789	0,4854	0,4777	0,5432	0,5626	0,8598
		P-value	0,0000	0,0000	0,1699	0,2926	0,0217	0,0453	0,0003	0,0003	0,0000	0,0000	0,0000
		t	4,4823	4,7152	1,3645	1,0421	2,3220	2,0119	3,8463	3,7669	4,4823	4,7152	11,6667
		Gower	0,6709	0,6382	0,7582	0,7073	0,8213	0,7882	0,7400	0,6964	0,6382	0,6055	0,9345
Privacy		Correlation	0,4977	0,5065	0,3204	0,2474	0,6101	0,5538	0,5605	0,5236	0,4560	0,4503	0,9390
Filvaly		P-value	0,0002	0,0001	0,0206	0,0770	0,0000	0,0000	0,0000	0,0001	0,0007	0,0008	0,0000
		t	3,9753	4,0700	2,3434	1,7690	5,3352	4,6079	4,6892	4,2574	3,5500	3,4937	18,9092