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Growing by Exciting: A Study of the Effects of Perceived Firm Innovativeness on Customer Satisfaction, Customer Loyalty, and Firm Performance

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Preface

This master thesis is one of a series of papers and reports published by the Center for Service Innovation (CSI). Center for Service Innovation (CSI) is a coordinated effort by NHH to focus on the innovation challenges facing the service sector and involves 15 business and academic partners. It aims to increase the quality, efficiency and commercial success of service innovations and to enhance the innovation capabilities of its business and academic partners. CSI is funded through a significant eight year grant from the Research Council of Norway and has recently obtained status as a Centre for Research-based Innovation (SFI).

Abstract

Today's increasing focus on innovation in competing for the customers' attention, has become a highly relevant research topic. Yet most research has focused on customer satisfaction as the most important antecedent of loyalty, and that customer loyalty is a main indicator of enduring firm performance. Thus, previous research has only minimally considered the role of perceived firm innovativeness in relation to firm performance. In addition, most previous researchers have focused on innovativeness from a firm-based view. Consequently, the customer's point of view, which is crucial for innovation efforts to succeed, is neglected, and there is scarce knowledge about how customers' perceptions of the innovativeness of the firm can affect firm performance through the mediating factors of customer satisfaction and loyalty. Therefore, the goal of this study is to examine the way perceived firm innovativeness affects firm performance which is a part of the profitability picture, through the mediating effects of customer satisfaction and customer loyalty. Thereby, we aim to fill a gap within the field of innovativeness and firm performance.

After establishing a theoretical model with the prescribed relationships, we conducted a multiple-source secondary data study by using the respective indexes the Norwegian Innovation Index (NII) and the Norwegian Customer Barometer (NCB), in addition to financial data from annual reports and the Norwegian business finder service Proff. After analysing the respective variables by using the Hierarchical Linear Regression and Process Macro, we found that perceived firm innovativeness affects firm performance through the mediating effects of customer satisfaction and loyalty. We also found that perceived firm innovativeness has a stronger effect on customer loyalty than customer satisfaction has on loyalty, challenging the established theory that emphasises satisfaction as the most important antecedent of loyalty.

Keywords: Perceived Firm Innovativeness, Customer Satisfaction/Quality, Customer Loyalty, Firm Performance, Income Growth.

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This master thesis is a requirement for the MSc in Economics and Business Administration programme at the Norwegian School of Economics (NHH). Our majors are in Marketing and Brand Management (MBM) and Business Analysis and Performance Management (BUS).

Innovation, customer satisfaction, loyalty and firm performance are topics that highly interest us; therefore, we feel honoured to have been a part of the research project between the NHH and Bekk Consulting AS (Bekk) regarding how perceived firm innovativeness may affect firm performance through customer satisfaction and loyalty. Studying a topic as important as innovation and firm performance has been rewarding, exciting and extremely educational.

Writing this thesis has been an unpredictable and inspiring journey, and it also marks the end of our studies at NHH.

We certainly would not have been able to achieve this without support. First, we would like to express our gratitude to Seidali Kurtmollaiev for supervising us in this process. His guidance, expertise and engagement in this project have been paramount to us. We highly appreciate his close cooperation, constructive feedback and discussion, all of which challenged us to think critically. Second, we would like to thank Bekk providing us with the initial dataset. Here, we want to thank Arne Tjora and Stian Daazenko from Bekk who gave us guidelines to collect the data. Third, we would like to thank The Center for Service Innovation (CSI) for letting us be a part of this project and providing us with the necessary resources to conduct this research. Moreover, we would like to thank the CSI for funding the research project and for helping us communicating with Bekk.

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1. Introduction

1.1. Background

In today's market, companies are faced with high requirements to create a competitive advantage (Aarrestad & Hem, 2008) and a common objective for most companies is maintaining profitable operations (Thoresen & Skøien, 2013). Here, focusing on the customers is essential because customers create profitability for a firm (Lem, 2010). Thus, the income of a company depends on the customers, and especially loyal ones which are the foundation for future success, the key driver for long-term performance and an important aspect in maximising profitability (Selnes, 2002; Rousler, u.d, Murphy & Murphy, 2002). Moreover, loyal customers are more likely to spread positive word of mouth and recommend a brand to others and to increase the repurchase rate, which have major effects on the customer's lifetime value (Silseth, 2016; Rousler, u.d.; Murphy & Murphy, 2002; Donkers, Verhoef & de Jong, 2007). Furthermore, in today's market, because of the development of technology and increased expectations and competition, customers may be more loyal towards innovative companies (Kurtmollaiev, Lervik-Olsen & Andreassen, 2018). However, when customers have several different products and services to choose from, customers may not stay loyal if the company does not satisfy their needs. Therefore, customer satisfaction may also be an essential piece of the total profitability picture, and empirically, it has been emphasised as the most important antecedent of loyalty (Nyhus, 2014; Silseth, 2016; Samuelsen, Silseth, Lorentzen & Lervik-Olsen, 2007b).

An important question remains regarding how companies can keep customers satisfied to exploit the positive effects of satisfied and loyal customers. This is a major concern and may be more difficult to achieve in today's rapidly moving market because what companies have done before to succeed does not necessary lead to success now or in the future (Thoresen & Skøien, 2013). This illustrates the importance of companies being open to renewing themselves, and especially with the digital transformation, the value of innovation is increasing. According to an annual global survey by the Boston Consulting Group, 79% of the respondents ranked innovation as either the highest priority or a top three priority in their companies (Ringel, Taylor, & Zablit, 2015). Furthermore, a growing number of enterprises are facing more threats. This can be because of other companies better exploiting the changes

in technology, customer behaviour or the availability of data information to create innovative, customer-friendly alternatives to the products and services that incumbents offer (D'Emidio, Dorton & Duncan, 2015). Thus, innovation is crucial and on the companies' agenda. However, although there are several underlying motives for innovating, the common goal for all of them is to contribute to increasing the customer's individual welfare – directly or indirectly – to improve the company's finances and to make profitable returns on the company's innovation investments (Kurtmollaiev et al., 2018; Norheim, 2018; Andreassen, 2018; Einarsen, 2018; Madsen, 2003). As the competition tightens, companies are innovating intensely to increase profits, as noted, '*innovation that results in the acquisition of new customers and the retention of existing ones is imperative in most organizations'* (Kunz, Schmitt & Meyer, 2010, p. 816; Wilke & Sorvillo, 2005).

However, companies often have an internal approach towards innovations, focusing on high quality, improvements in their market offerings or bringing their costs down. Companies, though, rarely consider the customers' perspective and their perceptions of the company's innovation activities (Kurtmollaiev et al., 2018). Evidently, it is becoming more clear that consumers fail to buy products that companies expect them to adopt; studies show that most innovations fail during the first three years (Wilke & Sorvillo, 2005). The reason why consumers fail to adopt these innovations may not necessarily be because of the economic value of the physical products but may be explained as being *'more in the minds of people'* and a more psychological process (Gourville, 2006, p. 10). Gourville (2006, p. 10) describes further, until businesses understand these underlying psychological factors and '*respond to the psychological biases that both consumers and executives bring to decision making'*, the *'new products will continue to fail*'.

To make innovation efforts successful in the market, it is important for companies to apply an approach in their innovation efforts that is consistent with the market's needs and desires. By companies using an internal approach towards innovations, the customers' perceptions are given minimal attention, and this may lead to a mismatch between the customers' and the firm's perceptions of innovativeness (Kurtmollaiev et al., 2018). Especially, with the customers operating as the final judge of whether the companies' innovations succeed or fail in the market, the customers point of view should be given extensive focus. Indeed, the customers' perceived firm innovativeness is a function of the company's overall activities, and based on the enduring innovations efforts of a firm, not solely on a firm's one-time action

(Kunz et al, 2010). Therefore, a more continuous and external marketing-based view with a customer-centric perspective considering innovations is essential, rather than an internal and solely economical one (Wilke & Sorvillo, 2005), to change the customers perceived firm innovativeness.

Innovating by using a continuous and customer-centric approach may create a win-win situation where the customers get increased benefits from adopting new products while the companies enjoy the benefits of improved firm performance. Furthermore, companies seen as creative and innovative may appear as the preferable option relative to other competitors in the market, thus, attract and retain customers more easily (Kurtmollaiev et al., 2018). Moreover, in today's globalised market, where the customers are faced with countless offers, the need for companies to differentiate themselves through innovations is even more important in order to be noticed and attractive in the market (Kunz et al., 2010). Further, innovations create excitement and feelings, which is crucial in bringing customers into a long-term relationship with the company (Lervik-Olsen, Kurtmollaiev & Andreassen, 2016).

Currently, the world is devloping faster than ever. Landlines are fading out, and new technologies are being introduced and used, opening the way for new types of competitors to enter the market and more rivalry to arise in different industries. Disruptive innovations challenge existing businesses by capturing market shares when customers start adopting the new entrants' offerings, driving down prices and putting pressure on the margins of existing companies (Christensen, Raynor & McDonald, 2015). To keep income and performance at a certain level and to grow and survive in the market, companies' ability to innovate and renew themselves successfully requires looking at the future customers' needs and desires. In Norway, we have seen these tendencies being stronger than ever (Norheim, 2018). However, innovation requires a lot of effort and investments with no guarantee of success. In the end, the customers' perceived firm innovativeness, their level of satisfaction and loyalty may be important for firm performance and future success, making the customer perspective essential to investigate. By combining marketing and business analytic perspectives, we can look at both the customer side and the financial side, which are both crucial and need to be aligned to create enduring and successful innovations.

1.2 Research Question and Purpose

The purpose of the current research project is to investigate how customers' perceived firm innovativeness may affect a firm's performance, which will be done in the context of the Norwegian market. To analyse this relationship, we check if perceived firm innovativeness impacts firm performance through other variables – namely customer satisfaction and loyalty – which are established concepts in the marketing literature. However, although there have been multiple studies researching and building the link between customer satisfaction, loyalty and profitability (Silseth, 2016; Cho & Pucik, 2005), the question of how perceived firm innovativeness affects firm performance and how innovativeness may be a factor in explaining customer satisfaction and loyalty have not been examined in detail. This lead us to the following research question:

> *RQ: 'How do perceived firm innovativeness, customer satisfaction and loyalty affect firm performance?'*

We aim to further investigate the impact of perceived firm innovativeness on customer satisfaction, loyalty and firm performance and the mediating factors in this relationship. By taking a customer perspective instead of a firm-based view, we strive to obtain deeper knowledge about the link between the customers' perceptions of the firm's innovation efforts and the subsequent effects this has on customer satisfaction and loyalty on a more detailed and differentiated level. By investigating these possible relationships, we wish to contribute with new insights in the ongoing discussion within this field of research.

1.3. Boundaries of The Thesis

In the present research, we focus on available data from a selection of companies that span two years. Furthermore, only the largest and leading companies within each industry are included, based on the research conducted to develop the Norwegian Innovation Index (NII) and the Norwegian Customer Barometer (NCB). The companies included are – to a certain extent – nationwide, and together, they account for about 70% of industry turnover on a national basis (with some exceptions). Further, the current research is based on the Norwegian market and uses perceptions and data based on Norwegian customers.

1.4. Structure of the Thesis

The thesis comprises seven chapters. In chapter 2, the theoretical framework for developing the research model and hypotheses is presented. A thorough explanation of the concept of firm performance, customer loyalty and satisfaction are provided before looking at perceived firm innovativeness and how these constructs of interest have been linked together in previous research.

Chapter 3 presents our proposed research model and accompanying hypotheses. The research methods used are discussed in chapter 4, and the results of the empirical analyses and hypotheses tests are presented in chapter 5, including a presentation of the main results. In chapter 6, the theoretical and managerial implications are provided. In addition, an assessment of the validity, reliability and general limitations are provided in chapter 7, as well as directions for future research and an overall conclusion of the current study.

To clarify, the terms ‘customer’ and ‘consumer’ and ‘firm size’ and ‘employees’ are used interchangeably throughout the paper with no variation in their meaning.

2. Theoretical Perspectives

In this section, we focus on our constructs of interest: firm performance, customer loyalty, customer satisfaction and perceived firm innovativeness. Throughout this chapter, we emphasise the relevance of these variables and what is interesting about them, relevant previous research and criticism of existing models used to explain these constructs. Based on these theoretical perspectives, we present our constructed research model and formulated hypotheses.

2.1 Firm Performance

Firm performance is related to the term 'profitability', which is composed of two words, namely, profit and ability (Tulsian, 2014). The term profit is exceeding the selling price of goods over their cost and the term ability *'indicates the power of a business entity to earn profits'* (Tulsian, 2014, p. 19). The ability of a firm also denotes its earning power or operating performance. Therefore, the profitability can be defined as the ability of a given investment to earn a return from its use. Based on this definition, firm performance and profitability are closely related to each other. Thus, even though some of the previous research measures only profitability, we still think it is relevant and interesting to look at this research because the results can give insights and be comparable to some degree.

Further, profitability consists of both an income and a cost side. Income is one of the main indicators for firm performance, and in most cases, it is the only component of the profitability picture that reflects the customer's behaviour. Thus, income directly depends on customers. Value creation in a company equals the value of goods and services sold within a certain period of time (Hoff, 2013). Hence, customers impact income by affecting volume and prices, so it is natural to look more at the income perspective. In addition, because income is an important component of firm performance, we can use income as an indicator for firm performance.

2.1.1 What Impacts Firm Performance

From an economic perspective, one factor affecting income and firm performance is the interests of assets, such as bank deposits (Visma, u.d.a). In addition, the income size is also affected by the number of products sold and the price of the products and services of the company (Edholm, 2017). Thus, a higher income could be the result of customers buying an increased volume of either existing or new products and services and/or paying a higher price for these products and services. Although the customers do not set the price directly, their willingness to pay is reflected in the prices that the company sets. Furthermore, what the customers are willing to pay depends on how they evaluate the company's offerings relative to other competitors and substitutes; thus, customers can indirectly influence what companies charge for their products and services. The price also depends on the company's position in the market and the competitive landscape, meaning that more and stronger rivalries in the industry are external forces that may lead to a reduction in prices and margins (Besanko, Dranove, Shanley & Schaefer, 2013). This is something that customers do not have a direct impact on, other than the fact that they can evaluate one company's products and services as being superior to other competitors and continue to buy one company's products, even at a higher price. If the company is not able to increase the demand with a reduction in price, it will result in a reduction in income.

This illustrates how companies are in a continuous battle to gain customers' attention in a competitive market. Customers in today's market are met with countless offers from different providers, and a company's performance in the market depends on their ability to attract and retain customers. Therefore, the importance of innovations to differentiate themselves from other competitors is on the rise in today's market (Kunz et al., 2010). Furthermore, most companies name innovation as one of their top three priorities (Ringel, Taylor, & Zablit, 2015). Therefore, companies are conducting continuous innovation efforts to attract and retain customers, the common goal of which is to increase the customer's individual welfare, directly or indirectly, and to improve the company's finances by making profitable returns on their innovation investments (Kurtmollaiev et al., 2018; Norheim, 2018; Andreassen, 2018; Einarsen, 2018; Madsen, 2003).

This shows the importance of innovation for firm performance and it is therefore essential to define innovation in this context. Because this thesis was done in collaboration with the CSI,

it is natural to base the definition of innovation on the same interpretation as the CSI, which is based on Schumpeter's definition of innovation. According to Schumpeter (1934), an innovation *'is a new idea that is commercialized'* (Lervik-Olsen et al., 2016, p.1). The definition does not put similarities between research and development (R&D) attempts and innovations or between inventions and innovations, which are two of the reasons why we are using this specific interpretation. Schumpeter's definition emphasises the fact that to be an innovation, a new idea must have been launched and seen by customers. That is, *'the new idea must lead to a noticeable change in a customer experience'* (Lervik-Olsen et al., 2016, p. 1; Andreassen & Lervik-Olsen, 2016).

Furthermore, a company's income and firm performance fluctuates with the customers' desires to adopt the company's product, their desires to buy more or less and/or their willingness to pay for the product. This is related to how the customers view the product or service and how satisfied and loyal they are with the company and what the company is offering. Based on this, it is interesting to look at what impacts a customer's decisions to adopt a company's products or services. There are a number of factors that can influence customers' purchasing decisions, and thus affect income. For instance, the competitiveness and rivalry explained above can press margins and limit the income for companies; also, the state of the economy can affect income because it impacts the customers' purchasing power. Furthermore, it may also be political or sustainability factors associated with a brand, product or service that may impact consumers' willingness to adopt a product. Indeed, no matter the cause for a customer buying a product, empirically, customer loyalty been emphasised as the key indicator for firm performance (Lervik-Olsen et al., 2016; Silseth, 2016). This leads us to our second construct of interest: customer loyalty.

2.2 Customer Loyalty

Customer loyalty is an expression of a customer's expected behaviour and thus relates to how a business will succeed in the future, which is an expression of profitability (Oliver, 1999). Furthermore, customer loyalty is the likelihood that customers will maintain their customer relationship with the service provider, whether they will recommend the business to others in a positive way (word of mouth) and if they want to continue their customer relationship in the future (Oliver, 1999). This is '*despite situational influences and marketing efforts having the*

potential to cause switching behavior' (Oliver, 1999, p. 34). Loyalty can further be divided into two different types: namely cognitive and affective affiliation (Samuelsen et al., 2007b). Cognitive loyalty implies that one brand is preferable to its alternatives and that loyalty is based on brand beliefs only. In addition, the loyalty may be based on prior or vicarious knowledge or recent experience-based information (Oliver, 1999). Affective loyalty, though, implies a liking or attitude towards the brand based on cumulatively satisfying usage occasions.

2.2.1 Customer Loyalty as a Main Indicator for Firm Performance

To improve firm performance, firms depends on customers, especially loyal customers, who, empirically, have been emphasised as a main indicator for firm performance. According to Silseth (2016), customer loyalty will impact profitability because loyal customers are more likely to come back and repurchase products and services from the company, engage in word of mouth and increase the share of wallet (customers buy more). In addition, loyal customers will continue using the company's products and services, which contributes to higher income in the long run (Webber, 2008). For instance, when looking at one customer who buys a new car every four years, if this customer buys Toyota one time, the company's income increases because of that one car purchased. However, if the customer is loyal over a time period of 40 years, this would result in increased income and volume for an equivalent of 10 years (one new car every four years). This illustrates how loyal customers can be an important indicator for firm performance from a long-term perspective; this is supported by Selnes (2002), who claims that customer loyalty shows the probable income stream the company can expect in the future.

However, important drivers for long-term profitability are not just loyalty itself, but also the number of loyal customers (Selnes, 2002). Indeed, the value in keeping existing customers satisfied with the product and the brand is impossible to ignore. The global marketing research firm KISSMetrics estimates that the average cost of a lost customer is $243 (Probstein, 2009). According to Webber (2008), it can cost up to five times more to acquire new customers than to keep current ones. Looking at this in an isolated situation, the company that sells more products to current customers will have significantly higher profits. This shows the value of promoting customer loyalty because gaining new customers at the expense of old ones is a losing proposition in competitive industries. The average company loses 10%

of its customers every year (Rousler, n.d.). By focusing on customer loyalty, the churn rate can be lowered to 5%, and the profitability of the organisation will increase by 25–125%, depending on the industry. According to Gartner Group (Rousler, n.d., p.1) *'80 percent of your company's future revenue will come from just 20 percent of your existing customers'*.

The Harvard School of Business (HBS) has a tool for measuring customer loyalty. The Customer Lifetime Value Calculator (CLV) shows businesses the effect that customer retention has on profits over time. The CLV can be defined as *'a measure of a customer's aggregate profit to the firm over the total time that the customer deals with the firm'* (Fripp, 2014, p. 2) and is '*calculated as a single dollar number, which summarizes the net profit/loss position of the customer's total relationship with the firm* (p. 2). It is *"calculated on per customer basis, but is more usually determined for the average customer within a particular market segment"* (Fripp, 2014, p. 2). According to the HBS, customer loyalty increases the profits by encouraging repeat business, reducing the operating costs for a business, establishing a favourable price premium, and by generating referrals. Yet also, it is also important for businesses to find new customers (Rousler, n.d.). But the fact remains that a company's current customers will be the foundation of their future success. In addition, the customer profitability rate tends to increase over the life of a retained customer (Murphy & Murphy, 2002). Although there is an unquestionable correspondence between loyalty and firm performance, there are situations in which individual consumers do not have the opportunity or need to reconsume but remain loyal nonetheless (e.g., alumni); this illustrates that loyalty is a crucial element for firm performance.

2.2.2 What Impacts Customer Loyalty

We have established that loyalty is an important factor for firm performance. However, an important question remains regarding how companies can keep customers loyal, to exploit these effects. To understand how customer loyalty works, it is essential to look at the factors that may impact customer loyalty. When customers choose to stay loyal to one brand, they omit a market full of other possible providers (Andreassen, Kurtmollaiev & Lervik-Olsen, 2017). Some factors that may impact this decision may be brand reputation, the creditability of the firm or the scale of the firm (Sander, 2017). First, as customers are evaluating different providers, they may consider the potential risks involved with different alternatives. For instance, purchasing from a brand that is fairly well-known in the market, a brand that the

customer has heard positively about or been recommended by others, may decrease this risk (Sander, 2017). Especially for high-value products where the financial risk is larger, these factors may impact the choice of provider; thus, the nature of the product may also impact the level of loyalty a company can gain; so companies with a well-established name might increase creditability and have an easier time keeping customers loyal (Bråthen, 2017). Furthermore, factors such as the level of experience and time that the company has operated in the market and the scale of the company may influence the creditability of the company, thus affecting customer loyalty. It may also be that a combination of multiple factors will make a company more attractive and the preferred option for the customers, and in that way affect the customer loyalty of the brand in question. Based on these examples and the fact that customer loyalty is highly individual and subjective, it can be difficult to explain what impacts customer loyalty. However, in the literature, customer satisfaction has been mentioned as an important predictor for customer loyalty.

Research by Samuelsen et al. (2007b) indicates the important relationship between customer satisfaction and loyalty through perceived reputation and calculative and affective affiliation. Customers' intentions regarding their relations with companies are measured through these three components, showing the expected future behaviour of customers. In this context, calculative association means to what extent the customer maintains the relationship with the company because it would be rationally correct to do so. This may be because of the fact that the company has the best economic conditions or because there is a lack of alternative suppliers. Research shows that calculative association is a driver for future intentions (Samuelsen et al., 2007b). Affective association, though, is based on the customer's emotional relationships and identification with the supplier; these relationships are assumed to have an intrinsic/self-worth value that can hardly be replaced by competing offers. Finally, reputation is an attitude-based variable that expresses the customer's perceptions of the company, and research shows that perceived reputation affects the customer's affective affiliation with the company. Reputation is, of course, important in terms of recruiting new customers. However, among existing customers, it is the customer's satisfaction that is indicated to have the greatest impact on customer loyalty (Nyhus, 2014). The fact that customer loyalty is affected by customer satisfaction, is also supported by the research of Lervik-Olsen et al. (2016).

Building customer loyalty means having an approach that emphasises customer satisfaction over short-term sales numbers. Even if a company makes record profits by selling a product

but loses customers, the earning potential for the organisation in the future will be significantly reduced. This illustrates the importance of customer satisfaction, which empirically has been shown to be the most important antecedent of loyalty (Nyhus, 2014; Samuelsen et al., 2007b). This brings us to our next constructs of interest: customer satisfaction.

2.3 Customer Satisfaction

Customer satisfaction is an assessment of what customers get compared with their expectations (Oliver, 1980), and this is experienced through the level of quality and possible variance in quality (Lervik-Olsen et al., 2016). Therefore, perceived product quality is important for the customer to be satisfied (Selnes, 2012). Even though the literature includes different definitions and dimensions of quality, it is almost universally perceived as a dynamic threshold that a firm must meet to satisfy customers (Cho & Pucik, 2005). Furthermore, because our research spans multiple years, our theoretical framework treats customer satisfaction as cumulative. This means that we look at customer experiences with the company over time. Satisfaction is measured in relation to the customer's expectations of the company, how it is relative to competitors and in relation to an ideal supplier in the industry (Samuelsen et al., 2007b). Customers' satisfaction with a company can affect future purchase intentions, the degree of affective and calculative association with a company and also customers' perceived reputation of the company. In other words, perceived quality can be a possible indication of how positive or negative existing customers' attitudes towards the brand are (Samuelsen, Peretz & Olsen, 2007a).

2.3.1 The Link Between Customer Satisfaction, Loyalty and Firm Performance

Companies should be concerned about creating good customer relations because of the value of satisfied customers. According to Silseth (2016), more satisfied customers leads to more loyal customers. Furthermore, with increased satisfaction, the customers become less price sensitive; hence, increased customer satisfaction can lead to increased profits and firm value thanks to these loyal customers (Silseth, 2016). Thus, based on previous research, we see a clear established link between customer satisfaction and firm performance in which loyalty mediates this effect.

However, empirically, research also indicates that there is a more direct link between customer satisfaction and firm performance. According to Silseth (2016), targeted work to satisfy customers can create a win-win situation where customers are satisfied while the company earns more. Therefore, customer satisfaction may be very profitable. Cho & Pucik (2005) identify three major empirical studies in the literature, and the first uses the Profit Impact of Marketing Strategies (PIMS) database. As Cho and Pucik (2005) note, most studies have found that superior quality has a positive relationship with a higher ROI (Buzzel & Gale, 1987; Phillips, Chang & Buzzell, 1983; Schoeffler, Buzzell & Heany, 1974), yet Wagner (1984) finds inconclusive results on the relationship between quality and ROI. Second, Cho and Pucik (2005) look at a series of studies conducted with the American Customer Satisfaction Index (ACSI) between customer expectations, perceived quality, perceived value, customer satisfaction, customer complaints and customer loyalty (Fornell, Johnson, Anderson, Cha & Bryant, 1996). In relation to this, Ittner and Larcker (1996) reported a positive relationship between the ACSI's customer variables and financial measures, such as return on assets, market-to-book ratio and price-earnings ratio. Third, Cho and Pucik (2005) note the studies that examined perceived quality data from the EquiTrend Quality Assessment Database (EQA) of the Total Research Corporation. Here, for instance, Aaker and Jacobsen (1994) find a positive relationship between stock return and perceived product quality in 34 companies traded on the U.S. Stock Exchange, implying that quality is positively related to a firm's economic performance measure. Repeated findings on quality, either measured by customer satisfaction or perceived quality, provide a growing body of evidence that the relationship between customer satisfaction and firm performance is positive. Interestingly, research on customer satisfaction has predominantly used profitability rather than growth as a measure for firm performance (Cho & Pucik, 2005). This may indicate that this field of research lacks an income growth measurement, illustrating the importance of our approach.

2.3.2 What Impacts Customer Satisfaction

From previous research, we can see that customer satisfaction can have a positive effect on the firm. Thus, it is interesting to look at the factors impacting customer satisfaction in order for a firm to exploit these effects. However, a company cannot directly affect customer satisfaction (Wilson, Zeithaml, Bitner & Gremler, 2012; Samuelsen et al., 2007b). For a company to impact the degree of customer satisfaction, they must use certain action variables

(Wilson et al., 2012), which are named in the literature as the marketing mix (Wilson et al., 2012; Framnes, Pettersen & Thjømøe, 2011). The original marketing mix consists of four action variables: product, price, promotion and place/distribution (Framnes et al., 2011). In addition, we can say that the marketing mix consists of seven components if we expand it to include physical evidence, people and process (Professional Academy, n.d.). The research done by Silseth (2016) and Samuelsen et al. (2007b) indicates that there are four different variables affecting customer satisfaction and perception of justice regarding different products and services in question. Similar to the marketing mix, these include 'price', 'material quality', 'ability to react"' and 'personal treatment'. Here, Silseth (2016) and Samuelsen et al. (2007b) are also basing their research on the marketing mix but by focusing on the four specific variables mentioned in the previous sentence. Thus, customer satisfaction is not something a company can affect directly; therefore, it is not possible to observe which attitude the customers have towards a brand (Wilson et al., 2012). However, customer satisfaction may give an indication of the customer's attitudes (Samuelsen, Peretz & Olsen, 2007a).

2.3.2.1 Customer's Attitudes

People have a limited information capacity, and instead of keeping in mind all the possible information about different brands, customers establish attitudes towards them. This is called the 'functional attitude theory'. The functional attitude theory addresses the underlying motives people have for their attitudes; it is intuitively easy to accept but difficult to practice because companies find it hard to uncover what motives different people have. This is easier to understand when learning about the different functions of an attitude (Samuelsen et al., 2007a).

The attitude theory distinguishes between the different types of attitude functions (Samuelsen et al., 2007a). According to Keller (2003, p. 463) *'Consumers ... might like and use certain brands because they satisfy their needs (utilitarian function), allow themselves to express their personality (value-expressive function), bolster a perceived weakness they have (ego-defensive function), or simplify decision making (knowledge function)'*. In general, attitudes have a knowledge-organising function and an instrumental function. That is, they simplify the decision-making process and keep track of what is good, what is less good and should be avoided. In addition, attitudes in different situations can serve as an ego-defensive function, meaning that in some circumstances, customers like or do not like brands because it means

that they do not have to confront a weakness in themselves. For outsiders, it can be hard to understand why customers have positive or negative attitudes towards the firm's brands because attitudes are not necessarily a direct reflection of the brand's objective characteristics (Samuelsen et al., 2007a). Hence, it can be hard to readjust or impact people's attitudes because they already might have an attitude towards the brand based on underlying motives.

Attitudes represent a summary evaluation, and as the knowledge-organising function indicates, people use their attitudes more or less consciously when making decisions in their daily lives (Samuelsen et al., 2007a); this means that an attitude mediates the effect of a customer's actions on his or her behaviour. Here, 'mediating', is the effect of one's actions on behaviour and how these actions can 'get lost' if one does not understand how attitudes act as an intermediary on behaviour.

All companies naturally want their customers to have positive attitudes or perceptions of their brand. However, attitudes do not always affect behaviour directly. For instance, two customers can have similar positive attitudes of the same brand, but only one of them may buy it, while the other may choose to go with competitors. An important reason for this paradox is that companies forget that attitudes not only vary in how positive they are, but also in how strong they are (Samuelsen et al. 2007a). Thus, even though a customer has a positive attitude towards a brand, it does not mean that the customer will buy it. Furthermore, if the customer is satisfied with a brand, it does not mean the customer will repurchase it (Silseth, 2016). This illustrates how customer loyalty may be important to the relationship between customer satisfaction and firm performance and how attitudes can be difficult to work with. However, because attitudes can indicate customer satisfaction, it is important to understand the different drivers for people's attitudes and what their emotions consist of, especially because feelings are an essential part of innovations. In addition, this establishes a possible relationship between innovations and customer satisfaction.

2.3.2.2 Customer Emotions

As of today, there is a lot of literature on the rational evaluation of companies, which is reflected in measuring the quality of purchased and consumed goods and services. However, there are few studies on the customers' feelings, enthusiasm and commitment to companies. In other words, current theories do not show whether the average of Norwegian companies'

customer satisfaction is related to active – or raised – feelings or passive feelings. Active – or raised – feelings can, for example, be enthusiasm, while passive feelings can be habits or unpredictability (Plutchik & Kellerman, 1980; Russel, Weiss & Mendelsohn, 1989). However, from an economic perspective, it is not clear what is really best for the business beyond the fact that high perceived quality is better than low perceived quality (Lervik-Olsen et al., 2016). What is certain is that everything becomes a habit over time. For example, the pleasure of buying a new car decreases over time; the product is of the same high perceived quality, but the customer's feelings have fallen from active to passive. This shows that customers' emotions are one part that explains customer satisfaction. For other products and services, it may be more desirable to change and innovate the company's products or services. For instance, this is noticeable in the mobile market, where Apple is regularly upgrading its products (Lervik-Olsen et al., 2016). So it might depend on the nature of different products or services in terms of to what degree innovation efforts will have an effect on firm performance.

Customers are satisfied when they get new or more options to choose from, better product or service delivery and improved physical environments – hence new changes in the marketing mix – which makes them excited and engaged. Indeed, one way to excite customers and improve the company's offering across multiple dimensions is through innovations. Again, Apple is a good example of how continuous innovations, improvements and offerings in the market can have positive effects. For instance, by releasing a new iPhone every year, consumers may become curious and excited about what the design will look like, what new technologies and functions it will have and so on. Furthermore, this may lead to customers feeling engaged and satisfied with the company, illustrating how a company that is innovative and perceived as innovative by customers may increase customer satisfaction.

Customer satisfaction is also related to emotions and the customer's expectations of the company (Samuelsen et al., 2007b). According to Lervik-Olsen et al. (2016), innovations, both small and big, and either successful or failures, create feelings among customers and shareholders, who has a direct impact on the bottom line. Feelings are necessary to engage customers in a long-term relationship with the company. The customer's emotions consist of two different dimensions: cognitive satisfaction, which comprises positive or negative emotions, and emotional satisfaction, which refers to active or passive emotions (Kunz et al., 2010). A combination of cognitive and emotional satisfaction drives the customers' perceptions of the company's innovativeness; these emotions are also related to the fact that

customers tend to overvalue the value of the products they already own or use (Gourville, 2006). This can be taken in context with the fact that customers tend to undervalue the benefits and value they will get by adopting innovations instead of consuming incumbent products or services (Gourville, 2006).

Innovations in the marketing mix can have positive effects on customer satisfaction, for instance, in an expansion in the offerings. One example includes 'Meny', a Norwegian and Danish supermarket chain, which has a wide range of products and brands, which may attract customers. Despite this large selection, consumers often tend to purchase the same products and brands that they already use, which may be the attitude function related to 'simplify decision making'. However, the customers' level of satisfaction and loyalty towards the brand may still increase because the option to choose is what is important here. This relates to both innovations in the marketing mix by expanding offers, but also towards attitudes and satisfaction. Indeed, downsizing a company's offerings can lead to less loyal and satisfied customers. One example of this is 'Rema', a Norwegian supermarket chain; cutting their selection when they introduced 'the best friend strategy'. This example illustrates how it can be a trade-off between a company trying to achieve good procurement conditions and satisfied customers. These two objectives may come in conflict, and in the 'Rema' scenario customers may have been disappointed and it may have affected their satisfaction and loyalty (Neegaard, 2016; Dalen & Nilsen, 2017; Wig, 2017).

As we can see, innovativeness creates feelings, and feelings are required for long-term relationships (loyalty), and cognitive and emotional satisfaction affects customers' perceptions of innovativeness (Lervik-Olsen et al., 2016). Hence, emotions are an important part of the link between perceived firm innovativeness, customer satisfaction and loyalty. Therefore, understanding where customer emotions and attitudes come from and how they can be affected is something that can impact the strength of, effect of and relationships between perceived firm innovativeness and satisfaction and, therefore, loyalty. Furthermore, especially in today's competitive market, it is crucial for companies to differentiate themselves from competitors and become the preferred alternative. This illustrates how perceived firm innovativeness may be important for this relationship, which leads us to our final construct of interest: perceived firm innovativeness

2.4 Perceived Firm Innovativeness

Perceived firm innovativeness is the customers' perceptions of a sustained ability of the company to create new, creative and powerful ideas and solutions (Kunz et al., 2010). There is a key difference between innovation and innovativeness. Whereas 'innovation' focuses on the outcome of firm activity (i.e., goods and services), 'innovativeness' refers to the capability of a firm to be open to new ideas and work on new solutions (Crawford & Di Benedetto, 2003). In other words, innovativeness presents the creativeness of the company and whether the company offers – among other things – new solutions or ideas that lead to market changes. Moreover, innovativeness refers to an enduring characteristic, not to success at one point in time (Hurley & Hult, 1998; Im & Workman, 2004). Thus, perceived firm innovativeness can be conceptualised as the consumers' perceptions and attribution of such enduring firm capability. Perceived firm innovativeness is not an objective assessment but rather a subjective consumer perception and attribution based on consumer information, knowledge and experiences. That is, consumers evaluate their observations to judge innovativeness (Kunz et al., 2010). To build a consistent image of firm innovativeness, these firm characteristics and behaviours need to be stable over time (Brown & Dacin, 1997), which may include surprising market offers, new product attributes, new design elements and new marketing approaches, along with the overall creativity of the firm and its dynamic market behaviour (Kunz et al., 2010). There are also multiple other perspectives on innovativeness, and the perceived firm innovativeness from these different perspectives can deviate from each other, thus creating a mismatch that is important to be aware of during innovation efforts.

2.4.1 Customer Versus Firm-Based Perceptions

The research from Kunz et al. (2010) focuses on firm innovativeness from the customer's perspective; this research shows that consumer perceptions of the entire firm – not just new products and technologies – play a key role in the success of innovative efforts. Firms, hence, should also account for a functional-cognitive perspective as well as consumer emotions and experiences. Companies face increased pressure to differentiate themselves in the marketplace through innovation, which is usually addressed through product and technology-focused R&D. The research of Kunz et al. (2010) indicates that innovation research and management can benefit from a broad-based, consumer-centric perspective. A narrow perspective around technical innovation is not enough to be seen as innovative. In this case, it is not enough for a

product or service to be new in the market. Consumers may feel more engaged with a firm that is innovative in a broader organisational and cultural sense, and this may lead to improved firm performance. Thus, perceived firm innovativeness may be a key element in building customer equity and, ultimately, shareholder value. Because investors are focused on company growth, they may use perceived firm innovativeness as a critical piece of information to judge the value and potential of a company. Here, companies that are perceived as innovative may be more attractive to investors, which may lead to improved company value.

In Tverky and Kahneman's (1981) research, they look at how people value prospects, or choices, in the market and find that *"human beings' responses to the alternatives before them have four distinct characteristics"* (Gourville, 2006, p. 4). The first thing people evaluate is the attractiveness of an alternative regarding its objective, perceived or subjective value. Next, people evaluate new products relative to a reference point, which is usually the products they already own. Third, consumers view any improvements of the new products relative to this reference point, seeing these possible improvements as gains and losses. Finally, losses have a much bigger impact on people than gains. Tversky and Kahneman (1981) call this 'loss aversion' which leads people to value products that they already own or consume, more than those they do not. According to Thaler (1980), this can also be referred to as the endowment effect, which implies that people *'value what they own, but may have to give up, much more than they value what they don't own but could obtain'* (Gourville, 2006, p. 5). Gourville (2006) shows that adopting an innovation often includes a trade-off. Therefore, it is not enough for an innovation to simply be better because unless the gains far outweigh the losses, customers will not adopt it. Furthermore, Tversky and Kahneman's (1981) research implies why people stick to what they already own even if a better alternative exists; this is called 'status quo bias', which occurs when people have owned a specific product for a short time and intensifies over time. However, consumers are often not aware of their own bias. This may be one explanation of why not all companies see profits after specific innovation investments. For innovative efforts to succeed in the market in terms of customers adopting new products, it may need to go through other factors affecting firm performance.

Another reason why companies may not see profits after innovation investments may be because executives are also biased when it comes to new products: *'In a perfect world, companies would know that consumers irrationally overvalue incumbent products and would*

take that bias into account when launching innovations' (Gourville, 2006, p. 7). Executives look at their innovations as the reference point and are convinced that the product works in the market. Moreover, they recognise the need for it, *'and they are keenly aware of the shortcomings of existing alternatives. ... Not having the feature that their innovation provides seems to the developers like a shortcoming and having the features that the incumbent provides does not seem essential'* (Gourville, 2006, p. 7). These executives perceive themselves as *'visionaries, product champions, or believers, suggesting that they have embraced the world the rest of us haven't-yet'* (Gourville, 2006, p. 7).

There are several problems with this method of thinking. One problem occurs '*when the executive's reference shifts, and they adopt the innovation-as-status-quo perspective'* (Gourville, 2006, p. 7). Just as consumers do, *'they fall victim to the endowment effect. They overvalue the benefits of their innovations by a factor of three. Like the consumer, executives are also unaware of their bias'* (Gourville, 2006, p. 7). Studies show that *'when anticipating others' judgements or choices, people find it impossible to ignore what they themselves already know or believe to be true'* (Gourville, 2006, p. 7). As an illustration, this is why people tend to overestimate the probability that others will have the right answer to a quiz if one knows the answer or why one overestimates the likelihood that others will find a hidden item if that one person knows its location. In this 'curse of knowledge', *'developers expect consumers to see the same value in their innovations that they see',* which results in managers becoming shocked when sales do not materialise (p. 7). This mismatch between executives' and customers' perceptions of innovation illustrates why innovation does not necessarily improve firm performance. Furthermore, it shows why the customer-based view is more important in innovations thanks to the adoption-loyalty-income link than the firm-based view. This illustrates why it is relevant to study the effects of innovativeness form a customer perspective.

In sum, according to Gourville (2006, p. 7), consumers tend to overvalue the *'existing benefits of an entrenched product by a factor of three, while developers overvalue the new benefits of their innovation by a factor of three'*. This may result in a mismatch between what innovators think consumers desire and what consumers really want, illustrating the importance and benefits of a customer-based view regarding innovations. Furthermore, this shows how innovation does not necessarily lead to increased profitability for the company directly, showing the importance of researching how customers' perceived firm innovativeness of

companies (through customer satisfaction and loyalty) affects firm performance. This is what makes the term ‘perceived firm innovativeness’ so important to understand because how customers perceive new products or services may have something to say for the effect on firm performance in the end.

2.4.2 The Importance of Custmers’ Perceptions

In previous research, good innovation work has been conducted in the private and public sectors. However, few – if any – have asked customers or users about the perceived firm innovativeness of the companies. Customer reviews may not match the entrepreneurs’, managers’ or employees’ own perceptions of innovation skills and performance (Andreassen, Kurtmollaiev, Lervik-Olsen, 2018). However, this does not make customers an irrelevant source of information; rather, it is the contrary because customers are the ones who the companies are trying to satisfy, and their perceptions of innovativeness are important (Lervik-Olsen et al., 2016). Therefore, Lervik-Olsen et al. (2016) suggest that innovativeness needs to be measured at the company level and that the customer is the final judge of the company’s innovativeness. More precisely, Lervik-Olsen’s et al. (2016) approach towards innovation is based on the idea that businesses – not nations – are innovative, and customers – not managers or experts – are best suited to evaluate the company’s innovativeness. This view is supported by Kunz et al. (2010), who claim that a broad-based customer-centric approach towards innovativeness may be beneficial.

One important reason for companies to listen to customers is that customers’ perceptions of the companies’ innovativeness affect customers’ view of how attractive customers perceive the business to be, compared with other alternatives. In other words, high customer satisfaction and quality are insufficient for a company to remain in the market (Andreassen, Kurtmollaiev & Lervik-Olsen, 2018). The company’s relative attractiveness – as a function of quality and innovation – will affect customer loyalty and repurchasing. Furthermore, a little change in the repurchase rate will have major effects on the customers’ lifetime value, the customer base’s economic value and company value (Andreassen et al., 2018). It is certainly important and interesting from a managerial point of view to understand the underlying factors that influence the repurchase rate. Lervik-Olsen et al. (2016) emphasises the importance of more innovations from established firms to create more profitable and

productive jobs, specifically in the context of Norway, so it may be highly relevant and interesting to analyse innovativeness in well-established firms in Norway.

2.4.3. What Impacts Perceived Firm Innovativeness

Based on previous research and establish theory presented above, a broad-based customer approach to perceived firm innovativeness can be beneficial. It is also relevant to look into the factors that impact perceived firm innovativeness because these can increase customer satisfaction through excitement and feelings. A central aspect of innovativeness is novelty or newness, which can manifest in several forms. The type of novelty in an innovation can be classified as either product innovation or process innovation (Oslo Manual, 2018). A firm engaged in novelty creation is seen as forward-looking and future oriented. However, introducing new things alone does not make a firm innovative (Kunz et al., 2010). For example, an innovative company like Apple is also seen as highly creative. Using a consumer-centric perspective, creativity broadly includes all types of company efforts and activities seen as unique relative to the competitors and as meaningful to consumers (Amabile, 1988; Im & Workman, 2004; Smith, MacKenzie, Xiaojing, Buchholz & Darley, 2007). Furthermore, creativity is strongly associated with surprise and the unexpected (Besemer & O'Quin, 1986), meaning that a firm's creativity can stimulate and excite consumers, resulting in new experiences for customers (Haberland & Dacin, 1992).

Finally, consumers are more likely to view a firm as innovative if its novel and creative efforts have an impact in the market. An innovative firm may change established consumption patterns and can be seen as a pioneer in its industry (Kamins, Alpert & Elliott, 2000). Through their 'generative capacity' (Moorman & Miner, 1997), firms can radically challenge the status quo and existing industry structure (Usero & Fernandez, 2009). According to Schumpeter's (1934) classic work on 'creative destruction', innovative firms are seen as progressive, dynamic and risk-taking. Empirically, research shows a significant effect of firm and brand innovativeness on business performance and stock returns (Mizik & Jacobson, 2008). Thus, there are multiple potential benefits of being perceived as innovative. However, based on the presented theory, there may be a gap between a firm's perception and the customers' perceptions of innovativeness. Therefore, because customers are the final judge of the success of innovation efforts, a broad-based customer-centric view is proposed. In addition, to be perceived as innovative from a customer standpoint, the company needs to have a continuous

approach towards innovation, not an action-based one (Kunz et al. 2010). This may also indicate how a strong innovative culture throughout the firm can be beneficial and impact the customers' perceived firm innovativeness.

In sum, we conceptualise perceived firm innovativeness as the *'consumer's perception of an enduring firm capability that results in novel, creative, and impactful ideas and solutions for the market'* (Kunz et al., 2010, p. 816), and not from a more general perspective (Lowe & Alpert, 2015). Furthermore, it is not possible for a firm to be seen as innovative if its creative ideas fail in the marketplace most of the time. In the same way, ideas that succeed in the marketplace must also be seen as creative and novel, and if not, a firm will not be seen as innovative (Kunz et al., 2010). In addition, it is important to emphasise that the perception of innovativeness is experience based and related to perceived changes (positive and negative) that are important to customers. A change in perceived firm innovativeness will mean that the company will appear to be more or less attractive in a competitive market. The literature provides insights into the possible relationships and indicates that the possible effects of these constructs of interest may not occur directly.

2.5 Summary of our Constructs of Interest

Based on the theoretical framework, innovation is even more important in today's competitive market to attract and retain customers. First, to make innovation efforts successful, companies need customers to adopt their products and services. However, this effect may not happen directly, and research shows customer loyalty is a key indicator predicting profitability. However, innovations alone may not lead to loyal customers. For a customer to repurchase from the same brand, previous research emphasises customer satisfaction is an important antecedent of loyalty (Nyhus, 2014; Samuelsen et al., 2007b), which is static and does not acknowledge changes that companies make to keep their customers satisfied. The changes companies can make, for instance, through innovative efforts, may increase customer satisfaction through feelings and excitement (Lervik et al., 2016). However, for a company to exploit the benefits of innovativeness, it is important for the customers to perceive the company as innovative. Nonetheless, previous research shows that there can be a mismatch in perceived firm innovativeness between firm-based view and a customer-based view. Therefore, a broader and more customer-centric view on innovation has been called for (Kunz

et al, 2010). In sum, companies are concerned with their performance in the market and want to increase their income. To improve firm performance, companies need customers, especially loyal customers, who must be kept satisfied over time. To accomplish all of this, the company must be the preferred alternative in the market, meaning, in the end, the company must innovate with a customer-based approach.

2.6 Our Position in the Literature

So far, there have been few studies on how perceived firm innovativeness, customer satisfaction and loyalty may affect firm performance, Mostly, the studies analyse simply profitability. However, as shown in section 2.3.1, there has been a number of studies about the direct relationship between customer satisfaction and firm performance (in the U.S. market) but here focusing on different financial performance measures of the firm (Cho & Pucik, 2005). Most of the literature focuses on profitability as a whole, not just on income. Innovations, though, can affect both the cost and income side; therefore, it may be relevant to measure both sides, hence profitability. Because a customer-based view in terms of perceived firm innovativeness is what is important, we think it is interesting to look at these possible effects only from an income perspective because this is what the customers can impact. Thus, considering both costs and income may give a misinterpreted picture because the cost level can fluctuate based on many other factors that the customers cannot influence. Although we note that innovative efforts also impact the cost side, we think a better consistency can be found between perceived firm innovativeness and firm performance by only looking at the income side.

In addition, prior studies on the factors affecting profitability mostly focus on internal processes or the direct actions of a company (e.g., promotion) (Stokkedal, 2017). This indicates a lack of considering customer experiences and their point of view, especially regarding new products and services. A customer-based approach to perceived firm innovativeness may be lacking in this field of study, illustrating the importance of this approach.

The fact that there is little previous research about the relationship between our constructs of interests is because it is difficult to collect soft data, such as perceived firm innovativeness

and customer satisfaction, across a few hundred companies. Thus, it is rare to find large-scale studies that investigate this relationship, not to mention the mediation effect of innovativeness through customer satisfaction and customer loyalty (Cho & Pucik, 2005). However, it is possible to find some evidence on the indirect effect between innovativeness and firm performance. In a series of studies intended to identify the success and failure factors of new products (Cooper, 1990; Cooper & Brentani, 1991; Cooper & Kleinschmidt, 1995, 1996), Copper et al. find that for new products or services to be successful in the market, they should carry superior quality, implying a possible mediation effect on the relationship between innovation and market success through customer satisfaction. Another finding is from the Sears' Employee-Customer-Profit (ECP) chain model, which established a chain of cause and effect running from employees' innovative behaviour to an improvement in customer satisfaction and then to superior firm performance (Rucci, Kirn & Quinn, 1998). Because customer satisfaction to some degree is correlated with the quality of products or services, Rucci et al. (1998) speculate that a mediation effect for customer satisfaction may exist. These studies, though, do not account for the effect of loyalty, which has been proven to have an impact on firm performance (Silseth, 2016).

Additional evidence comes from Cho and Pucik's (2005) pilot testing and analysing of the results of Brown and Perry (1994) and McGuire, Schneeweis and Branch (1990). Although none of these studies directly discussed the mediation effect of innovativeness and quality, both reported correlation coefficients between the eight attributes of the Fortune Reputation Survey and performance measures, such as growth rates and return on equity (ROE). Based on Maruyama's (1998) simple diagnostic formula and their correlation coefficients, Cho and Pucik (2005) test two mediation models: (1) Quality → Innovativeness → Growth Model and (2) Innovativeness → Quality → Profitability Model. They find that both mediation models are viable (Cho & Pucik, 2004).

Cho and Pucik (2005) examine how quality and growth, as well as profitability and market value, are related to each other. They assume that the higher the quality, the greater the profitability performance. However, it is important to note that this research defines innovativeness as something *'new that has not existed before'* (Cho & Pucik, 2005, p. 556) and not as something 'new that is commercialized' as we do in the current thesis. However, we still think it is interesting to look at their findings about the relationship between quality and profitability. Their study indicates a possible way out of the inconsistent results found in

previous research on the relationship between innovation, quality and firm performance; they propose that the innovativeness-quality-performance model (IQP model), which describes how a firm's capability to balance innovativeness with quality drives growth and profitability, will drive superior market value. This model examines the direct relationship, and the mediation effects of innovativeness and quality on firm performance. Theoretically, the IQP model relies on the literature on resource-based view, organisational learning, innovation and quality. The results of structural equation models indicate for that first, innovativeness mediates the relationship between quality and growth; second, quality mediates the relationship between innovativeness and profitability; third, both innovativeness and quality have mediation effects on market value; and fourth, growth and profitability have mediation effects on market value (Cho & Pucik, 2005).

Cho and Pucik's (2005) results are very interesting because one of their models accounts for a different order of serial effects than our research question. However, we think the second model makes more sense, especially from a customer-based view. Innovation is something that happens internally in the company. As mentioned, innovation can come in many forms; for instance, it can be around the company's offerings, how they offer it, where they offer it and so on. These choices – and perhaps changes – have an impact on how customers perceive the innovativeness of a firm. In addition, changes can be interpreted as good, bad, better or worse depending on the specific customer. Again, this has an impact on quality and how satisfied the customers are. We see quality or customer satisfaction as something that happens as an effect of innovativeness, not the other way around. Therefore, we see Cho and Pucik's (2005) second model as the most relevant for the current thesis.

Furthermore, Cho and Pucik's (2005) study shows that quality alone is not sufficient to create high growth, and innovativeness alone is not sufficient to improve profitability. Combining the results of different studies innovativeness influences performance through satisfaction and loyalty (Cho & Pucik, 2005; Silseth, 2016; Lervik et al., 2016). Customers who perceive their firms as innovative are more satisfied, so they are more loyal to their firms and spend more money on these firms' offerings (Cho & Pucik, 2005; Silseth, 2016). Cho and Pucik's (2005) study helps to explain why an overall corporate strategy should balance the twin priorities of innovation and quality. Because neither 'profitability without growth' nor 'growth without profitability' guarantees superior market performance, Cho and Pucik (2005) believe that the capability to balance innovation with quality is indispensable for companies to sustain

profitable growth in a fast-moving global economic environment. Finally, their results support the resource-based view of the firm, empirically demonstrating how a firm's intangible resources – in this case its capability to manage both innovativeness and product/service quality – can be the source of value. In addition, their research shows a possible path towards superior market performance (Cho & Pucik, 2005).

To the best of our knowledge, few studies exist on how perceived firm innovativeness, customer satisfaction and loyalty affect firm performance. However, there is research on how some of these constructs of interest affect profitability. Therefore, we wish to contribute with research within the field of innovativeness by exploring how perceived firm innovativeness may affect firm performance using income growth as a proxy through the mediating variables customer satisfaction and loyalty respectively. Research on this topic is useful because it may provide information to the respective businesses about the effects their innovation efforts have on their customers and if this may affect the company's performance and growth.

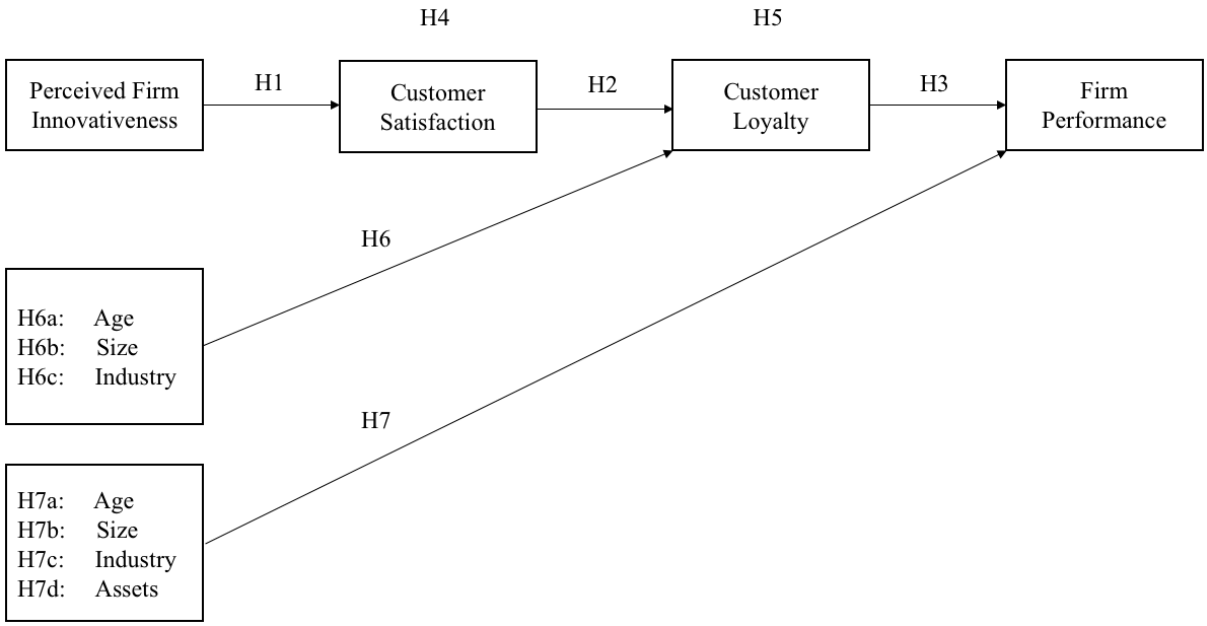
3. Research Model and Hypotheses

Chapter 3 includes a presentation of our proposed research model and an explanation of our hypotheses, which will be used to answer our research question about how perceived firm innovativeness, customer satisfaction and customer loyalty affect firm performance. The model provides further insight regarding how perceived firm innovativeness indirectly affects firm performance.

3.1 The Proposed Research Model

A research model is a visualisation of the research question and shows the connection between the different variables to be investigated (Selart, 2018). Our research model and the related hypotheses are based on the theory discussed in the previous chapter, especially the research by Kunz et al. (2011). The model illustrates how we think perceived firm innovativeness affects customer satisfaction, loyalty and firm performance.

Figure 1:
Our Proposed Research Model



3.1.1 Explanation of the Variables

As the model in Figure 1 illustrates, we have one independent variable, two mediating variables and one dependent variable, along with a set of control variables that might affect firm performance and customer loyalty. In this context, we investigate if perceived firm innovativeness goes through two different mediators, namely customer satisfaction and loyalty. In other words, we want to investigate if the relationship between perceived firm innovativeness operates through a second and third variable: customer satisfaction and loyalty. Furthermore, taking into account other relevant factors that may affect firm performance and to avoid confounding results because of specific (internal) variables that may affect customer loyalty and firm performance, we have chosen to include a set of control variables that we believe may affect loyalty or firm performance for certain theoretical reasons (explained in the hypotheses below). Table 1 gives an overview of the meaning of our research model's core variables.

Table 1:
Explanation of the Variables

Variable	Meaning
Perceived firm innovativeness *(Independent variable)*	Research has shown that customer perceived firm innovativeness affects customer satisfaction. The current study conceptualises perceived firm innovativeness as consumer's perception of an enduring firm capability that results in novel, creative, and impactful ideas and solutions for the market. Customer perception of a sustained ability of the company can result in new, creative and powerful ideas and solutions. Innovativeness here refers to an enduring characteristic, not to success at one point in time. Perceived firm innovativeness is a subjective perception and attribution based on consumer information, knowledge and experience. Hence, perceived firm innovativeness is how innovative the company and its products or services are form the consumers' perception.
Customer satisfaction *(First mediating variable)*	Customer satisfaction is expected to affect future purchase intentions, thus customer loyalty. Customer satisfaction is an assessment of what customers obtain compared with their expectations, experiences with the quality and possible variances in quality. Customer satisfaction says something about how the product is in relation to the customer's expectations of the product. Our research model treats customer satisfaction as cumulative, meaning that we look at customer experiences with the company over time. The satisfaction is measured in relation to the customer's expectations for the company, how these expectations are relative to competitors and how they relate to an ideal supplier in the industry.
Customer loyalty *(Second mediating variable)*	Research has shown that customer loyalty affects profitability because loyal customers are more likely to come back and repurchase from the company, engage in word of mouth (WOM) and increase share of wallet. Customer loyalty is an expression of the customer's expected behaviour and thus an indication of how the business may succeed in the future. Customer loyalty is the likelihood that customers will maintain their relationship with the service provider, whether they would recommend the business to others in a positive way and if they want to continue their customer relationship in the future. Our research model looks at customer loyalty in general and is therefore not divided into the two subgroups of loyalty, cognitive and affective affiliation, respectively
Firm performance *(Dependent variable)*	Firm performance is related to the term 'profitability'. Profitability consists of both an income and cost side in which customers have the most influence over the income side, thus income is what is relevant in the current study. It also shows that income is one of the main indicators of firm performance. Research shows that especially loyal customers are the key to firm performance. In the current study, we are using income growth as a proxy to measure firm performance. Therefore, these two terms are used in the explanation of the hypotheses.
Control variables	Based on previous research we include a set of control variables that we believe may impact customer loyalty and firm performance. The control variables are used in the regression analysis to rule out that the relationship between the independent variable and dependent variable is not because of any variables that have been excluded from the analysis. In our model, these control variables consist of age, size (in terms of employees/FTE), industry and assets.

3.2 Development of Hypotheses

3.2.1 Perceived Firm Innovativeness and Customer Satisfaction

Based on the presented theory, we believe there is a positive connection between perceived firm innovativeness and customer satisfaction (Kunz et al. 2010; Lervik-Olsen et al., 2016). A firm engaged in novelty creation is seen as forward-looking and future oriented (Kunz et al., 2010); hence, innovative companies may seem more modern and professional; these companies might be more attractive to customers, which may lead to greater satisfaction. In addition, innovative companies are often seen as creative, and creativity is strongly associated with the unexpected (Besember & O'Quin, 1986), meaning that a firm's creativity may stimulate and excite consumers and result in new experiences for customers (Haberland & Dacin, 1992). Customers then may feel more excitement and engaged in dealing with innovative companies, increasing customer satisfaction. In addition, an innovative firm can be seen as a pioneer in its industry (Kamins et al., 2000). For instance, Apple is seen as highly innovative and creative; Apple scores the highest of the top 25 companies on the American Innovation Index (AII) (2018). According to the AII (2018), customers want more than a satisfactory experience or a cheap price, and companies that engage in positive innovation are perceived as more attractive; thus, this may impact customer satisfaction.

According to Dawar (2013), there has been a shift from upstream to downstream innovations. Today, companies are more focused on the customers and how to innovate their offerings to create more value for customers. By companies having this customer-centric perspective in mind, they may have better chances of addressing customer needs more often and in a more efficient way. Thus, if a company addresses customer needs and innovates around those needs, it can add more value and benefits for the customers, which also may increase satisfaction.

As mentioned, perceived firm innovativeness reflects the customer's overall evaluation of how innovative the company and its products or services are (Lowe & Alpert, 2015). Further, the variables affecting customer satisfaction are related to the marketing mix, including price, product, place and people (Framnes et al., 2011; Professional Academy, n.d.). In this way, what is influencing customer's perceived firm innovativeness to some level, may be related to what is affecting customer satisfaction. In addition, the customer's role has also changed from

being a passive recipient to end partner (Ordanini, Miceli, Pizzetti & Parasuraman, 2011; Vargo & Lusch, 2004). From the company's perspective, this might imply including the customers more often in the overall process and having their feedback and desires in mind when innovating. From the customer's viewpoint, this may increase the level of 'personal treatment', which is an action variable affecting customer satisfaction (Silseth, 2016). This example illustrates that if perceived firm innovativeness increases because of improvements in the marketing mix, customer satisfaction might increase as well. Moreover, by innovating based on the customers' desires might increase the positive experiences with the company while reducing the negative ones, which may lead to positive attitudes, thus greater customer satisfaction towards the company.

Perceived firm innovativeness may further lead to customer satisfaction when customers are served by the company's employees in a positive way (Nysveen & Andreassen, 2014). For instance, innovations related to the channels used in the sale of the product or service can be a source of improving customer satisfaction. It may be that channels for delivery or service and follow-up after purchase are considered weak. Here, innovation efforts may become useful for increasing consumers' perceived firm innovativeness; these efforts can be the combination of different sale channels that are best suited for the customers' preferences and needs, which may increase satisfaction. Furthermore, customers also experience satisfaction in the statically relationship with the organisation. For instance, organisations offering high levels of self-service may learn that customers want more personal assistance. Therefore, innovations in relation to the customer relationship with the firm may also be important to ensure satisfied customers (Nysveen & Andreassen, 2014).

Finally, Kunz et al. (2010) shows that perceived firm innovativeness is a subjective consumer perception based on consumer information, knowledge and experience. Customers need to feel that they are engaged in a firm that is innovative in a broader organisational and cultural sense. Thus, looking at these factors – together with the fact that the customers can be seen as end partners – involves the company being more customer centric in everything, from how the company chooses to innovate their products and services to how the company works to how the company communicates, interacts and treats customers. A good example of a company that has this innovativeness across the entire organisation is Google (Ryan, 2016). Google is among the top 25 companies in the AII (2018), and for a period of time, Google encouraged its employees to spend 20% of their work time on side projects with the purpose of being

creative and innovative, which, for example, led to the creation of Google Maps (Robinson, 2018). Google cherishes an innovative workforce that manifests itself in the entire organisation, and this may manifest itself in the customers as well, leading to increased perceived firm innovativeness and customer satisfaction. In addition, Google's mission is to 'touch' people's lives; they want to make a difference and solve problems with technology (Wojcicki, 2011). Based on this, it seems as though Google has a customer-centric perspective when innovating new products and solutions. This shows just some of the reasons why Google is perceived to be an innovative company. Further, the American Customer Satisfaction Index (ACSI) shows that Google has a customer satisfaction score of 82 (of 100) (Statista, 2018), which illustrates how there may be a link between the two variables of perceived firm innovativeness and customer satisfaction. Innovating based on customer needs and desires may lead to increased customer satisfaction of the products and services offered to customers. Therefore, the following hypothesis is proposed:

H1: Perceived firm innovativeness has a positive effect on customer satisfaction.

3.2.2 Customer Satisfaction and Customer Loyalty

According to Silseth (2016), companies should be concerned about creating good customer relations because of the value that a satisfied customer brings. Silseth (2016) claims for instance that satisfied customers are more likely to come back to the firm to repurchase products or services and recommend the business to others through WOM. Silseth (2016) also states that more satisfied customers lead to more loyal customers. Samuelsen et al. (2007b) note that customer satisfaction has both a direct and an indirect effect on customer loyalty through reputation and affiliations. In addition, people evaluate new products or improvements in new products relative to a reference point and measure these improvements as gains or losses (Tversky & Kahneman, 1981). The reference point is often the products the customers already own. Hence, the more pleased and satisfied a customer is with a product, the more likely the customer will be to stay with that provider, meaning that there is a higher threshold to switch to products or services offered by another company. In addition, losses weigh higher than gains because the value function for losses is steeper than for gains. Thus, if a customer is fairly satisfied with what he or she has, switching to another provider would entail losses; further, this will weigh more than the possible advantages gained with other products (Tversky & Kahneman, 1981). This further illustrates the possible effect satisfied

customers have on loyalty and how this link is strengthened by these psychological effects (Tversky & Kahneman, 1981).

For instance, IKEA scores high on both customer satisfaction and loyalty (BI, 2017; Norwegian School of Economics, 2017c). IKEA is known for placing warehouses outside of towns in the suburbs (IKEA, n.d.). However, people still travel several miles to shop at IKEA even though there are other furniture stores closer to the cities. A reason for why these customers remain loyal may be that they are satisfied with the low price and that the goods (as a rule) are always in stock (no delivery time); thus, this is related to the action variables 'price' and 'ability to react', both of which affects customer satisfaction, and may therefore also affect customer loyalty. Another example is Apple. By having one product of Apple, a customer may be more likely to buy another Apple product. Although to some extent this illustrates the lock-in function, we still think it is a good example of how customer satisfaction affects customer loyalty. In this regard, the customer satisfaction of Apple can be seen as being in line with the products' ease of use. Apple's products and services are compatible and 'speak well together' because they have the same ecosystem, which Android and Windows have not matched yet. In this regard, having one Apple product might increase the chance of using Apple for other electronic products, which is related to loyalty (buying more). Based on the presented arguments, we believe that more satisfied customers may lead to more loyal customers. Thus, we argue that firms with higher customer satisfaction will be more likely to provide higher customer loyalty, which gives hypothesis 2:

H2: Customer Satisfaction has a positive effect on Customer Loyalty.

3.2.3 Customer Loyalty and Firm Performance

According to Silseth (2016) having more loyal customers means that they will be more likely to come back to the firm to repurchase products or services, engage in WOM or buy even more products or services, resulting in increased share of wallet. Furthermore, a little change in the repurchase rate will have major effects on customers' lifetime value, the customer base's economic value and the company's value (Andreassen et al., 2018). This point is supported by Murphy and Murphy (2002), who state that the customer profitability rate tends to increase over the life of a retained customer. Even though some of the benefits of CLV comes through a reduction in costs, it is also highly relevant for firm performance in terms of

increased income. As mentioned, loyalty involves increased repurchase and WOM. So the longer a customer stays loyal to a brand, the more the customer has the opportunity to spread positive WOM and recommend the company to others. This then may lead to increased income from the specific customer and also the people around the customer.

Some of the reasons why customer loyalty may increase profits is because of encouraging repeat business, establishing a favourable price premium and generating referrals (Rousler, u.d). For instance, if an industry is experiencing high rivalry or new competitors entering the market with lower prices, this may result in companies having to reduce their prices to be attractive in the market (Besanko et al., 2013). Again, this may lead to reduced income. However, Rousler (n.d.) states that a company with a high proportion of loyal customers may be able to keep their prices at a certain level and still retain current customers because they may be less price sensitive. Selnes (2002) claims that the number of loyal customers is important drivers for long-term profitability, and customer loyalty gives information about the probable future income streams that the company can expect. This illustrates the importance and impact loyal customers may have on firm performance. In addition, it illustrates the point of Murphy and Murphy (2002), who claim that a company's current customers will be the foundation of their future success.

Rousler (u.d) also mentions that customer loyalty is the key to maximising profitability. In today's competitive market, we can see indicators of companies focusing on customer loyalty. For instance, many companies are developing and using loyalty programmes. This can increase the information companies are able to obtain about their customers, thus allowing companies to customise their offerings and provide special offers to specific customers. Thus, these programmes attempt to increase the advantages and benefits customers get by using a brand so that they will keep using the brand and have more to 'lose' if they switch providers. The benefits can be in the form of discounts or 'points' related to the company or in terms of discounts or special deals when purchasing from other companies. One example includes 'Rema' with their app 'Æ', where customers get discounts for the top 10 products that they buy. Another example is 'DNB', Norway's largest financial services group, who offers discounts and special deals in other stores, such as 'Power' or 'H&M' if customers use the DNB credit card.

Based on previous research on the relationship between customer satisfaction and loyalty, and the arguments above, we think that higher customer loyalty will lead to higher firm performance, which leads into hypothesis 3:

H3: Customer loyalty has a positive effect on firm performance.

3.2.4 The Mediating Role of Customer Satisfaction and Customer Loyalty

The previous hypotheses – H1 to H3 – describe the direct relationship between each of the variables. The next group of hypotheses relate to the expected mediating effects between the variables in the model. In the following, we will describe the model overall through the mediating effects in the proposed hypotheses. As explained in section 2.2.1, customer loyalty is a crucial element for firm performance, and because loyalty cannot be affected directly, we need to include some variables in our research model that may explain this variance in loyalty; this illustrates the importance of satisfaction as a mediating effect between perceived firm innovativeness and loyalty in our model. Furthermore, it also emphasises how loyalty may operate as a mediating effect between customer satisfaction and firm performance.

The first proposed mediating mechanism is customer satisfaction. According to Lervik-Olsen et al. (2016), innovations create feelings among customers, who in turn have a direct impact on the company's bottom line. This illustrates how feelings – and thus innovation – are necessary to really engage customers in a long-term relationship with the company. However, perceived firm innovativeness itself may not lead to customer loyalty and increased income because the value in keeping existing customers satisfied with the product and brand is impossible to ignore. Further, having an approach that emphasises customer satisfaction over short-term sales is what builds customer loyalty. Even if a company makes record profits by selling a product in which they lose customers, the earnings potential for the organisation in the future will still significantly be reduced (Probstein, 2009); this illustrates the importance of loyal customers as a mediating effect between customer satisfaction and firm performance.

The second mediation mechanism is customer loyalty. High customer satisfaction and high product quality are insufficient for a company to remain in the market (Andreassen et al., 2018). Indeed, satisfied customers alone do not necessarily lead to customers repurchasing from certain brands. The company's attractiveness in the market as a function of quality and

innovation is what affects customer loyalty, thus is what affects the repurchasing rate. This illustrates the importance of firms innovating to stay attractive in the market and to keep customers satisfied. Furthermore, this illustrates how satisfied customers are an important variable that explains the relationship between perceived firm innovativeness and customer loyalty. In addition, this shows how satisfaction may increase the rate of repurchasing – and thus income – through loyal customers. Furthermore, with increased satisfaction, the customers become less price sensitive. This means that increased customer satisfaction may lead to increased profits and firm value through customer loyalty (Silseth, 2016).

In this way, innovation efforts may create feelings among customers that may change the customers' perceived firm innovativeness of the firm. This perceived firm innovativeness may lead to excitement and engagement among customers, thus increasing customer satisfaction. Keeping customers satisfied may entail having a stronger focus on and concern for the customers. Furthermore, this focus may lead to customer loyalty, which increases the odds of customers repurchasing (Silseth, 2016). In addition, loyal customers are described as those who recommend the brand to others and spread positive WOM (Oliver, 1999; Silseth, 2016), thus they may also attract new customers, which may also increase income. This leads to the two following mediating hypotheses:

H4: Customer satisfaction mediates the effect of perceived firm innovativeness on Customer loyalty.
H5: Customer loyalty mediates the effect of customer satisfaction on firm performance

3.2.5 Control Variables and Income (Firm Performance)

Because the factors affecting income – thus firm performance – may be associated with a lot of uncertainty, we have chosen to include some control variables to reduce the risk of obtaining confounding[1] results and to account for other possible factors that may have an impact on loyalty and firm performance. Moreover, some of these variables, including age, size and industry, have also been used as control variables in previous studies (Foss, Lyngsie

[1] Confounding variables are 'extraneous but difficult to observe or measure variables that can potentially undermine the inferences drawn about the relationship between the independent variable and the dependent variable' (Saunders et al., 2016, p. 713).

& Zahra, 2013). We think the following control variables would be sensible to include in our analysis because of the theoretical reasons explained below:

- The company's age
- The company's size
- The company's related industry
- The company's assets

First, the length of time the business has been in the market may affect income. Coad, Segarra and Teruel (2016) investigated whether age had an impact on innovation and firm growth; using R&D attempts, the study showed that newer firms had both larger performance benefits – though also larger declines – at the upper and lower quantiles. Another study by Coad, Segarra and Teruel (2013) analysed whether firms improve with age. The authors found that firms improved with age, which was shown by steadily increasing productivity levels, larger size, higher equity ratios and profits. However, their research also showed that firm performance declined with age because older firms had lower expected growth rates of sales, profitability levels, and productivity. Hence, previous research shows that age might matter, but the findings are inconsistent regarding whether younger or older firms have the benefit of increased income. Here, younger companies may have larger growth rates in terms of sales because they start out small and have large growth potential and thus a positive income growth. On the other hand, younger firms' businesses are also characterised by more uncertainty than older firms; thus, they may also show negative results and negative trends in terms of income. In addition, it can be argued that older companies have a steadier income growth because they have acquired more experience in the industry and/or they may be at a more mature stage in their cycle. Thus, these older firms may have gained more skills to exploit the resources they have at their disposal. So older companies may have more experience with what works and what does not work and may be better at using their time and resources right, resulting in higher efficiency. In conclusion, based on previous research and the arguments presented above, it is unclear in what way age affects firm performance (Coad et al., 2013, 2016).

The company's age may also affect customer loyalty. Consumers often prefer what they are familiar with rather than the unknown. From a financial perspective, consumers feel that they are taking on less financial risk buying from a brand that is well established and that has

positive WOM, rather than buying from an unknown brand (Sander, 2017). Thus, an older company has often developed a well-established name in the market that is known to consumers. This is something that may increase credibility and the power of the brand in the market, which consumers may be affected by unconsciously (Sander, 2017). Thus, a strong brand creates credibility and loyalty (Bråthen, 2017). In addition, older companies often have a well-established customer portfolio. Therefore, people using a certain brand may spread positive WOM, recommending it and making others that may not currently be using the brand familiar with it; this may affect others' choices (Sander, 2017; Silseth, 2016), showing how age may affect both loyalty and firm performance.

Customers who have been using the company's products and/or services for years and have a good experience with them will often repurchase instead of choosing other options. In addition, companies that have been in the market for a long time could be better equipped to understand what the customer needs based on their experience in the market. This leads to the following hypotheses about the company's age:

H6a: The company's age has an effect on customer loyalty.
H7a: The company's age has an effect on firm performance

In addition, we think that the company's size may affect firm performance. Empirically, the number of full-time equivalents (FTEs) has been used as a measurement and proxy for size; therefore, we chose to do the same in the current thesis (Barbera, 2013; Momrak, 2012). SSB also uses FTE as an indicator for size (SSB, 2018), and previous research has shown that size has a significant (weak) effect on firm profitability (Pervan & Viši, 2013).

Other studies have shown that size plays a crucial role in terms of the performance of a firm (Shah et al., 2016). Although these studies analyse firm performance and profitability, thereby also including cost, it is still relevant to look into, although we only include income, because income is a main part of the profitability picture. First, having a large company size is often an indicator that the company operates on a large scope nationally and possibly internationally (which is not included in this analysis). However, a large company is often well-known, both to current and also potential customers. This may increase the chances of the customers being familiar with the brand, knowing someone who uses it or having heard positive WOM about it. Hence, it may result in income growth as this may lead to buying from that specific brand

because of certain effects. For instance, because buying from a well-known firm may feel like less of a financial risk, and familiarity and credibility towards a brand makes the decision to buy easier (Sander, 2017); the decision to buy can also be made easier through the bandwagon effect (choose the brand our reference group and people we want to identify us with or circumvent uses) (Bloom & Bloom, 2017). In addition, a larger company size may also indicate that the company is present on a larger scale and can draw income from more areas, thus having other income streams to draw from if purchases from one market or customer segment are declining.

A big player in the market may also have more resources compared with small companies, such as having a larger network, distribution and sales channels (Besanko et al., 2013). Other examples could be having the resources needed to acquire a more skilled workforce because the firms can operate with competitive salaries to capture the best employees and more resources to put into training, more capital to conduct R&D and to explore new markets, as well as conduct market analyses and marketing, all of which may lead to capturing greater market shares. This illustrates how larger companies may be more equipped to increase income relative to smaller companies with a small share of the market. In addition, larger companies may have more resources to stay ahead in the market and develop and renew products than smaller companies. In this way, larger companies may be perceived as more attractive to both customers and employees which can lead to higher income growth and capturing the best employees, respectively. Additionally, a larger employee pool, often enables companies to have more specialised departments and employees working on very specific tasks.[2] This might lead to a higher quality in all aspects of the company, which for instance may enable the firm to charge higher prices that may lead to income growth. In addition, a large employee staff may indicate a larger company, which entails that they have more human capital and resources that can come up with innovative products and offerings in the market, which may increase income. Moreover, a larger employee pool often indicates that the firm is doing well, which may be illustrated through a larger market share or an increase in volume or price that increases income. However, *'small firms have fewer levels of hierarchy, so decision making can be more rapid'* (Knott & Vieregger, 2015, p. 2). Thus, it

[2] The development department works solely on making high quality products with few errors; the customer service department works specifically towards the customer, making sure that their concerns and desires are taken care of.

may also be argued that a smaller company may develop more quickly and adapt to the changes in the market better, which may lead to improved firm performance. Additionally, it may be that size as a measurement of firm performance is more important when financial information is reported in absolute numbers because some of the effect of larger versus smaller companies are minimised when looking at development ratios. However, based on the discussion above it may be that size matter in terms of generating income efficiently.

Furthermore, size may also have an effect on customer loyalty. This relates to the arguments and research of how age can affect loyalty as several of the same arguments may apply for the relationship between size and loyalty. A larger firm size may indicate a longer period of time operating in the market. Moreover, large companies often have a larger presence nationally and internationally and have a well-established name that consumers are familiar with, at least to some extent. For instance, major companies that are recognised by their logos have all invested heavily in branding for numerous years (Bråthen, 2017). Thus, because consumers tend to choose what they are familiar with, rather than the unknown that might feel risky, a large firm with a strong brand may create credibility and loyalty (Bråthen, 2017). This leads to the following hypotheses:

H6b: The company's size has an effect on customer loyalty
H7b: The company's size has an effect on firm performance

Next, we believe that the industry the business operates in may affect firm performance as measured through income growth. Empirically, industry has been used as a variable for measuring firm performance (Short, McKelvie, Ketchen & Chandler, 2009). Across different industries, there are significant differences in income as measured in absolute numbers. What income is considered 'normal' or 'good' among different industries varies because income highly relates to the nature of the product in terms of what price the company can charge and how many products the company sells, depending on the demand in that specific industry. However, it may also be important differences in income growth across industries that are important to take into account. For instance, our dataset consists of both airplane companies and grocery stores. In these cases, it may be the industry-specific and related factors that account for a change in income. For instance, expensive products and services such as travelling are more affected by a recession period than high-frequency products such as grocery products. Hence, companies related to the travel industry might experience a decline,

while other industries may not. These industry-related factors have been taken into account in our thesis by including the industry as a control variable. In addition, trends, such as new technology, regulations or other factors may impact one specific industry as a whole, while other industries would not be affected.

Additionally, it may be that some industries will grow or decline as a whole relative to other more mature and stable industries; this may affect income growth. For instance, industries involving a large proportion of high-frequency products, such as grocery products, satisfy the basic physical needs of consumers, and 'all' consumers buy food somewhere. Thus, the whole market is divided among different providers, and there are limited ways to increase market share because one company needs to steal the competitors' customers. This may be difficult in industries like this where distance and availability may be the most important factors when choosing providers. These industries may have a more stable income because there is a lower possibility of creating a larger market itself. Other industries, such as the newspaper industry, may create a bigger market because the whole market may not currently be reached. For instance, some consumers may not subscribe to any newspapers. Therefore, these industries may have more of an opportunity to grow. This further illustrates how there may be a more natural difference related to industry that affects income growth, and this needs to be controlled for.

Industry might also have an effect on loyalty. By their very nature, some industries are more involved with the customers and have a deeper personal relationship and history with customers. A good illustration includes lawyers or doctors, where the relationship is often more personal, and the company has insights into more personal details than in, for example, the retail industry. Thus, the relationship is often built on trust, where you use the same provider multiple times (Fugelli, 2001; Hafstad, 2010). This illustrates how the level of loyalty may be related to the industry by the industry's very nature. In addition, loyalty may vary from industry to industry (Silseth, 2017). This leads to the two following hypotheses:

H6c: The company's industry has an effect on customer loyalty.
H7c: The company's industry has an effect on firm performance

Based on the theoretical perspectives in section 2.1.1, firm performance is affected by the interests of the company's assets, which is supported by Dahl (2006). Companies and their

shareholders require a return on their assets (Visma, n.d.b). If a company invested in newer and better assets, they would not do it if they did not think that they could get a positive return (Schølberg, 2009). Here, there is a clear link between assets and income. The relationship between assets and income growth is about how efficient these assets are used to generate income. An example of these assets could be new equipment or machines with larger capacity and/or that produce products with fewer errors. In this way, newer and better assets may work more efficient and produce a higher volume and quality. This may lead to companies being able to charge a higher price for their products, or it could reduce the cost- leading to higher margins, thus, the company may be able to reduce prices, but increase overall income as a function of higher sold volumes. This example illustrates how assets can impact income growth, however, whether larger or smaller assets are beneficial in terms of the efficiency to turn assets into income may be argued both ways. For one thing, a company with larger assets may draw more on those assets to be present in many cities, invest more capital into R&D and innovation, perform market analyses and find out what the customer wants and invest in 'branding' and marketing campaigns. This may lead to, among other things, higher excitement among customers, superior products and a more powerful brand, which again may lead to a relatively high income growth.

On the other hand, a company with smaller assets often indicates a smaller firm which often have fewer decision levels. In this way, a company with smaller assets may use all of their available assets to the best use 'all the time', which may result in better efficiency in generating income than larger companies. However, although larger companies often move slower, thus, their resources may not be put into best use 'all the time', larger companies have relatively larger total assets and resources to put into use, which may have a larger impact on the market. Finally, this provides the following hypothesis:

H7d): The company's assets have an effect on firm performance.

3.2.6 Summary

Our proposed research model illustrates our assumptions of how we think perceived firm innovativeness indirectly affects firm performance through the mediating variables of customer satisfaction and loyalty. In reference to our hypotheses, we believe that a higher perceived firm innovativeness has a positive effect on customer satisfaction and loyalty, thus improving firm performance.

4. Methods and Data

This chapter provides a description of the research methods employed to empirically test the hypothesised model. The focus of chapter 4 is to explain our choice of research design and strategy, in addition to how we obtained our data. In addition, we describe how our data were prepared and checked; this includes an assessment of defining our variables and predicting missing values to obtain a complete dataset.

4.1 Research Design

A research design is defined as *'the framework for the collection and analysis of data to answer research question and meet research objectives providing reasoned justification for choice of data sources, collection methods and analysis techniques'* (Saunders, Lewis & Thornhill, 2016, p. 726). With a suitable design, we can ensure that our *'substantive and statistical assumptions for the data analysis (...) are met'* (Smith, 2014, p. 27). Therefore, a sound choice of research design is crucial.

The literature usually distinguishes between exploratory, descriptive and explanatory designs (Saunders et al., 2016). Which research design is most suitable for a thesis, depends on various factors, such as the research question, existing knowledge and time and other resources available (Saunders et al., 2016). Our research question is not comprehensive but relatively structured and descriptive in nature. This lent itself to the use of a descriptive design. Moreover, as presented in the theoretical perspectives, there has been some research on how perceived firm innovativeness, customer satisfaction and loyalty affects profitability, but not how it affects firm performance. In this way, some knowledge has been developed in this field, meaning we can make comparisons between the established theories and our results. This design further gives us the opportunity to describe the characteristics, correlations and categories of the studied subject (Saunders et al., 2016). Descriptive research is useful for understanding correlations, and because the purpose of this thesis is to describe whether there is a relationship between the variables by testing our hypotheses derived from theory, the descriptive approach is the best option.

4.2 Research Approach

The literature distinguishes between three different types of research approaches: deductive, abductive and inductive, respectively (Saunders et al., 2016; Jacobsen, 2015). The differences among these approaches involve the use of theory. In the current thesis, we first want to look at what the established theory says about how the constructs of interest in our research question affect each other, and then complete our own study by conducting a data analysis. Therefore, we move from the general to the special (Saunders et al., 2016); this means that we start with the theory to investigate if this can be displayed in reality. In accordance with the literature, it is advisable to use a deductive approach for this type of research (Saunders et al., 2016). A deductive research approach is also appropriate for the current study because there already is some research in the field related to the current study. Here, we want to test the validity of the existing theory and knowledge by testing our hypotheses. The purpose is therefore to generalise (in reference to external validity). Further, this approach lends itself to a research design with a high degree of structure.

Furthermore, we chose to use a quantitative method in order to answer our research question. This gives us the opportunity to study a phenomenon from the outside by having indirect contact with the cases through abstract indicators. In this way, we can go more in width of the phenomenon, rather than in depth. Such a method is well suited for testing hypotheses and seeking to find the typical of the selection (Saunders et al., 2016). Further advantages of the quantitative method are that the data are easily to systemise, allowing us to handle large amounts of data with statistical analysis programmes. Furthermore, by using more ‘cases’ and fewer variables investigated, the interest lies in finding patterns in the data of all the ‘cases’, rather than individual viewpoints. In this way, we may be able to find something in the extensive relationships and variations in the data. Through statistical analysis, we may uncover relationships between several different variables at the same time and how they work together. In this way, we can be relatively sure that we have measured the conditions we wanted to measure, and we can say with some certainty how much of the variance in the data material can be explained by the independent and mediating variables (Saunders et al., 2016).

4.3 Research Strategy

The research strategy implies a *'general plan of how the research will go about answering the research question(s)'* (Saunders et al., 2016, p. 726). Furthermore, a strategy should be chosen based on the research design and approach. In our case, we use multiple-source secondary data already collected by Bekk, the NII and NCB while supplementing these data with our own from Proff and annual reports (Saunders et al., 2016). Multiple-source secondary data are *"data created by combining two or more different data sets prior to the data being accessed for the research. These data sets can be based entirely on documentary or on survey data, or can be amalgam of the two"* (Saunders et al., 2016, p. 721). Our data collection and selection will be further explained in section 4.4.

Using data from multiple sources is highly beneficial because it eliminates several types of problems, such as common method bias[3] (Podsakoff, 2017; Podsakoff, MacKenzie & Podsakoff, 2012). In this way, we can enhance the possibility of finding a result that shows the *'true relationship'* (Podsakoff, 2017, p. 7). This gives us an adequate database, where we can analyse the relationship between the different variables in the research question using statistical and graphical techniques (Saunders et al., 2016). Furthermore, our analysis is at the organisational level, and we analyse our data as a cross-sectional study, which can be defined as *'the study of a particular phenomenon (or phenomena) at a particular time, i.e. a "snapchot"'* (Saunders et al., 2016, p. 714).

In sum, we have chosen to use a descriptive design, a deductive approach and a quantitative methodology. We are using multiple-source secondary data from the NII, NCB and Bekk, and data from Proff and annual reports. Additionally, we are analysing data from 2016 to 2017 as a cross-sectional study.

[3] Refers to *"the type of deviation caused by the similarity in methods used to obtain the data"* (Podsakoff, 2017, p. 7). Common method bias is also called common method variance, which refers to *"variance that is attributable to the measurement method rather than to the constructs the measures represent"* (Podsakoff et al., 2003, p. 879).

4.4 Data Collection and Selection

To analyse the relationships and effects in our proposed research model, we need data about perceived firm innovativeness, customer satisfaction, loyalty and firm performance. The data about firm performance were collected through annual reports and financial registers. CSI and BI Norwegian Business School (BI) have developed indexes that measure the first three variables which will be used in this thesis, both representing the values on a scale from 0 to 100. In the following, we will describe these indexes in more detail.

4.4.1 The Norwegian Innovation Index

To measure Norwegian companies' innovativeness, researchers at the CSI at the NHH have developed the NII (see conceptual model in Appendix A). This is a new approach of measurement and the first national ranking of important industries and companies' innovative ability where the jury consists of the customers. The index ranks responses from approximately 20,000 customers of 79 companies in over 20 industries (NHH, 2017c). The index is developed based on a theory and measuring instrument that measures the customers' perceptions of Norwegian companies' innovativeness. In other words, the index measures companies' innovations regarding how the customers experience it, which is consistent with our research question and is the main reason for using the NII in our research.

As Appendix A illustrates, according to the NII, there are around four innovation areas of the companies that are visible to customers. Perceived firm innovativeness reflects the customer's overall evaluation of the company's ability to develop in one or more of the four innovation areas. Thus, these are the areas that affect the customer's evaluation of the company's ability to innovate. These areas include the value proposition, which entails *'what the company offers to the market'* and *'the value for the customer'*; changes in the value delivery, which is defined as *'how the service is delivered to the customer'*; changes in the relational experience over time, which implies the relationship between the service provider and the customer, or *'who the service is about';* and changes in the interaction space, which implies *'where the service is delivered'* (Lervik-Olsen et al., 2016, p. 3; Kurtmollaiev et al., 2018; Andreassen, 2016; Christensen, Anthony, Berstell & Nitterhouse, 2007; Edvardsson & Olsson, 1996; Lovelock & Wright, 1999; Wirtz & Lovelock, 2016; Bitner, 1992; Carbone & Haeckel, 1994; Zomerdijk & Voss, 2010). Common to all segments is that perceived innovativeness has

strong and clear consequences for whether customers perceive a company as relatively better than its competitors. As illustrated in Appendix A, the NII includes the three following variables: 1) perceived innovativeness (I), 2) the company's relative attractiveness in the market (RA), and 3) customer loyalty (L). RA is a measure of how attractive the customers experience the company compared to other alternatives, (NHH, 2017b). However, we will only use perceived firm innovativeness and loyalty from this index because these are the only relevant measurements for our research question and hypothesised research model.

We chose to use the NII to measure perceived firm innovativeness and loyalty because the CSI's purpose and approach to innovativeness and is measured in line with what we want to investigate. The first purpose of the CSI's measuring instrument is to provide Norwegian companies with feedback on how their customers experience the company's innovations and perceive the company's innovativeness - abruptly and relatively (Lervik-Olsen et al., 2016). This is because, according to the CSI, sustainable businesses have three characteristics: first, they deliver high-quality products and services; second, they innovate on a regular basis; and third, they launch innovations that trigger active emotions (NHH, 2017c). The NII can provide companies with information regarding how customers perceive the companies regarding innovativeness, the level of innovation in Norwegian industries and overall innovativeness for the companies over time. The current thesis can contribute to saying something about the possible positive effects of innovativeness and strength of the proposed relationships.

4.4.2 The Norwegian Customer Barometer

The NCB is a research programme established in 1995 and developed by BI with Barcode Intelligence AS. The NCB is founded on high-quality international research and is in line with corresponding national customer indices in countries such as the United States, Sweden, Germany and Taiwan (BI, n.d.). The NCB is an annual data index on customer satisfaction where the data are collected among Norwegian households, here focusing on the relationships between customers and suppliers, both in the consumer and the business markets (Silseth, 2018). The range of industries and companies measured in the NCB is based on what is included in the 'Norwegian households shopping cart'. This means that the industries were chosen based on what private households spend their money on.

The conceptual model of the NCB is based on a theoretically developed relationship model designed to measure the level (skill) and impact (importance) of different areas that are important for customer satisfaction and loyalty (see Appendix B for the conceptual model) (Barcode Intelligence, n.d.), and here, customer satisfaction is relevant for the current study. To measure customer satisfaction, the NCB uses the four variables: price, material quality, 'ability to react' and 'personal treatment'. Together, the value of these different variables creates an overall value indicating the average customer satisfaction for a specific company, which is what we will use in this thesis.

The NCB aims to be the benchmark used by Norwegian companies for several comparisons, including comparisons with other businesses, and with other industries. Furthermore, the NCB aims to be basis for comparison over time and as a starting point for a company's own and more extensive investigations. This indicates that the values of NCB are appropriate to use for comparing different companies across industries, which is important for our analysis. In addition, the NCB wishes to be a driving force for disseminating results and knowledge that contribute to increased value creation in Norwegian businesses. In other words, the NCB investigates which Norwegian businesses consumers are the most satisfied with (Barcode Intelligence, n.d.), giving companies the opportunity to see what is of importance or not, which makes it easier to prioritise efforts towards creating the most value for customers.

The companies measured by both the NII and NCB are included because to a certain extent, they should be nationwide and together account for about 70% of industry turnover on a national basis (with some exceptions). In other words, the companies involved in the survey are the largest players in each industry (Pedersen, 2018; NHH, 2017a).

4.4.3 Limitations of the NII and NCB

As described, the NII and NCB provide relevant data on regarding our research question and hence, what we want to measure and analyse. However, there are several limitations with the NII and NCB. Although a lot of the companies in the NCB used in the research have five stars for customer satisfaction, there is still great improvement potential for most of the companies they measure. Overall, the surveyed companies averaged 72-point customer satisfaction in 2018, which is a slight decline of 0.3 points compared with 2017 (BI, 2018). Norwegian companies here are shown to score quite similar in terms of customer satisfaction. This leads

to the question of what really makes these companies different. Perhaps it could be their ability to launch new ideas. The fact that many of these companies are concentrated around a small interval in terms of scores on the indexes, can have implications for the current study because it will be difficult to measure the effect of innovativeness through mediating effects that are similar. In addition, it is a static model that does not account for other external factors and explanations when we use the index values directly. For instance, electric utilities continue to see a downturn that started in 2017, and several of the players in this area have seen a significant drop in customer satisfaction (BI, 2018). An explanation for this decline in the industry may be due to high electricity prices, transition to a common invoice (for power and grid rent) and the replacement of power meters. This shows that factors the companies do not have direct control over can affect customer satisfaction, to some level.

According to BI (2018), businesses need to have a customer satisfaction of around 80 points or more to see the full impact in terms of increased loyalty. Silseth in BI (2018, p. 3) recommends that *'many of the chains need to think new and come up with measures that increase the value and experience of the customers'*. If not, Silseth is afraid that the decrease of customer satisfaction and move to e-commerce will increase (BI, 2018). This missing link regarding the full effect of customer satisfaction towards loyalty may be because of firms' innovativeness. Coming up with innovations that may increase satisfaction, so companies might be able to realise the full effect of satisfied customers in terms of increased customer loyalty and firm performance. In this regard, we see it as a very interesting way to measure how perceived firm innovativeness may affect firm performance through customer satisfaction and loyalty.

Therefore, by combining these two conceptual models, the NII and NCB respectively, and by focusing on the variables perceived firm innovativeness, customer satisfaction and loyalty, we can create the foundation of our dataset. Neither the NII or NCB discuss the relationship between these three variables and firm performance. Therefore, we need to collect financial data as well, illustrating both why our research is novel and important regarding the possibility of discovering new knowledge in the areas of innovativeness, customer satisfaction, loyalty and firm performance. Moreover, the NII and NCB are only theoretical models, meaning that it is impossible to account for all the possible conditions that may affect customer loyalty and firm performance. This implies that because the NII and NCB are static models, they do not necessarily illustrate the exact reality of the companies' situations. We try

to cope with this limitation by including the respective control variables that were presented in section 3.1 and 3.2.5.

4.4.4 Proxy for Firm Performance

To measure the possible effect perceived firm innovativeness has on firm performance, we used income growth as a proxy. In reference to our hypotheses we assumed that a higher level of innovativeness will lead to a positive effect on firm performance through two mediating effects. Thus, by looking at the income growth we were able to measure whether customers improve firm performance as a result of perceived firm innovativeness. In addition, our dataset includes companies from a variety of industries and companies with big differences in terms of scope, size and financial numbers. For instance, the bank industry and the taxi industry have very different income in terms of absolute numbers. Furthermore, by using income growth instead of absolute numbers, we accounted for these 'natural' differences between companies. The income growth ratio was measured using the income for 2017 and subtracting the income of 2016 and then dividing it by the income of 2016. This gave us the income growth number for 2017. We executed the same formula using the income of 2015 and 2016 to get the income growth rate for 2016.

In general, income can be defined as the earning of money related to the sale of goods and services and/or interest on bank deposits, shares, bonds or something similar (Visma, n.d.a). In addition, income increases an enterprise's money supply. However, in the present thesis, we looked at income as a function of the firm's sales income, meaning that we excluded financial income such as interests from shares and bonds. This is because the customers only affect the company's primary business, which is reflected in the income from sales. Moreover, because the current thesis and our respective variables are based on the customer's perspective, we needed a measurement of firm performance that reflects the same.

Thus, we excluded the cost because this component will give a misinterpreted picture of how perceived firm innovativeness affects firm performance: the customers cannot directly affect the company's cost, but also the cost represents other possible explanations and components when there is a shift in firm performance. Examples of these factors may be industry-specific regulations or requirements that can increase the costs of the companies operating in that industry or company-specific factors such as increased prices from the suppliers that may

increase the cost level. Even though innovation might have had a positive effect on the customers and the firm's income, cost factors outside the customer's control can undermine this change. However, we acknowledge that a company's development of income can be used as a proxy because it affects firm performance and profitability. At a stable cost level, an increase in income will lead to greater profitability; likewise, at a stable income level, a reduction in cost will lead to greater profitability. However, if the costs fluctuate, an increase in income will always lead to greater profitability compared with a stable income.

4.4.5 Selection Methodology

To measure perceived firm innovativeness and customer loyalty, we used the NII, and to measure customer satisfaction, we used the NCB. We also collected the NCB loyalty values as a backup for the NII loyalty values. The NII data come from 2016 and 2017, while the NCB contains data from 2006. However, because we needed numbers from both of the indexes, we only collected the satisfaction and loyalty data of the NCB from 2016 and 2017. In total, 57 companies were represented on the NII from 2016 and 75 companies in 2017. Because we needed the data for both years, we could only use the companies that were registered on the index for both 2016 and 2017. Thus, we ended up with 57 companies from the NII. With this sample, we could collect satisfaction and loyalty data from the NCB and financial numbers for these companies. In total, it was 44 of the 57 companies that had NCB numbers for 2017, and 42 that had numbers for 2016. Additionally, we collected financial data from annual reports and Proff to obtain numbers for income growth. The dataset we obtained from the collaboration with Bekk went up until the year 2016. Therefore, we needed to collect financial numbers for 2017 to complete the dataset. In addition, we needed to collect data for the control variables, namely assets, size and age, and categorise the companies to the respective industries.

4.4.6 Excluding Cases

After the data from both indexes had been collected, we had a sample size of 57 companies with some missing NCB values. However, some companies had to be removed from the dataset. 'Vinmonopolet', 'NAV' and 'Posten Norge' were removed from the dataset because these are close to being monopolies, so these companies will define their own industry, and it

would be difficult to compare them with other companies. Initially, Bekk had also removed 'Zalando' because they only found the German parent company, which did not report income in Norway, and 'OneCall' because they could not find the income associated with the specific brand. In addition, we removed 'Nordea' from the dataset because it was not possible to find the financial numbers for 2017 that was consistent with data from previous years; this was because of their restructuring of the department, going from being a subsidiary to a branch. After excluding these cases, we ended up with a sample size of 51 companies.

4.5 Data Collection

Our dataset has a large variety of industries and companies with different structures, reporting standards, set-ups, organisational structures and scopes. Some companies report their financial numbers nationally and have a separate financial statement for the Norwegian segment, other companies that operate internationally report for the Nordic market or globally as a whole, while some companies report financial numbers overall for the parent company. Therefore, we needed to segment the information for some companies to collect the data that would be relevant for the Norwegian market and on a brand level to make it consistent with what the indexes measure. In addition, some companies in our dataset consist of individually owned stores, where the income and assets could not be collected based on brand level, but instead needed to be collected from each individual store.

In addition, several of the companies are involved in different activities where some aspects of their businesses or offerings are not relevant in the sense that customers cannot impact these parts of the business and/or these parts were not consistent with the brand and industry that was measured in the indexes. For these companies, we only collected relevant income for the brand that the customers can impact. Furthermore, because the financial data were segmented to match the indexes, we also needed to collect age and size numbers consistent with the financial data. Because of these differences in the companies regarding the reporting method, structure, industry, international scale, multiple activities, and sources of income, it was not possible to use one source, method or database to collect the data. Based on these challenges, it was necessary – though time-consuming – to gather the data manually for each company. By doing this, we could ensure that we had correct and relevant numbers for each

company and year to make these numbers comparable and consistent with the indexes and to minimise sources of error.

4.5.1 Income and Assets

To measure the effects of perceived firm innovativeness, we needed financial data representing the Norwegian customers and the specific brands, to make it consistent with what the NII and NCB measure. Therefore, we only collected financial data for the Norwegian segment. We also limited the collected income to the brand and industry that the indexes measure by excluding other sources of income that the customers cannot impact or associate with the brand. For instance, gain or losses related to other investments can lead to fluctuations in income and may lead to wrong conclusions in our analysis. The evaluation of what sources of income to exclude was subjective and in some instances, it could be argued both ways regarding what to include for the different companies and industries. To be consistent and make sure our selection was not biased, we established some guidelines which were important to follow, especially within the same industry. Further, since we used income growth the most important thing is consistency in the numbers within one company in terms of what was included for the different years, which was easy to control.

In addition, some companies reported their financial numbers in other currencies. Therefore, it was important to convert these into the right currency for consistency. According to accounting principles, the income statement numbers should be converted into other currencies based on the average exchange rate for the fiscal year, while numbers from the balance sheet are based on the exchange rate at 31.12. Based on this, we chose to do the same in our dataset. In the following, we will explain how income and assets were collected through a combination of annual reports and Proff.

4.5.1.1 Consolidation of Companies

In collecting of the data for some companies, it was not possible to find the information on an aggregated level through annual reports or Proff. For instance, ‘Møbelringen’ is a voluntary owned chain where each individual store is legally responsible for its operations, so there was no aggregated overview of the data we needed. For these companies, we had to find the financial numbers for each individual store and then aggregate them. Companies in our

dataset such as ‘Meny’ and ‘Kiwi’ are part of the parent company ‘NorgesGruppen’, which does not have separate annual reports for each brand. Moreover, what complicated this further was that, for instance, several of the ‘Kiwi’ stores are individually owned stores that are promoted under the brand name, thus it was relevant to include. In order to make the data consistent with the indexes, we needed financial data on a brand level, so we collected financial data based on the parent company, subsidiaries and stores on Proff to obtain income and assets at the brand level.

Furthermore, some of the companies’ stores had been closed because of bankruptcy, and some companies had opened new stores. This may be relevant for the analysis because bankruptcy can be a consequence of lower income, and opening of new stores is often a sign that the company is doing well. Therefore, we chose to include these stores in our dataset. Furthermore, four ‘Bohus’ stores had data from previous years, but the financial numbers for 2017 were not published yet, but they were still operating. Thus, if we included these stores, the aggregated income for 2017 would not represent the operating stores. Relatively to 2016, it could look as though they had a drop in sales, which may not necessarily be the case. Therefore, removed these four stores of ‘Bohus’ from the dataset.

4.5.1.2 Collection from Annual Reports

We also had some companies where the income was related to different activities and had to be separated to obtain the relevant income. For instance, ‘Thon’ operates in different business activities, such as hotels and property. In our study, ‘Thon’ is categorised in the hotel industry, which is the industry a private consumer can impact income and the industry they associate with ‘Thon’. To collect numbers at a national level and only the income that customers contribute to, we had to go through the annual reports for some of the companies. For instance, to collect income related to the Norwegian segment for ‘Tryg’, we had to use the geographical segmentation in the notes of the annual reports. However, the assets were only reported on a group level and not allocated to the different segments. Therefore, we were not able to collect relevant asset numbers for some of the companies.

4.5.2 Size

To measure size, we used average FTEs. Because the financial information was segmented, it was important to collect the FTEs that contributed to the income that had been registered. However, one large obstacle was that several of the companies operate with different segment information and measurements of size. Some use average FTEs, others use the average number of employees, and while some separate the proportion of employees to different countries, other companies does not. This made it difficult to collect data regarding size. Therefore, a combination of using annual reports, segmentation in annual reports, comparing salaries against employees, 'Proff Forvalt', emails to respective companies, news articles and the company's webpage were used to confirm that the data collected were correct and consistent with the financial numbers registered. For instance, companies like 'Thon' and 'Esso', operate in multiple different industries and countries; we only collected the data based on income related to Norway and the hotel- and fuel industry respectively. Hence, only a proportion of the income for 'Thon' and 'Esso' were gathered, and therefore collecting the total FTEs in Norway and/or for the whole company would be inconsistent, because these FTEs contribute to a much higher income than what was collected. To check that the income and FTEs collected were a match, we often used a combination of different sources (e.g. annual reports, Proff Forvalt, home page, salaries) to make sure we got the right numbers. This way, we were able to match the FTEs with the collected income, making our variables consistent and comparable.

However, for some companies we were not able to find a size that matched the collected income. In addition, some companies have a different set-up, making it impossible to find these numbers. For instance, 'Møbelringen' wrote to us in an email that the number of FTEs on a brand level is not something they even know. After emailing all the remaining companies and reporting the size from the ones who responded, we ended up with seven companies that did not have size.

4.5.3 Age

To report the age for the different companies we had to find the year of establishment. The age of the different companies was collected through a combination of the company's web pages and annual reports. Some companies were established abroad and entered the

Norwegian market at a later point in time. In addition, some companies have gone through mergers and acquisitions, and have been sorted into the current brands and companies at a later date. Based on these difficulties, it was important for us to establish rules and guidelines when collecting years of establishment to make sure we were consistent. As a main condition, we based the collecting procedure on the official year of establishment, except if the company was initially established abroad, which, then, we used the year the company came to Norway.

For instance, IKEA was established in 1958 in Sweden, but the first store in Norway opened in 1963; thus, we used the latter. Some companies, such as different telecommunication companies, fuel companies, insurance companies and news companies started with different names, and have gone through large restructuring phases and mergers. However, the customers who lived through these transitions already have an experience, perception and something they associate with the brand, even though the companies have merged or changed names. Also, these companies did not start from scratch because they had existing customers, assets, experience and so on. In addition, companies that engaged in mergers, acquisitions or changes in name or concepts tended to still refer back to their roots, history and experience in the market. In this way, we see the first year of establishment as most relevant for us to use in this specific study. Furthermore, because the index values are based on the brand level, we used the establishment year for the firm as a whole, not the individual stores or departments of the company.

4.5.4 Sources of Error

There are also a number of errors that can occur when the data are gathered manually. Especially in the current study, where some of the data collected are segmented and only a proportion of the numbers are gathered to make them consistent with the other variables, this may increase the chance of inconsistency across companies and industries. For instance, ‘Sbanken’ and ‘DNB’ are companies with different structures, activities and investments. Thus, because only a proportion of the income was collected it is relatively difficult to ensure that the financial information collected are completely based on the same criterias. However, because we are using income growth as a proxy for firm performance, the most important thing, was that the financial numbers were consistent for the different years within a company, thus showing correct development. Therefore, we are only compared income growth across firms; therefore, many of the possible errors related to inconsistencies across

firms because we did not collect all the income, disappeared. Further, this minimises the impact of possible errors because it was easy to ensure that the numbers within one company were consistent in terms of what sources of income are included and that these sources are based on the same market, scope, industry and so on.

Another error that may occur when the data are manually collected is entering in errors. For instance, some numbers were reported in Swedish currency, some in Norwegian, some in thousands and some in millions. Hence, the chance of writing the wrong number or simply create a typo increases. However, our dataset was initially developed by Bekk and then supplemented with additional data and updated financial information by us. Therefore, when we reported the data we doubled checked the numbers collected by Bekk and corrected a few typos. This helped us minimise this source of error.

4.6 Data Preparation

First, before conducting the data analysis, we made sure that all the variables were easy to compare and that the outcome could be read in the correct way. Our hypothesis includes four control variables, whereas age was collected based on year of establishment, this was converted into age to avoid interpreting the results the opposite way.

We used Statistics Norway's standards as the basis for classifying industries (SSB, n.d.). After grouping the companies in our dataset according to this categorisation, we ended up with five industry categories: retail; finance and insurance; information and communication; transportation; and accommodation and dining. The industry IDs were recoded into dummy variables (Johannessen, 2007), resulting in five new dummy variables of which four were used in the regression analysis. One dummy variable was omitted from the regression because it could be generated through a linear combination of the other four. Otherwise, the variables may had been too correlated and may have given misleading results in our analysis (University of California, Los Angeles, n.d.).

4.6.1 Missing Data

Our initial sample size was 51 companies, with 13 companies missing values from the NCB for 2016 and 2017. Because satisfaction is one of our mediating variables, we found it important to have as few missing values on this specific variable as possible. After evaluating the NCB indexes dating back to 2006, we saw that the NCB values did not fluctuate a lot within one company and that most companies ranged between 70 and 80 on the index. Most importantly, we found that 10 of the 13 companies had been on the NCB in a number of previous years. Based on this, we concluded that it was acceptable to predict good estimates for the companies that did not have NCB values for 2016 and 2017. For the 10 companies that had NCB values from previous years, we predicted the numbers for 2016 and 2017; this was done using linear prediction with ordinary least squares (OLS), which minimises the squared residuals. The three remaining companies were not represented on the NCB at all from 2006 to 2017, except for one in 2017. Thus, we did not have a reference point or something that could indicate what the estimate should be. Because these values vary across different companies and because this is based on how the customers view the specific brand, it is difficult for us to give a good prediction of the NCB satisfaction measures without any point of reference. Therefore, we chose not to estimate customer satisfaction values for these companies, so there were three missing values in 2016 and two in 2017.

In total, we were missing numbers for seven companies for both assets and size. We chose not to estimate these values because these companies did not segment their assets and size into different segments, thus, it might not be a reasonable or correct way to do it. In addition, the income was segmented because some companies operate in multiple industries, and because the industry standards and ratio of income over assets differ a lot across companies, we would not be able to provide good estimates of assets and size. Moreover, these were only control variables that were used to check our research model. The cases with missing values will be excluded when these variables are used in the analysis, and if there is no effect, we can exclude the variable for further analyses and use the whole sample again.

4.7 Ethical Consideration

Research ethics refers to the standards of behaviour that guide our conduct in relation to the rights of those who become the subject of our work, or are affected by it (Saunders et al.,

2016). According to Saunders et al. (2016) a number of ethical issues can arise during the different stages of a research process. Hence, we as researchers are not free from exercising good ethical judgement, and must be methodically qualified to conduct research with validity and quality, and maximize the fact that critical considerations take precedence over preconceived perceptions and assessments.

The collected data in the current study are all from public sources where everything is anonymised. In addition, we assume that the researchers behind the NII and NCB have taken into account ethical guidelines when collecting data from consumers to develop their models, and hence that the data cannot be linked back to the respective respondents.

In addition, it is important that our research is as "true" as possible and we will therefore ensure that reliability and validity remain on a sufficient level. Therefore, as far as possible we have been objective and had a critical mind when collecting data in order to not allow subjective opinions affect the collection. In addition, we have tried to maintain our objectivity, integrity and quality during the stages of analysing and reporting our research. Our motivation for the current study has been to present in an honestly way and make it easy to understand how we have conducted our research.

5. Data Analysis

In this chapter, we provide the relevant analysis for our hypothesised model. Hence, we test the hypotheses through a multiple linear regression model and the mediating effects by using PROCESS macro software. Section 5.2.3 presents the results from the hypotheses testing and provides an overview of the main results.

All analyses were conducted using the statistical analysis tool IBM SPSS Statistics version 25 and the additional program Process Macro v3.1 for IBM SPSS.

5.1 Mixed-Effect Modelling (Merging 2016 and 2017)

Our initial dataset consisted of data from 51 companies over two years. To enhance the generalisability of our results, we merged the data from the two years to analyse them as cross-sectional data. Thus, we went from 51 to 102 cases. This is a common method used by researchers when trying to *'integrate information from two different cycles to increase the sample size of a small domain'* (Wendt, 2007, p. 2). As a robustness check of this operation, we used mixed effect modelling.[4] To have a meaningful analysis, we needed similar samples from both sizes. From Appendix C, there was a change in the coefficients. However, this change was not significant, meaning that the difference between the companies was not significant, hence indicating homogeneity. Therefore, it is considered acceptable to merge the data.

5.2 Hypotheses Testing and Results

In order to test the hypotheses, regression analyses were performed, Hierarchical Linear Regression (HRM) and mediation, respectively. For all hypotheses, the complete dataset has been used to derive the results.

[4] '*Mixed effect models are fundamental tools for the analysis of longitudinal data, panel data and cross-sectional data'* (Peng & Lu, 2012, p. 109). A *'method of analysing repeated measures data'* (Beaumont, 2012, p. 3).

5.2.1 Hierarchical Linear Regression

Multiple regression analyses, in this context the HRM, were conducted to identify possible causal relationships and test our hypothesised model. Regression analyses test whether the variance in an endogenous (dependent) variable, Y, can be explained by the variance in one or more exogenous (independent) variables, X_1, X_2 … X_k, by assuming that Y is a linear function of X_1, X_2 … X_k (Hayes, 2013). Multiple regression can be used to explore the relationship between one continuous dependent variable and a number of independent variables or predictors (Pallant, 2016; Statistical Solutions, n.d.a). This technique is based on correlation but allows for a more sophisticated exploration of the interrelationship among a set of variables. In HRM, the variables in the research model were entered in a predetermined order based on theoretical grounds, with each independent variable being assessed in terms of what it added to the prediction of the dependent variable after the previous variables had been controlled for (Pallant, 2016; Boduszek, n.d.). Then, the overall model and relative contribution of each block of variables were assessed. For our analysis, we chose a 5% level of significance because a 95% confidence interval is common in our field of research.

A number of assumptions are related to this method of analysis (Pallant, 2016; Berry, 1993). Therefore, preliminary analyses were conducted for the variables in our hypothesised model to ensure no critical violation of normality,[5] linearity,[6] homoscedasticity[7] and multicollinearity[8] (Saunders et al., 2016, pp. 548-549; Pallant, 2016). Substantial deviations from normality will affect the reliability of the t and F test, particularly for small samples, potentially invalidating all the resulting statistical tests (Hair, Black, Babin & Anderson, 2010). The initial normality test of the dependent variable showed several outliers and a skewness of 8.701 and kurtosis of 83.077 (Appendix D). This test focuses on the normality of residuals', (error) distribution and was preformed to check the dependent variables to identify outliers and other serious deviations that could affect our results. Because multiple regression can be very sensitive to outliers and the respective values of skewness and kurtosis were extreme, we needed to remove some outliers. After removing the most extreme outlier, we

[5] Normality *'is used to describe a symmetrical, bell-shaped curve, which has the greatest frequency of scores in the middle with smaller frequencies towards the extremes'* (Pallant, 2016, p. 59).
[6] Linearity refers to the degree of which the change in the dependent variable is related to the change in the independent variables (Pallant, 2016).
[7] Homoscedasticity implies *'the extent to which the data values for the dependent and independent variables have equal variances'* (Saunders et al., 2018, p. 717). Homoscedasticity describes a situation in which the error term is the same across all values of the independent variables (Statistical Solutions, n.d.b).
[8] Multicollinearity implies *'the extent to which two or more independent variables are correlated with each other'* (Saunders et al., p. 712).

obtained a decent result concerning normality for further analyses (Pallant, 2016). The case that was removed was a company that merged in 2016, leading to very misleading financial information (15 to 16), therefore it was only necessary to remove 2016. However, there were still some outliers, but according to Pallant (2016), it is acceptable to have some outliers in the regression analysis. As for perceived firm innovativeness, customer satisfaction and loyalty respectively, we also had some outliers but had decent scores, so we did not need to take any action concerning these (Appendix D) (Pallant, 2016).

The skewness and kurtosis[9] should be more or less around 0 to fulfil the assumption of perfect normality (Pallant, 2016). However, values of around +/-3 are acceptable (Kline, 2011). In addition, if the probability for the Kolmogorov-Smirnov and Shapiro-Wilk tests is greater than 0.05[10], the data are considered to be normally distributed (Saunders et al., 2016). Table 2 shows that all our variables are approximately normal distributed, with some deviations. Ideally, the scores on each variable should be normally distributed (Pallant, 2016). However, it is rare that a variable is perfectly normal and distributed (Pallant, 2016; Saunders et al., 2016). Thus, although some of the constructs may be non-normal, the deviation can be considered small. Therefore, we chose to continue the further analyses, even though our dependent variable and independent variable were not completely fulfilling the assumption for normality.

Table 2:
Descriptive Statistics and Tests of Normality

	Skewness	Kurtosis	Kolomogorov-Smirnov	Sharpiro-Wilk
Income Growth	1.048	5.115	0.006	0.000
Customer Loyalty	0.131	0.996	0.200*	0.191
Customer Satisfaction	-0.632	2.162	0.200*	0.004
Perceived Firm Innovativeness	1.048	1.922	0.000	0.000

*. This is a lower bound of the true significance
a. Lilliefors Significance Correction

The results from the linearity test shows that the variables are more or less related in a linear (straight-line) fashion, with some deviations (Appendix E). According to Pallant (2016) and Saunders et al. (2016), this is acceptable. Further, the scatterplots show that the assumption of all variables being uncorrelated with the error term is more or less fulfilled with some outliers

[9] Skewness is a measure of the asymmetry and kurtosis is a measure of 'peakedness' of a distribution (Hair et al., 2010).

[10] For either statistic, a probability of 0,05 means there is only a 5 percent likelihood of the actual data distribution differing from a comparable normal distribution by chance alone.

(Appendix E). In order to fulfil the requirement of homoscedasticity the residuals should be roughly rectangular distributed, with most of the scores concentrated in the centre (along the 0 point) (Pallant, 2016; Boduszek, n.d.). Here we do not want to see a clear or systematic pattern to our residuals[11] (e.g. curvilinear, or higher on one side than the other). According to Pallant (2016), it may not be necessary to take any action if we only have a few outliers, which is the case for the current study. Further, testing for multicollinearity, the Coefficient Table shows the tolerance value and the VIF value (Appendix E). As we can see all the T values are over 0.10 and all the VIF values are below 10. This indicates that the assumption for multicollinearity of the regression model is met, which means that multicollinearity is not present in the respective variables[12].

5.2.1.1 Hierarchical Linear Regression Analysis

The HRM was used to assess the ability of perceived firm innovativeness, customer satisfaction and loyalty to predict firm performance after controlling for assets, age, size and industry. To complete the HRM analysis, we used Bodusek's (n.d) approach. Assets, age, size and four of the five computed (dummy) industry variables were entered in block 1, and in block 2, perceived firm innovativeness was added, explaining 4.5% and 5.1% of the variance[13] in income growth, respectively (Table 3). Finally, in block 3, both of the mediating variables – customer satisfaction and loyalty – were included, and the total variance explained by the model as a whole was 5.0%, F (10, 70) = 1.419, p = 0.190 (Table 3 and Appendix E). Customer satisfaction and loyalty explained -0.1% of the variance in income growth after controlling for age, assets, size, the four computed industry variables and perceived firm innovativeness, R squared change = .022 F change (2, 70) = 0.935, p = 0.398 (Table 3). The results showed that none of the control variables were significant towards income growth. The results of the HRM analysis with the dependent variable income growth are shown in Table 3, as well as Appendix E.

[11] Tabachnick and Fidell (2013) define outliers as those with standardised residual values above 3.3 (or less than -3.3).
[12] Pallant (2016) recommends that a very small tolerance value (0,10 or below) or a large VIF value (10 or above) would be of concern, and indicate multicollinearity.
[13] According to Pallant (2016, p. 162), *'when a small sample is involved, the R square value in the sample tends to be a rather optimistic overestimation of the true value in the population. The adjusted R square statistic 'corrects' this value to provide a better estimate of the true population value.'* Therefore, since we have small sample we choose to report this value, rather than the normal R square value.

Table 3: Coefficients and Model Summary (Income Growth)

	Model 1		Model 2		Model 3	
Variables	Std. Coeff β	Sig.	Std. Coeff β	Sig.	Std. Coeff β	Sig.
Assets	-0.244	0.110	-0.226	0.140	-0.174	0.281
Age	-0.007	0.958	0.060	0.691	0.056	0.711
Size	0.336	0.037	0.272	0.107	0.274	0.105
Retail	0.171	0.542	0.129	0.647	0.171	0.546
Finance and Insurance	0.004	0.987	-0.057	0.801	-0.052	0.819
Info. & Com.	-0.077	0.733	-0.130	0.568	-0.045	0.850
Transport	-0.006	0.980	-0.006	0.981	-0.008	0.975
NII Innovativeness			0.155	0.229	-0.025	0.901
NCB Satisfaction					-0.122	0.416
NII Loyalty					0.306	0.183
Adjusted R Square	0.045		0.051		0.050	
R Square Change	0.129		0.017		0.022	
F Change	1.543		1.471		0.935	
Sig. F Change	0.167		0.229		0.398	

Dependent Variable: Income Growth

We also believed that three of our control variables might explain some of the variation in customer loyalty. To check for this relationship, we performed a separate HRM analysis in which customer loyalty was used as the dependent variable. In this analysis, we used the three control variables that might have an impact on loyalty in block 1, including size, age and industry, which ended up explaining 15.4% of customer loyalty. Further, we added perceived firm innovativeness in block 2, which explained 64.8% of the variance in customer loyalty. Block 3 consisted only of customer satisfaction because customer loyalty was the dependent variable. The total variance explained by the model as a whole was 72.5% $F(8,72) = 27.349$, $p<.001$ (Table 4 and Appendix F). Customer satisfaction explained an additional 7.7% of the variance in customer loyalty, after controlling for age, assets, size, the four computed industry variables and perceived firm innovativeness, R squared change =0.073, F change (1,72) =21.277, $p<.001$ (Table 4). The results of our HRM analysis with the dependent variable loyalty are shown in Table 4, with supporting tables in Appendix F.

Table 4: Coefficients and Model Summary (Customer Loyalty)

	Model 1		Model 2		Model 3	
Variables	Std. Coeff β	Sig.	Std. Coeff β	Sig.	Std. Coeff β	Sig.
Age	-0.370	0.006	-0.013	0.882	-0.005	0.952
Size	0.100	0.418	-0.174	0.041	-0.123	0.103
Retail	-0.089	0.724	-0.257	0.120	-0.234	0.111
Finance and Insurance	0.196	0.307	-0.062	0.625	-0.103	0.357
Info. & Com.	-0.196	0.344	-0.442	0.002	-0.356	0.004
Transport	-0.085	0.707	-0.042	0.770	-0.062	0.629
NII Innovativeness			0.795	0.000	0.638	0.000
NCB Satisfaction					0.324	0.000
Adjusted R Square	0.154		0.648		0.725	
R Square Change	0.218		0.462		0.073	
F Change	3.429		105.073		21.277	
Sig. F Change	0.005		0.000		0.000	

Dependent Variable: NII Loyalty

What is of interest regarding this analysis is whether the control variables affect customer loyalty or not. In the final model, only one control variable 'information and communication' with a beta of -0.365 was significant ($p < 0.005$), indicating that only this industry variable was significant for customer loyalty (Table 3). Even though none of the hypotheses were supported in the HRM analysis, we can use the results to exclude some of the alternative explanations (Hayes, 2013). As mentioned, none of the controlling variables had a significant impact on income growth, while one of the four industries had a significant impact on customer loyalty (which may be because of coincidences). Based on these findings, we excluded the control variables in the mediating analysis.

5.2.2 Mediation Analysis

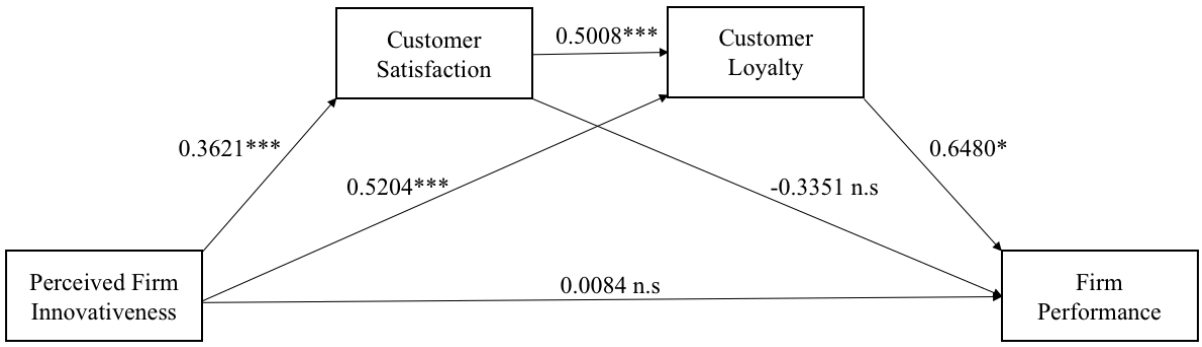
Although the regression analysis did not show any significant direct relations supporting our hypotheses, it did not indicate that there were no relations in the mediating model. As the Correlation Table (Appendix E) from the HRM analysis showed, there was a significant correlation between perceived firm innovativeness and income growth, as well as customer loyalty and income growth. This shows that there might be some mediating effects on income growth in our model that the multiple regression did not capture (Hayes, 2013).

An HRM analysis will not test the whole chain of effects, thus we cannot identify the amount of indirect effects and provide the amount of the total contribution to income growth of perceived firm innovativeness, customer satisfaction and loyalty. In the research model hypothesised in the current study, two mediators were included and hypothesised as working in sequence. For the purpose of analysing the full model in its hypothesised sequential order, a regression analysis using the PROCESS Procedure by Preacher and Hayes (2008) was conducted. PROCESS is a computational tool for path-analysis-based moderation and mediation analysis that can test models with mediators operating in sequence or in parallel (Hayes, 2012). Our model included two mediators – customer satisfaction and loyalty respectively – and came with the assumption that increased satisfaction leads to increased loyalty and then increased income growth. Hence, a causal chain model was appropriate to analyse these effects, hence the use of model 6 (see Appendix G) (Hayes, 2013). In the present study, we used a bootstrapping level of 50,000 samples. Furthermore, because we were using index values from different indexes and income growth, we looked at the standardised beta to eliminate the units of measurement (Pallant, 2016).

5.2.2.1 Direct and Indirect Effects

An overview of the results, and also those to be used in the testing of the hypotheses can be seen in Table 5. In reference to our research model we want to focus on the effects and relationships that we hypothesised with, although we account for and report other explanations that the results might show. For a full overview of the output given, see Appendix H. It should be noted that as bootstrapping entails selecting new cases from the original set several times, the bootstrapped intervals and results will differ slightly each time the macro is run, as cases are selected randomly. The outputs from the mediating analysis gives us the relationships shown in Figure 2.

Figure 2:
Overview of the Direct and Indirect Effects



***p < 0.001 (2-tailed)
**p < 0.01 (2-tailed)
*p < 0.05 (2-tailed)

The overall model (customer satisfaction is the outcome variable) is significant in terms of predicting customer satisfaction (M1) with perceived firm innovativeness (X) with the following output; F(1, 92)=21.8800, p<0.001, R2=0.1921. Further, perceived firm innovativeness predicts customer satisfaction with b=0.3621, t(92)=4.6776, p<0.001, (path a1). The overall model for the second output (customer loyalty as outcome variable) is significant showing that both perceived firm innovativeness and customer satisfaction predicts loyalty with the following output; F(2, 91) = 96.0165, p<0.001, R2=0.6785. Looking at the separate paths (a2 and d21) illustrated above, we can see that both perceived firm innovativeness and customer satisfaction has a significant effect on customer loyalty, with b=0.5204, t(91)=8.1623, p<0,001 and b=0.5008, t(91)=6.4878, p<0.001, respectively. This means that perceived firm innovativeness actually has a stronger effect on loyalty (which was not hypothesized with), than the effect customer satisfaction has on loyalty (which was hypothesized with). In the last overall model (income growth as outcome variable) that includes all variables we got the following output; F(3, 90) = 3.5768, p<0.05, R2=0.1065. Further, looking at the separate paths included in this overall model, it shows that customer loyalty predicts income growth with b=0.6480, t(90)=2.3570, p<0.05. In reference to our hypotheses we also needed to calculate two indirect effects that the output from Model 6 does not show directly. This was done by multiplying the two direct paths for this relationship, and using Sobel test to obtain the standard error, then calculating the t-value. The indirect effect of perceived firm innovativeness to customer loyalty through customer satisfaction was explained with b=0.1813, se=0.0478, t=3.7929, thus significant on a 5% level. The indirect

effect of customer satisfaction to firm performance through customer loyalty was explained with b=0.3245, se=0.1823, t=1.78, thus significant on a 10% level. Furthermore, the effect of perceived firm innovativeness on firm performance shows full mediation, while the effect of perceived firm innovativeness on customer loyalty is partially mediated, and the effect of customer satisfaction on firm performance shows also full mediation.

We can also look into the two remaining paths in Model 6 although they were not hypothesised with. Illustrated in Figure 2, we can see that customer satisfaction does not have a significant effect directly to income growth (path b1), with the following output; b=-0.3351, t(90)=-1.3686, p>0.05. This supports our hypothesis that the effect from customer satisfaction has to go through loyalty, which in turn has an effect on income growth. The last path in model 6 (c´) shows that innovativeness does not have a significant direct effect on income growth, reported with the following; b=0.0084, t(90)=0.0381, p>0.05. In sum, the coefficients in the path model shows the effect and relationships between the different variables. In reference to our research model, all paths relevant to our hypothesized relationships were significant.

Table 5:
Indirect Effects, Total Indirect Effect and Total Effect

Hypothesised Route	St. Beta	BootLLCI (LLCI)	BootULCI (ULCI)
Ind 1: Perceived Firm Innovativeness → Customer Satisfaction → Income Growth	-.1213	-.3775	.0927
Ind 2: Perceived Firm Innovativeness → Customer Loyalty → Income Growth	.3372	.0424	.7018
Ind 3: Perceived Firm Innovativeness → Customer Satisfaction → Loyalty → Income Growth	.1175	.0127	.2680
Total Indirect Effect	.3334	.0341	.6670
Total Direct Effect	.0084	(-.4288)	(.4456)
Total Direct and Indirect Effect	.3418	(.0376)	(0.6460)

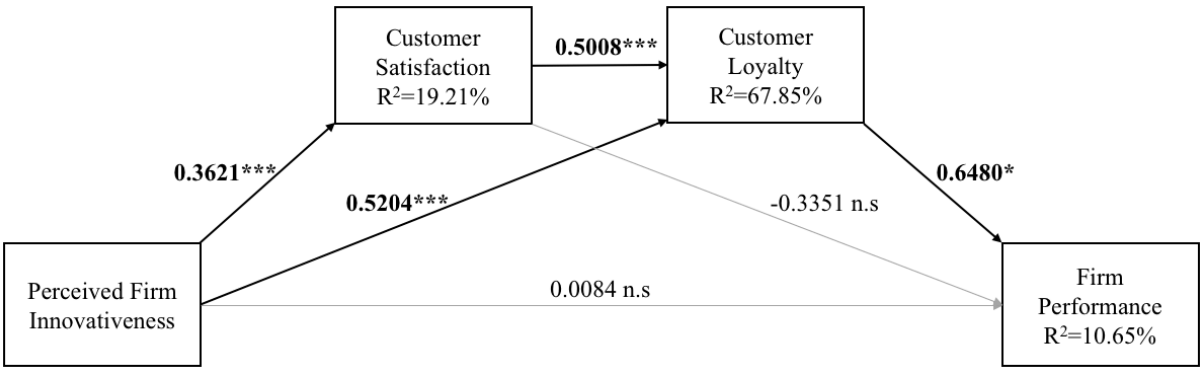
As Table 5 indicates, we have both a total effect and an indirect effect that is significant. The bootstrap confidence intervals show that two of the three indirect effects show a significant mediation effect. This means that the effect is significant at a 5% level. The total indirect effect is mainly due to the second indirect effect which describes the effect from perceived firm innovativeness directly to customer loyalty and then to income growth. However, this was not hypothesised in our study, but is a result estimated in Model 6. Further, the direct

effect of perceived firm innovativeness on income growth seems to disappear. Mediation is suggesting that the relationship between the predictor (perceived firm innovativeness) and the outcome (income growth) will be weakened and ideally if it is full mediation the direct effect will be completely lost when the mediators are included in the model. The requirement to establish that mediation occurs is that the direct effect is reduced. In other words, mediation would be shown by a significant indirect effect. In our analysis we find results on more or less "full mediation", as the direct effect is almost completely reduced. In other words, we get a very small direct effect between perceived firm innovativeness and income growth, but a very large indirect effect through all the variables. The full overview of outputs can be seen in Appendix H.

5.2.3 Main Results

The main results from testing the hypotheses are shown in Figure 3, which includes the standardized path coefficients for all significant paths and the explained variance of income growth as firm performance, along with a model fit summary. Summarized results for all the hypotheses tests are shown in Table 5.

Figure 3:
Our Revised Research Model



Std. Beta and R^2 values.

***p < 0.001 (2-tailed)

**p < 0.01 (2-tailed)

*p < 0.05 (2-tailed)

The revised research model is based on the numbers from the mediation analysis. We excluded the control variables with the hypothesised link to customer loyalty and income growth in the mediation analysis as they were not significance value in our model. As we can

see, perceived firm innovativeness through customer satisfaction and customer loyalty, explains income growth by 10.65%. In addition, we also see that perceived firm innovativeness and customer satisfaction explain customer loyalty by 67.85 %. Compared to the HRM analyses where customer loyalty was the dependent variable, we got that perceived firm innovativeness and customer satisfaction explained loyalty by 57.1%.

Table 6:
Hypotheses Support - Presentation of the Main Results

Hypotheses	Relationship	Direction		β	p	Support
H1	Perceived Firm Innovativeness → Customer Satisfaction	+		0.3621	0.0000	Supported
H2	Customer Satisfaction → Customer Loyalty	+		0.5008	0.0000	Supported
H3	Customer Loyalty → Firm Performance	+		0.6480	0.0206	Supported
H4	Perceived Firm Innovativeness → Customer Satisfaction → Customer Loyalty	+		0.1813	0.0001	Supported
Direct effects	Perceived Firm Innovativeness → → Income Development	+		0.0084	0.9697	Not significant
	Perceived Firm Innovativeness → Customer Loyalty	+		0.5204	0.0000	Significant
H5	Customer Satisfaction → Customer Loyalty → Firm Performance	+		0.3245	0.0751	Not supported
Direct effects	Customer Satisfaction → Firm Performance	-		0.3351	0.1745	Not Significant
H6a)	Age → Customer Loyalty	-		-0.005	0.952	Not supported
H6b)	Size → Customer Loyalty	-		-0.123	0.103	Not supported
H6c)	Industry → Customer Loyalty	- - - -	Retail: FiIn: Trans: InCo:	-0.234 -0.103 -0.062 -0.356	0.111 0.357 0.629 0.004	Partly supported
H7a)	Assets → Firm Performance	-		-0.174	0.281	Not supported
H7b)	Age → Firm Performance	+		0.056	0.711	Not supported
H7c)	Size → Firm Performance	+		0.274	0.105	Not supported
H7d)	Industry → Firm Performance	+ - - -	Retail: FiIn: Trans: InCo:	0.171 -0.052 -0.008 -0.045	0.546 0.819 0.975 0.850	Not supported
Overall research model	Perceived Innovativeness → Customer Satisfaction → Customer Loyalty → Firm Performance	+		0.1175	BootLLCI : BootULCI 0.0127 : 0.2680	Supported
Other findings (Ind1 from model 6)	*Perceived Innovativeness → Customer Satisfaction → Firm Performance*	-		*-0.1213*	*BootLLCI : BootULCI -0.3775 : 0.0927*	*Not significant*
Other findings (Ind2 from model 6)	*Perceived Innovativeness → Customer Loyalty → Firm Performance*	+		*0.3372*	*BootLLCI : BootULCI 0.0424 : 0.7018*	*Significant*

5.3 Additional Analysis

Our hypothesis was that perceived firm innovativeness has an effect on income growth through two mediators. However, it is not clear from previous research when the possible effects of innovative efforts occur. To build up a consistent image of firm innovativeness, these firm characteristics and behaviours need to be stable over time (Brown & Dacin, 1997). Therefore, innovativeness refers to enduring characteristics, not success at one point in time (Hurley & Hult, 1998; Im & Workman, 2004). The effects from innovativeness might come gradually and increase over time. In addition, it was mentioned that customers will often overvalue what they already have and use (Gourville, 2006), so it could be argued that even though the customers view one company as innovative, it may take time before these customers actually switch brands or try something new. Therefore, it could take time before innovative efforts are actually reflected in the company's income.

In addition, this is something that could vary for different products and services. It could be argued that for typical high-consumption products customers buy more frequently that the possible effect innovativeness indirectly has on income will occur rather quickly. In reference to our dataset, this will typically be retail and grocery stores, while for other products or services with a lower frequency of purchase, this effect might happen later. This may be because of both that the nature of the products or services not being purchased frequently, but also because the customer will go through a larger evaluation of the provider. The innovative efforts a company did one or two years ago might boost sales later on. Based on this, it is interesting to investigate whether the effect of being perceived as innovative might be reflected in income at a later point. Therefore, we wanted to do an additional analysis where this relationship could be investigated.

To carry out this specific analysis, we needed to separate the dataset based on years, which means we had a sample size of 51 companies. The dependent variable was income growth in 2017. For the independent variable – perceived firm innovativeness – we used the year 2016 because we wanted to analyse whether innovativeness has a delayed effect on income growth. For the mediating and control variables, we used the numbers from 2017. Based on the theoretical framework we believe that the mediating variables – customer satisfaction and loyalty – are closely related to income. Satisfaction is about the fulfilment of customer expectations, and loyalty entails recommending and using one brand over time (Lervik-Olsen

et al., 2016; Oliver, 1999). We can argue that customers answering questions about brands would to some level be familiar with the brands. Based on these arguments, we think that the possible effect from satisfaction through loyalty and then to income would occur quickly. So it would be the most relevant to use the 2017 numbers for the two mediators. We also used the 2017 numbers for the control variables because there were no hypotheses supporting that these variables' effects would appear later. Note that our data only came from two years. However, it is interesting to analyse if we can find tendencies of when these possible effects occur.

5.3.1 HRM

In order to do the additional HRM analysis, preliminary analyses were conducted again to ensure no valuation of the assumptions of normality, linearity, multicollinearity and homoscedasticity, as the sample size was half of what we used in section 5.2. The univariate normality assumption was satisfied for all the variables after an inspection of the descriptive statistics and the Kolmogorov-Smirnov and Shapiro-Wilk tests in Table 7 (Appendix I). In addition, the assumption of all variables being uncorrelated with the error term were satisfied, and multicollinearity is not present in our variables (Appendix J). In addition, curve estimation was conducted to ensure that the assumption of a linear regression was satisfied (Appendix J).

Table 7:
Descriptive Statistics and Tests of normality

	Skewness	Kurtosis	Kolomogorov-Smirnov	Sharpiro-Wilk
Income Growth 2017	0.974	2.197	0.009	0.006
Customer Loyalty 2017	0.110	1.245	0.200*	0.501
Customer Satisfaction 2017	-0.674	2.557	0.200*	0.071
Perceived Firm Innovativeness 2016	1.156	2.180	0.181	0.006

*. This is a lower bound of the true significance
a. Lilliefors Significance Correction

For the HRM analysis, assets, age, size, and the four computed (dummy) industry variables were entered in block 1, explaining -9.3 % of the variance in income growth 2017. After entry of the perceived firm innovativeness variable in block 2 the total variance explains -5% of the variance in income growth 2017. Finally, after entry of the customer satisfaction and loyalty variables for 2017 in block 3, the total variance explained by the model as a whole was -11.8 %, F (10, 30) = 0.578, p = 0.818 (Table 8 and Appendix J). Customer satisfaction 2017 and customer loyalty 2017 explained an additional 6.8% (negative direction) of the variance in

income growth 2017, after controlling for age, size, assets and the four computed industry variables, and perceived firm innovativeness, R squared change = .971, F change (2, 30) =.030, p =.971 (Table 8). As we can see from Table 8, we get a negative adjusted R^2. One reason for the negative adjusted R^2 may be due to our relatively small N (number of cases), high p (number of controls) and low R^2. In this additional analysis, we ended up with 30 degrees of freedom in model 3 and R^2 is 16.2 %. The problem with such a small sample is also that the t-values will be wrong and the degrees of freedom quite small. In the final model, none of our main variables or control variables were significant. Therefore, we will continue the further mediating analysis without the four control variables. The result of the HRM analysis with the dependent variable income growth 2017 can be seen in Table 8, as well as Appendix J for supporting tables and figures.

Table 8:
Model Summary (Income Growth17)

	Model 1		Model 2		Model 3	
Variables	Std. Coeff β	Sig.	Std. Coeff β	Sig.	Std. Coeff β	Sig.
Assets 2017	-0.064	0.782	-0.040	0.859	-0.042	0.868
Age	-0.063	0.769	0.050	0.823	0.048	0.834
Size 2017	0.202	0.403	0.097	0.695	0.100	0.695
Retail	-0.185	0.664	-0.241	0.567	-0.238	0.584
Finance and Insurance	-0.207	0.536	-0.298	0.374	-0.296	0.403
Info. & Com.	-0.252	0.461	-0.338	0.322	-0.333	0.353
Transport	-0.210	0.578	-0.193	0.603	-0.190	0.621
NII Innovativeness 2016			0.286	0.134	0.280	0.312
NCB Satisfaction 2017					0.055	0.813
NII Loyalty 2017					-0.037	0.902
Adjusted R Square	-0.093		-0.050		-0.118	
R Square Change	0.098		0.062		0.002	
F Change	0.512		2.360		0.030	
Sig. F Change	0.819		0.134		0.971	

We also did a separate HRM analysis in order to check the control variables against customer loyalty 2017. Here we also excluded assets in block 1, while the other variables were kept the same, except in block 3 where we excluded customer loyalty. None of the control variables were significant (Table 9). However, similar to the original HRM analysis, perceived firm innovativeness and customer satisfaction are significant to customer loyalty (Table 9). Based on these findings we will exclude the control variables in following mediating analysis. The

result of the HRM analysis with the dependent variable customer loyalty 2017 can be seen in Tables 9, as well as Appendix K for supporting tables and figures.

Table 9:
Coefficients (Customer Loyalty17)

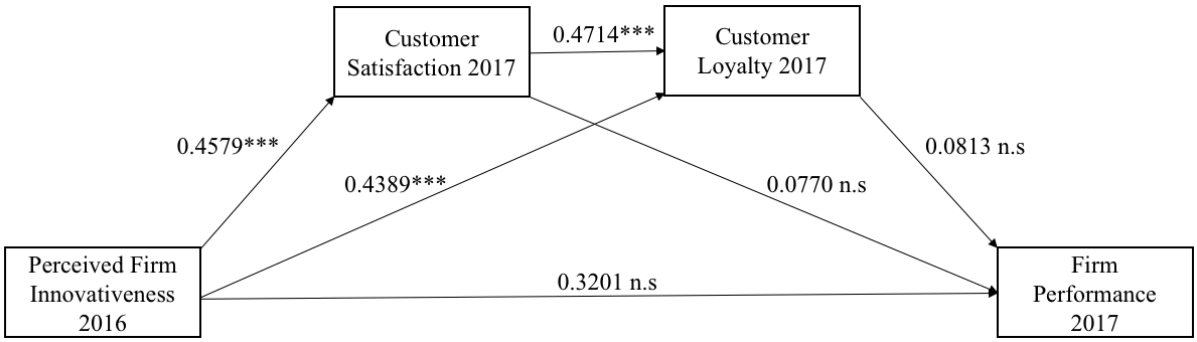
	Model 1		Model 2		Model 3	
Variables	Std. Coeff β	Sig.	Std. Coeff β	Sig.	Std. Coeff β	Sig.
Age	-0.394	0.046	-0.122	0.430	-0.106	0.468
Size 2017	0.096	0.597	-0.121	0.401	-0.082	0.545
Retail	-0.048	0.897	-0.150	0.595	-0.110	0.681
Finance and Insurance	0.262	0.356	0.079	0.715	0.066	0.744
Info. & Com.	-0.148	0.625	-0.333	0.156	-0.242	0.279
Transport	-0.067	0.840	-0.001	0.998	0.008	0.972
NII Innovativeness 2016			0.675	0.000	0.500	0.002
NCB Satisfaction 2017					0.309	0.029
Adjusted R Square	0.093		0.485		0.544	
R Square Change	0.229		0.347		0.060	
F Change	1.682		26.943		5.219	
Sig. F Change	0.155		0.000		0.029	

5.3.2 Mediating Analysis

The overview of the direct and indirect effects for the additional mediating analysis can be seen in Figure 4. The overall model for the outcome variable being customer satisfaction is significant in terms of predicting customer satisfaction (M1) with perceived firm innovativeness (X), with the following output: $F(1, 46)=18.9135$, $p<0.001$, $R2=0.2914$. Further, perceived firm innovativeness 2016 predicts customer satisfaction 2017 with $b=0.4579$, $t(46)=4.3490$, $p<0.001$. The overall model for the second output where customer loyalty17 is the outcome variable is significant. This shows both that perceived firm innovativeness 2016 and customer satisfaction 2017 effects customer loyalty 2017 with the following output; $F(2, 45)=30.7998$, $p<0.001$, $R2=0.5779$. Looking at the separate paths (a2 and d21), we can see that both perceived firm innovativeness 2016 and customer satisfaction 2017 has a significant effect on customer loyalty 2017, with $b=0.4389$, $t(45)=3.9385$, $p<0.001$ and $b=0.4714$, $t(45)=3.5889$, $p<0.001$, respectively. The last overall model where income growth17 is the outcome variable, shows the following; $F(3, 44)=1.5396$, $p>0.05$, $R2=0.0950$. With a p-value of 0.2176 the overall model is not significant. In addition, we calculated the two indirect effects that Model 6 does not show. The indirect effect of perceived firm

innovativeness to customer loyalty through customer satisfaction was explained with b=0.2159, se=0.0785, t=2.7503, thus significant at a 5% level. The indirect effect of customer satisfaction to income growth through customer loyalty was explained with b=0.0383, se=0.0668, t=0.5734. Further, none of the paths leading to income growth (b1, b2 or c´) were significant.

Figure 4:
Additional Analysis - Overview of the Direct and Indirect Effects



*p<0.05 (2-tailed)

**p<0.01 (2-tailed)

***p<0.001 (2-tailed)

Although some of the links was not significant in this additional analysis, they show the same direction as our main analysis. This indicates that the main analysis is sufficient, and these results may be because of the sample size. The indirect effects, total indirect effects and the total effects of this additional analysis can be seen in Table 10 below. Here we see that the confidence interval for all the indirect effects goes through 0. Therefore, we cannot say that mediation happened in this additional analysis as the indirect paths are not significant. In addition, the direct effect has a p-value of 0.2407 (Appendix L). Thus, this does not support a direct effect in the additional mediation analysis either. The total effect model shows a direct and indirect effect of 0.4085 and is significant at a 5% level. The full overview of the outputs can be seen in Appendix L.

Table 10:
Indirect Effects, Total Indirect Effect and Total Effect

Hypothesised Route	St. Beta	BootLLCI (LLCI)	BootULCI (ULCI)
Ind 1: Perceived Firm Innovativeness16 → Customer Satisfaction17 → Income Growth17	.0353	-.3277	.3724
Ind 2: Perceived Firm Innovativeness 16→ Customer Loyalty17 → Income Growth17	.0357	-.2012	.2553
Ind 3: Perceived Firm Innovativeness16 → Customer Satisfaction17 → Loyalty17 → Income Growth17	.0175	-.0815	.1508
Total Indirect Effect	.0885	-.2497	.3857
Total Direct Effect	.3201	(-.2223)	(.8625)
Total Direct and Indirect Effect	.4085	(.0228)	(0.7943)

6. Discussion and Implications

In this chapter, we discuss the main findings of our study. Furthermore, the implications of the results will be discussed both in terms of theory and from a managerial point of view.

6.1 General Discussion of Findings

In total, four of the seven hypotheses were supported, and one was partly supported. With this in mind, we refer back to our research question:

RQ: 'How do perceived firm innovativeness, customer satisfaction and loyalty affect firm performance?'

To make a more interesting and relevant discussion of the results, some of the hypotheses and the mediating effects will be discussed together. This is done to give a more complete representation of the possible interactive effects in the current study. A summary of the results from the different hypotheses is shown in Table 6 (section 5.2.3). The HRM analysis did not give any significant effects. One explanation could be because of the relatively small dataset, making the mediating analysis more appropriate. Thus, for the discussion on hypotheses 1 to 5, we will focus on the results of the mediating analysis. Further, the discussion regarding hypotheses 6 and 7 involves our control variables, which only were included in the HRM analysis; thus, we will use these results as a base. Finally, we will discuss the results from the additional analysis. However, we will not explain the theoretical and managerial implications of this additional analysis because our main goal with this research is related to our initial research model.

6.1.1 Hypothesis 1

In section 3.2.1, we formulated the following hypothesis:

H1: Perceived firm innovativeness has a positive effect on customer satisfaction

The findings reported in section 5.2.2 and Appendix H, provide support for H1, showing a positive effect of perceived firm innovativeness on customer satisfaction. From Figure 3, 19,21% of the variance in customer satisfaction is explained by perceived firm innovativeness. Further, by looking at this path alone, perceived firm innovativeness predicted customer satisfaction with b=0.3418. The results from the mediating analysis indicate that perceived firm innovativeness has a significant effect on customer satisfaction.

Therefore, there is support for H1. As mentioned, in today's market, there has been a shift towards downstream innovations (Dawar, 2013), which might be one explanation for this effect. Because companies are more focused on the customer and their desires when innovating or are focusing more on the four innovation areas that are visible to customers, it may be more likely that customers perceive these companies as innovative. Furthermore, this can increase the chances that the innovations are in line with or exceed the customers' expectations, thus affecting customer satisfaction. Also, our interpretation of previous studies is that customers feel more engaged with an innovative company (Haberland & Dacin, 1992). Because innovativeness and creativity are often associated with each other, as a firm's creativity and innovativeness increase, the company might be more equipped to create excitement and stimulate customers.

In reference to the companies in our dataset, we have many mature companies with a high proportion of mature and standardised products overall. Thus, there may be a higher chance that the products, services and companies a customer chooses are because of habits. Further, when something becomes a habit, the pleasure of buying new things decreases (Plutchik & Kellerman, 1980; Russel, Weiss & Mendelsohn, 1989; Lervik-Olsen et al., 2016). This could decrease the link between perceived firm innovativeness and customer satisfaction and could indicate that the link is stronger for some types of products and companies than others.

Another explanation for the results may be related to the fact that overall perceived firm innovativeness reflects the customers' perceptions of a company's innovations in the four visible areas, mentioned in section 4.4.1 (Lervik-Olsen et al., 2016). Further, there are four action variables that affect customer satisfaction, two of which are price and ability to react (Silseth, 2016). For instance, a company's innovative efforts might change the customer's perception of value proposition and delivery, which is two of the four innovation areas. For example, a change in 'value proposition' might be better prices, and innovations in 'value

delivery' might be that the company is better able to react to customer needs. For instance, IKEA, when compared with many of its competitors, has relatively low prices and a high ability to react because the company has big warehouses where they stock all their products. Thus, relative to other competitors, customers might perceive IKEA as innovative and are satisfied with the prices and the company's ability to react. Thus, this may be another explanation for why the results of the current study show a link between perceived firm innovativeness and customer satisfaction.

However, the strength of this relationship and the link between the two variables might vary for different customers. For instance, some might not want furniture from IKEA because the furniture is highly standardised and not very unique. Thus, their perceptions of a change in 'value proposition' might not be positive or carry much weight. Further, although some might want their furniture straight away, others, for example, an older couple, may not prefer the big warehouses and may perceive IKEA's location in the suburbs as inconvenient, thus affecting 'value delivery'. Also, some might think the relational experience is better at smaller furniture stores. Thus, this may affect customer satisfaction through the action variables 'ability to react' and 'personal treatment' negatively. Here, changes by innovating in these areas may be perceived differently among customers, and this may affect the customers' levels of satisfaction associated with the company. This example illustrates how there is a positive relationship between perceived firm innovativeness and customer satisfaction, which was supported in the present study. However, the example also provides possible explanations of how the total effect of this relationship might be reduced because of customer desires, their perceptions of innovations and satisfaction may vary.

6.1.2 Hypothesis 2

In section 3.2.2, we formulated the following hypothesis between customer satisfaction and customer loyalty:

H2: Customer satisfaction has a positive effect on customer loyalty.

The findings reported in chapter 5.2.2 provide support for the hypothesised effect of customer satisfaction on customer loyalty. Figure 3 shows that perceived firm innovativeness and customer satisfaction explain 67.85% of the variance in customer loyalty. Indeed, the isolated

path between customer satisfaction and loyalty was significant, with b=0.5008. These results indicate that customer satisfaction has a significant effect on customer loyalty.

The support for H2 is expected, indicating a strong link between customer satisfaction and loyalty. One explanation for this result may be that the more satisfied customers are, the more likely they are to repurchase from the same provider rather than evaluate competitors' offerings. As mentioned in the theoretical framework, customers often use the products and services they already own or use as a reference point in their evaluation of new products and improvements (Tversky & Kahneman, 1981). Thus, our results indicate that the more satisfied customers are with what they already use, the stronger this reference point may be relative to competitors. Hence, the more satisfied customers are with a certain brand, the more likely they are to stay loyal to that brand. Another way to look at this might be that customers tend to overvalue what they already have and undervalue what they do not have (Gourville, 2006). Thus, this indicates that customers' satisfaction towards a brand and their reference points may be even stronger. Psychologically, the losses of changing to another brand will be perceived as increased if these customers are satisfied with their current provider, so the expected gains decrease (Tversky & Kahneman, 1981; Gourville, 2006). Again, this is only one explanation for why customer satisfaction affects loyalty.

6.1.3 Hypothesis 3

From section 3.2.3, we have the following hypothesis:

H3: Customer loyalty has a positive effect on firm performance.

The findings reported in chapter 5.2.2 provide support for the hypothesised effect of customer loyalty on firm performance. The mediating analysis showed that customer loyalty, customer satisfaction and perceived firm innovativeness explain 10.65% of the variance in firm performance (Figure 3). The link between customer loyalty and firm performance had a significant effect, with b=0.6480. Thus, the results show that this hypothesis is supported.

The link between customer loyalty and firm performance is fairly strong. As mentioned, customers who are loyal to one brand or company are more likely to repurchase (Silseth, 2016). Hence, the company's income increases as customers become loyal and use the same

provider every time they buy a product. Therefore, the degree of customer loyalty and the number of loyal customers a firm has will have a major effect on the customer's lifetime value, which increases the income of a firm (Fripp, 2014). Accordingly, loyal customers are more likely to spread positive WOM and recommend the brand to others (Silseth, 2016). Loyal customers might also increase the chances of noncurrent customers buying from the same brand, thus affecting firm performance by attracting new customers. These arguments illustrate some of the reasons why we obtained a positive effect between customer loyalty and firm performance.

Another way to look at this may be in relation to today's competitive market, where firms frequently use loyalty programmes. These programmes often provide benefits – or incentives to purchase from the specific brand – which may improve firm performance. So the more loyal customers are, the more data the specific company can register about customers. Further, customers can receive more customised offerings and increase the purchase rate from one brand when they receive benefits, which would be more beneficial to them instead of switching providers. This can be seen as another explanation for why our results indicate a positive effect between customer loyalty and firm performance, however, it also illustrates why customers buy from a specific brand even though their level of loyalty might not be that high. Thus, this link may have a reduced effect because customers who are not very loyal also may have incentives to buy from a specific brand. Likewise, it is not necessarily always the case that loyal customers repurchase from a specific brand. For instance, a customer might feel loyal to Apple products and recommend them to others, but because of the high price, for instance, the customer might buy a cheaper alternative. Thus, although there is a clear significant effect between customer loyalty and firm performance, these examples illustrate how the overall effect can be reduced.

6.1.4 Hypotheses 4 and 5

From section 3.2.4, we have the following hypotheses of the assumed mediation effects:

> *H4: Customer satisfaction mediates the effect of perceived firm innovativeness on customer loyalty.*
> *H5: Customer loyalty mediates the effect of customer satisfaction on firm performance.*

The results from hypotheses 4 and 5 are quite interesting. The findings reported in section 5.2.2.1 supports the hypothesis that perceived firm innovativeness has an indirect effect on firm performance through the two mediators; customer satisfaction and loyalty. This is consistent with the literature (Kunz et al., 2010; Lervik-Olsen et al., 2016; Silseth, 2016). The results from section 5.2.3 show (Table 6) that the indirect effect of perceived firm innovativeness to firm performance through customer satisfaction was explained with b=0.1813 and was significant at a 5% level, while the indirect effect of customer satisfaction to firm performance through customer loyalty was explained with b=0.3245 and was significant at a 10% level. The results from section 5.2.2.1 (Table 5) show that the first indirect effect that describes the relationship between perceived firm innovativeness and firm performance through customer satisfaction was not significant. This indicates the important role of customer loyalty and the results show full mediation because the direct effect is almost at zero and not significant. Also, the results from the mediating analysis, where income growth is the outcome variable, supports this link further. The relationship of customer loyalty and firm performance was b=0.6480, and was the only relationship with firm performance that was significant. Thus, neither the link between customer satisfaction and firm performance or perceived firm innovativeness and firm performance had a direct effect on firm performance alone ($p>0.10$). Although this was not in our hypothesised model, it is an effect estimated in model 6 and is interesting to note because it substantiates the relationships in our proposed research model. So the relationship between customer loyalty and income growth is crucial for the overall effect in our model.

As the results from section 5.2.3 show (Figure 3), both perceived firm innovativeness and customer satisfaction explain 67.85% of the variance in customer loyalty. From Figure 3, we see that customer satisfaction has a rather strong link to customer loyalty; however, the link between perceived firm innovativeness and customer loyalty is even stronger. Although this relationship was not hypothesised, it is important to note and is an interesting result regarding our theoretical implications, which we will come back to in section 6.2. Thus, the results of the current study indicate that customer satisfaction might not be the only way to increase customer loyalty. As the results show in Appendix H, the total indirect effect is mostly because of Ind2, which goes directly from perceived firm innovativeness to customer loyalty and then to firm performance. This explains 0.3372 of the total indirect effect, while the relationship that we hypothesised – perceived firm innovativeness affecting firm performance through customer satisfaction and loyalty – explained 0.1175. Thus, these results show the

importance and positive effects that may arise from having customers perceive the company as being innovative, indicating that perceived firm innovativeness does not necessarily need to go through customer satisfaction to increase customer loyalty.

One explanation for our results may be related to the fact that firms engaging in novelty creation are seen as forward-looking and future oriented (Kunz et al., 2010). Thus, if a customer perceives a company as highly innovative and future oriented, this might directly affect the customer's loyalty towards the company because the customer will feel engaged with the firm and perhaps confident that his or her needs will be met in the future. Therefore, another way to look at this might be through the role of feelings. As mentioned, innovation create feelings, and feelings are necessary to engage customers in a long-term relationship with the company (Lervik-Olsen et al., 2016). Thus, this illustrates why our results show that perceived firm innovativeness affects firm performance indirectly by affecting customer loyalty directly. Moreover, innovative companies can also change existing consumption patterns and be perceived as pioneers in the industry (Kamins et al., 2000). Apple is a good example of this. Before the iPhone, the use, consumption, frequency of buying phones and money spent on phones were quite different. Further, Apple continuously updates their offerings and excites and serves their customers beyond what they expect. The material quality might not be superior to other options (e.g., screens breaking quickly), and the price is steep compared with other options, which are two action variables impacting customer satisfaction. However, consumers might continue to buy Apple's products and stay loyal although customer satisfaction could be better because customers see the firm as highly innovative and feel engaged with the firm; or maybe Apple made it easy to switch to their products by linking all their products together. This further illustrates how the link between perceived firm innovativeness and firm performance might go through both customer satisfaction, customer loyalty or only through loyalty, all of which had significant impacts in the current study.

6.1.5 Hypothesis 6

In section 3.2.5, we formulated the following hypotheses between the control variables and customer loyalty:

H6a: The company's age has an effect on customer loyalty.

H6b: The company's size has an effect on customer loyalty.

H6c: The company's industries have an effect on customer loyalty.

As the results showed, only one of the control variables was significant in our study: the industry variable 'information and communication'. However, this does not mean that the other control variables do not have any impact on loyalty, just that we were not able to measure these effects in our study. There may be several reasons for our results, one reason may be because we had a relatively small sample size with few companies within one industry and the fact that our data only are from two years. Other reasons may be that these variables are not important for loyalty in our specific dataset.

We assumed that age might have an effect on customer loyalty; this was not supported by our HRM analysis (Table 4), indicating that the number of years the firm has operated in the market does not affect customer loyalty. One explanation for this result might be that a large proportion of the firms in our dataset are relatively old, and no company is under 10 years old. Thus, the possible effect age has on loyalty might not be important in this specific dataset. Further, older firms may contribute to loyal customers by having a well-established name and creditability in the market, while newer innovative firms are future oriented and adapt quicker to the customers' desires, thus creating loyal customers in another way. Both old and new companies may create customer loyalty in different ways, resulting in no significant effect on customer loyalty when it comes to how old the company is.

H6b, which states that size has an effect on customer loyalty, was not supported by our HRM analysis either (Table 4). For one thing, larger corporations might have more creditability, are well-known and have a large customer base, all of which may increase customer loyalty. However, larger firms may also take longer to adapt to changes than smaller firms because they often have a more hierarchical structure. Thus, for larger companies, customer loyalty might be reduced as newer and better products are introduced by smaller and more rapid moving firms and/or the loyalty towards smaller companies increases. Thus, the loyalty differences when it comes to size may not be that different. Also, it can be argued that larger corporations may have more resources to nurture relationships with their customers to establish long-term relationships. However, the smaller the company is, the easier it may be to increase the relational experience and personal treatment with customers and engage customers in long-term relationships because each customer is a bigger piece of the whole

picture. Again, this describes possible explanations for why size does not impact customer loyalty significantly in the current study.

We also hypothesised that the respective industry companies operate in may affect customer loyalty. As mentioned, we found support for our hypothesis regarding the industry the company operates in, specifically those categorised as 'information and communication'. Our results show that this industry had a significant negative effect on customer loyalty, while the three other industries had no significant effect. 'Information and communication' involves newspapers and telecommunication companies, and newspaper companies have particularly low customer loyalty scores. There has been a major shift of focus in these companies, and especially the younger generation that generally have a large digital focus may have been a driver for the development in this industry. These companies have gone through dramatic changes in a short amount of time: from previously having most of their sales related to physical newspapers to now focusing heavily on the digital solutions. Thus, one explanation for the significant negative relationship in the current study might be that with digital solutions for all the newspaper companies, it might be easier for consumers to surf through numerous newspapers instead of feeling loyal to a few. Previously, when the newspaper was mainly in a physical format, there may have been more of an evaluation of which newspaper to subscribe to and read; thus, the feeling of loyalty to one may have been greater. In today's market, it might be more confusing because a customer can access all newspapers online but not be able to read all the content without a subscription. This may be one explanation of the negative significant results in this industry when it comes to customer loyalty. Another explanation is that it is random, especially because industry categorising often are more subjective and therefore, a company can often be categorised in multiple different industries.

As mentioned, the other industries did not show a significant effect on customer loyalty. One explanation may be that none of these industry categories have an effect on customer loyalty. For instance, the industry category 'transport' involves airline companies, train and bus companies and so on. Here, for instance, the choice of which airline to use might vary a lot from time to time depending on availability, convenience and price. Thus, one company might have the best flights and prices for one certain date, while for another destination, another company might be better. Thus, a customer might not feel loyal to either one. Another example could be retail. For instance, in our dataset, the companies in retail are both standard grocery shops and retail stores. The choice of grocery store may also vary a lot based on

convenience and distance, while the choice of buying from 'H&M' or 'Cubus' may depend on what selection these stores have that fit the consumer's preferences at that specific time. Thus, these examples show how neither alternative may be superior to the other and how consumers can vary their consumption patterns based on factors other than loyalty. These may be some possible explanations for why we did not find any significant link between the other industries and customer loyalty. Furthermore, our partly supported hypothesis may indicate that different industries as a whole do not explain customer loyalty significantly, but there may be some industry categories where customer loyalty happens more because of certain characteristics in the specific industry.

6.1.6 Hypothesis 7

In section 3.2.5, we formulated the following hypotheses:

H7a: The company's age has an effect on firm performance.
H7b: The company's size has an effect on firm performance.
H7c: The company's industry has an effect on firm performance.
H7d: The company's assets have an effect on firm performance.

In the current study, none of the respective control variables were significant on the effect on income growth. Similar to hypothesis 6, this does not mean that the respective control variables do not have any effect on income growth, just that we were unable to capture these possible effects in our dataset. This may again be because of our relatively small sample size, which might be of concern to provide an adequate regression analysis (Pallant, 2016; Saunders et al., 2016).

First, our assumption, which was based on previous theories (Pervan & Viši, 2013; Shah et al., 2016), was that a company's age may affect firm performance. This hypothesis was not supported in our results (Table 3). One explanation for this result may be that there is no significant change in income growth between older and younger companies in our dataset. Another explanation might be that to get a significant effect of age for income, there has to be a larger proportion of relatively new companies. It could be that the difference of a 5-year-old company and 15-year-old company is much higher than the difference between a 35-year-old company and a 50-year-old company. In our dataset, the average age for all the companies is

51 years old. Only eight companies are less than 20 years old, and no company is under 10 years old. As mentioned, new companies often have a higher growth rate but also larger declines; thus, there is a larger fluctuation in income relative to older companies, which often have more stable incomes (Coad et al., 2013, 2016). However, because a very small portion of our companies are relatively new, and most companies are around a certain age, the effect of age to firm performance might not be relevant in our dataset, thus no significant effects were shown in the current study.

Our second hypothesis for the control variables related to firm performance was that size may have an effect on firm performance. This hypothesis was not supported (Table 3). Again, looking at size relative to income growth, this focuses on how efficient the employee pool generates income. One explanation for our results might be that in the digital age, there are many types of human resources that can be replaced by digital tools; it does not necessarily mean that the number of employees will have an impact on income growth, but rather, the opposite could be argued. A firm with less employees may use more digital and innovative tools to replace human capital while still generating income. In our dataset, the firms are relatively similar regarding size relative to income, and none of the companies, save for 'Komplett' and 'NetOnNet', are mainly Internet based. These two companies are the only ones that have a very different structure and set-up, including a lower number of employees relative to other companies. Having a larger proportion of firms like 'Komplett' and 'NetOnNet'[14] and more variety in the dataset concerning size may have given different results for the relationship between size and income growth. In addition, the companies on the NCB and NII use selection criteria in their indexes, which results in the represented companies being a certain size (Pedersen, 2018; NHH, 2017a). Thus, because the companies in our dataset do not vary that much, size may not have a significant impact on income growth here.

Our third hypothesis for the control variables stated that the industry may have an effect on firm performance. This hypothesis was not supported (Table 3). Thus, no industry had a significant impact on firm performance. There are some possible reasons for this. First, it could be that the industries studied here do not vary much when it comes to predicting firm performance. Another explanation might be that because we divided the dataset into industry

[14] Having different organization strucutre and fewer employees relatively to income than other companies.

categories there might not be enough companies within one industry to obtain significant results. Another possible explanation may be because of the fact that we used a wide categorisation of industries; there may be a relatively large variation within one industry, where some companies may have higher development in their income streams, and some have lower. If this were the case, the effects may counteract each other, resulting in no significant effect. In addition, it could be that the industries in our dataset are relatively stable in terms of growth. All of the industries in our dataset can be looked at as traditional, dating far back historically. Thus, relatively old industries and companies typically do not have a high growth rate but are more stable. Therefore, this may be an explanation of why no significant effects were found.

Our last assumption was that assets may have an impact on firm performance. The results do not support this hypothesis either (Table 3). Looking at the total assets and their relationship to income growth, what matters is how effectively the companies actually use their available assets to turn these assets into income. Thus, one explanation for our results may be that firms with larger total assets have a larger total income than smaller firms with smaller assets. However, how efficient these firms turn these available assets into income might not differ much. Companies with small assets are often smaller and have quicker decision-making processes. Hence, smaller firms might be able to react more quickly and use their available resources efficiently. Likewise, companies with large assets are often larger; thus, the decisions may go through several levels before being put into action, so these companies may move slower, and their assets may not be used that efficiently. On the other hand, companies with larger assets also have more resources to use when the decision is made, which can make for a stronger impact. This might be the reason why we do not find a significant relationship between assets and income growth.

6.1.7 Additional Findings

One interesting aspect of the effects of perceived firm innovativeness was whether these effects might have a delayed effect on firm performance. Empirically, it has not been established when the possible effects of perceived firm innovativeness occur, and as mentioned, the characteristics and behaviour of a firm need to be stable over time to build up a consistent image of perceived firm innovativeness (Brown & Dacin, 1997). The results from the mediating analysis show that the total effect of perceived firm innovativeness on firm

performance was significant and that the direct effect is quite high (b=0.32) but not significant. However, the indirect effects were very low, and none of them were significant. Thus, we cannot conclude that mediation happened in this additional analysis. One explanation for why we did not get any significant results may be that we had a relatively small sample size (48 companies). However, the additional analysis shows the same direction (positive) as the main analysis, which further indicates that it might be because of the sample size. In addition, because we were measuring the effects of 2016 perceived firm innovativeness on 2017 firm performance through the two mediating variables from 2017, we could only measure this one time because the NII dates back to 2016. Thus, the possible delayed effects may not have caught up in this analysis. Another explanation might be that most of the effects of perceived firm innovativeness happen rather quickly when compared with the other variables, meaning there would be no delayed effect. This approach to the research question could be highly interesting to investigate at a later point in time when a proper longitudinal study can be done to investigate the indirect long-term effects of perceived firm innovativeness on firm performance.

6.2 Theoretical Implications

The current study aimed to investigate how perceived firm innovativeness affects firm performance through customer satisfaction and loyalty. In the following, we discuss the theoretical implications that follow from the results of our mediation analysis. These results will be discussed and compared in reference to established theoretical frameworks and the results from other studies.

Our research model is mainly built on the research of Kunz et al. (2010), who also use a customer-centric research approach to study the effects of innovativeness. Although their research does not include the financial aspect, our results support their findings in terms of establishing the importance of innovativeness from a customer-based view and how it affects customer satisfaction and loyalty. Furthermore, Cho and Pucik (2005) find that quality mediates the relationship between innovativeness and profitability; however, their research does not account for the effects of loyalty, which other researchers and established theories state as an important variable explaining firm performance (Murphy & Murphy, 2002; Rousler, n.d.; Silseth, 2016, Andreassen et al., 2018; Selnes, 2002). To the extent that quality

and customer satisfaction can be compared, we find that satisfaction does not mediate the effect between perceived firm innovativeness and profitability. However, it is important to note that quality and customer satisfaction are not completely the same. Thus, we will not conclude that our research challenge the result of their findings, although in reference to the discussion in section 2.3, customer satisfaction and quality are fairly closely related.

Furthermore, previous research has established that customer satisfaction has an effect on customer loyalty (Lervik et al., 2016; Silseth 2016; Samuelsen et al., 2007b). The results from the mediating analysis support this relationship. However, we also found that perceived firm innovativeness has a stronger effect on customer loyalty than customer satisfaction. Furthermore, this may give some new insights into this field of study, especially in the Norwegian context, because it challenges the established theory that usually emphasises satisfaction as the most important antecedent of loyalty (Nyhus, 2014; Samuelsen et al., 2007b). Therefore, the present study supports the findings from the AII that state companies that engage in innovation efforts may be perceived as more attractive by customers and thus produce greater levels of customer loyalty (AII, 2018). Moreover, consumers expect more from companies than just a satisfied experience, showing the importance and positive effects of perceived firm innovativeness. Our research contributes to the field of innovativeness by having a broad-based customer-centric approach, which previous research indicates has been missing in this field (Kunz. et al., 2010).

Most theoretical frameworks in this field consider customer loyalty as the main indicator and an important variable to firm performance (Murphy & Murphy, 2002; Rousler, n.d.; Silseth, 2016; Andreassen et al., 2018, Selnes, 2002). The current study's results support these past studies by showing that a direct link from innovativeness to firm performance and indirect effect of innovativeness on firm performance connected to customer satisfaction were not significant. The only two significant effects were the indirect effects involving customer loyalty. Thus, our results support the established theories and indicate the crucial role of customer loyalty towards firm performance.

In addition, the established theory on customer loyalty states that loyalty increases with income but also that it decreases costs because of the savings associated with CLV (Fripp, 2014). Previous research has focused on profitability and included both the costs and income aspects regarding the benefits of innovativeness and having loyal customers (Cho & Pucik,

2005). Thus, we cannot fully conclude whether our research supported these previous findings because we only considered the income side, although profitability and firm performance are closely related. Furthermore, it cannot be concluded from past research whether innovativeness affects the income or cost the most and whether both sides are affected or if only one side is significant for profitability. However, because we only included the income aspect, we can separate these effects and establish that the benefits of loyal customers are significant in terms of income growth; thus, we contribute by showing that the customer's perception of a company's innovativeness benefits the income side alone.

Several previous studies in the field of perceived firm innovativeness and the indirect effects it has on firm performance have been conducted in the U.S. market (Cho & Pucik, 2005; Rucci et al., 1998; Murphy & Murphy, 2002). Thus, there has been a call for research outside the United States to improve the external validity in terms of generalizability and because customer perceptions may differ in relation to culture. With obvious differences between different geographical zones, the results coming from a particular area might not be generalisable to others. However, we found some research conducted in the Norwegian market as well although none of these studies account for the whole chain of effects proposed in the current study (Lervik et al., 2016; Silseth, 2016), showing the importance of studying this field regarding the Norwegian market. Therefore, our research contributed to this field because we established the effects concerning other markets previously not studied. In addition, our research contributes valuable insights concerning the role of perceived firm innovativeness because we only look at the dimensions that customers have the ability to influence. Thus, by limiting our research to a customer-based view and what customers can influence by excluding possible cost savings and other effects of innovative efforts allows us to isolate the effect from customers, showing more directly this relationship and giving further insights into this field in the Norwegian market.

Previous research has mainly been focused on certain areas of our research question, but not much focus has been on the whole chain of effects. First, previous research has looked at the relationship among customer satisfaction, loyalty and firm performance, thus not considering the role of perceived firm innovativeness. Second, previous research has also focused on the mediating effect of quality between innovativeness and profitability. Thus, the relationship between all variables in the current study and the effect of these variables on only income was not established empirically. A large contribution to this field of research has been on the

profitability of innovativeness, thus not separating what the customers actually can influence and considering the importance of a customer-based view of innovativeness. In this way, our research offers new insights.

Our research supports some existing theoretical frameworks. However, previous research on how perceived firm innovativeness, customer satisfaction and loyalty affect firm performance as a whole is scarce. Therefore, our results contribute to the understanding of the positive effects of innovation investments regarding income growth from a customer-based view. Further, the current study establishes some of these effects in the Norwegian market and contributes to the already established theory that customer loyalty is a very important factor affecting firm performance. In addition, our research shows the importance of perceived firm innovativeness towards customer loyalty, both through the mediating effect of customer satisfaction and directly on customer loyalty, which had the greatest effect in our study. Hence, our research challenges some existing research conducted regarding the importance of customer satisfaction and contributes further to possible explanations to the overall relationships and effects in this field.

6.3 Managerial Implications

The results of the current study have several implications for business developers and company managers, as well as marketing managers regarding innovation investments and how important it is to include customers when developing and improving products and services.

First, innovation efforts in the company lead to the managers and company overall to have a perception of how innovative the company is. Furthermore, companies invest in innovations hoping their investments will pay off. However, this perception might not reflect how the customers view the firm's innovativeness, and the customers' opinion is actually what is important because income directly depends on the customers. Innovative efforts may create feelings, give customers a positive attitude about the firm and have an effect on customer satisfaction (Lervik-Olsen et al., 2016). However, having satisfied customers do not necessarily lead to increased consumption or repurchasing or, in other words, loyal customers (Silseth, 2016). Furthermore, the BI (2018) mentions that customer satisfaction also should be

at a certain level, above 80, to realise its full effects. In addition, loyal customers are more likely to increase the repurchase rate and recommend the brand to others, thus increasing the income of a company. It may also be that customer loyalty must be at a certain level to exploit the full effect of increased income. Moreover, as our results indicate, customer loyalty can also mediate the effect between perceived firm innovativeness and firm performance, further illustrating the importance of loyalty for exploiting these positive effects on firm performance. These arguments show how the overall effect of perceived firm innovativeness can be reduced the closer we come towards income growth in our research model. From Figure 3, we see that the link between two consecutive variables in our research model is strong. Further, perceived firm innovativeness and customer satisfaction explained 67.85% of the variance in customer loyalty. However, the whole chain of effects, or all the variables, explained only 10.65% of the variance in income growth (including the paths estimated by model 6 that we did not hypothesise with); this may indicate that some of the effects of perceived firm innovativeness are reduced by each variable in the research model, reducing the overall effect on firm performance. This has some managerial implications because managers can better understand this relationship and get the most out of their innovation efforts.

Today, many companies are focused on innovation or at least say that innovation is important (Ringel et al., 2015). As our results show, the significant effect of perceived firm innovativeness on firm performance through the two mediating effects indicates that firms' involvement in novel and creative ideas may pay off (Kunz et al., 2010). However, innovation requires investments, and there is no point in doing it without purpose. First, the current study investigated perceived firm innovativeness from the customer's point of view, which is the perspective managers should keep in mind during innovative efforts. If innovation is not communicated in a sufficient way, the customers may not perceive the company as innovative, turning innovation into a mismatch between what the company actually does and what the customers perceive is being done. Therefore, the company might not maximise the return from the innovation investments. Based on this and the fact that customers are the final judge of whether the firm's innovations will succeed or fail in the market, along with being the ones who can contribute to a company's higher income, companies and managers should be concerned about what their innovation efforts look like from the outside and make sure that these efforts reflect what is actually happening. Moreover, this is something that can turn the focus towards what is important when innovating, giving firms motivation and guidance for how they should innovate. Therefore, this is also the only perspective companies can use

when innovating, which gives a win-win situation where both the customers and company receive the benefits of the innovation.

Second, innovating itself might not lead to higher income. As the mediating analysis shows, the direct effect of innovativeness on income is not very high because it only accounts for 0.0084 of the total effect of 34.18%, while the rest comes from indirect effects. Therefore, managers should keep customer satisfaction and loyalty in mind to exploit the full effects of innovations. For instance, including the four action variables that contribute to customer satisfaction might be one approach to consider. Other approaches could be to listen to what the customers desire and innovate around the customers, making sure that the company's products and services align with the customers' needs, take care of possible concerns and innovate to strengthen the marketing and communication with the customers (Kurtmollaiev et al., 2018). Another strategy could also involve minimising defects and keeping the products of a high quality through efficient and innovative processes. Here, it is important that managers do not see innovation and income as a direct relationship. Managers should keep in mind that it is the customer's perception of innovativeness that may actually impact customer satisfaction and loyalty, which in this context may affect firm performance. Therefore, managers should focus more on how they can use innovativeness to positively affect customer satisfaction, especially loyalty, because our research shows loyalty to be the most important aspect for improving firm performance. Moreover, our research shows that most of the indirect effect stems from customer loyalty, mediating the effect between perceived firm innovativeness and firm performance, hence not including customer satisfaction.

However, it is also important that managers and companies keep in mind that it might take time before innovative efforts manifest and are reflected in the performance of the company. As our results indicate, there is no direct effect from perceived firm innovativeness to firm performance. Furthermore, innovativeness refers to enduring characteristics, not success at one point in time (Hurley & Hult, 1998; Im & Workman, 2004). Therefore, managers should consider how to build a consistent image of firm innovativeness, hence keep the company's innovative efforts stable over time (Brown & Dacin, 1997). Moreover, the customers' perceptions of a firm's innovativeness are developed based on an overall view of the company's activities, not only as each new product is launched (Kunz et al., 2010). Thus, the possible effects of innovativeness do not happen with a one-time action; it needs to be a continuous innovation focus within the company to exploit its full benefits. This also implies

that companies should be patient in determining the success of their innovations; first, the customers must perceive the company as being innovative, which involves enduring innovation efforts that may take time.

Furthermore, our analysis shows that perceived firm innovativeness had a greater impact on customer loyalty than customer satisfaction had on loyalty. From a managerial perspective, this may imply that it is not relevant or profitable to satisfy customers at all costs; in fact, there is a limit. Thus, when a customer shows his or her loyalty to a company by leaving a market full of other providers, the company should focus on how to keep these customers who are the most loyal and profitable. Therefore, too much attention towards getting a bigger piece of the pie and satisfying customers at all costs may not be the correct approach. This might have a negative impact on loyal customers, who are shown to be the most important variable in terms of firm performance. This is also supported in the theoretical framework, where the psychological – hence the subjective perception – desires of the individual customers affect their purchasing decisions and whether a customer chooses to adopt a new product or not (Gourville, 2006). This illustrates the individual differences of a company's customer groups. Because customers' desires and perceptions are different, it is not profitable nor possible to satisfy all customers at once.

Furthermore, in today's market, companies are threatened by more untraditional and innovative companies. Examples of these companies include Amazon going into the grocery industry with Amazon Go, Apple competing against banks with Apple Pay and Tesla innovating the car industry. How companies innovate and react to these competitors can be crucial for their survival. For instance, when Amazon first began with its online books sales, it transformed the traditional book industry. Borders Group and Barnes & Nobel – traditional book shop chains – did not innovate in time to adjust to these changes[15] (Sanburn, 2011). This shows that innovation may establish different consumption patterns and change the customers' desires and needs (Kamins, Alpert & Elliot, 2000). Even though Borders Group and Barnes & Nobel probably had many satisfied and loyal customers, their customers changed their preferences to something they did not know that they wanted. Amazon awakened a need in the customers that they did not know they had. Innovating around what

[15] Border Groups was a former international book and music retailer. Borders did not foresee the rise of e-books like Amazon and later Barnes & Noble did (Sanburn, 2011). Barnes & Noble is today an online bookstore.

the customers want right now, hence their current needs, might not always be enough (Andreassen, 2016). It is also about being future oriented, keeping track of what is happening in the market and industry. Based on this, companies should not only focus on customers' satisfaction and current loyal customers when making their innovations; they should also look at the competitive market, both to establish benchmarks in the industry and determine the success and directions of their innovation efforts. Furthermore, disruptive innovations show how status quo can be challenged by changing current consumption patterns and how this can be profitable (Christensen et al., 2015). Thus, having a customer-centric and future-oriented view is something managers should keep in mind when innovating.

Finally, innovation is very costly. This means that we cannot conclude or generalise whether a potential increase in income actually turns out to be profitable in the end because we do not include the cost of the innovation efforts. This is, however, not a limitation with our research because it was a deliberate delimitation to exclude costs; rather, this is something that should be kept in mind when companies interpret our results for use in their business operations.

7. Limitations and Future Research

As with most other studies and research papers, the current study has its limitations. When it comes to analysing and presenting the data, it is important to provide adequate reporting of the boundaries and weaknesses of the findings (Saunders et al., 2016). We have identified possible limitations to our study related to the sample, the data collection and how the data analyses were carried out. The focus rest mainly with internal and external validity. In the following, we highlight some of these limitations and discuss elements of validity and reliability before moving on to general limitations and suggestions for future research.

7.1 Validity and Reliability

According to Yin (2018), there are four criteria that must be in place for a study to be considered credible and reliable: internal validity, external validity, conceptual validity and reliability, where reliability and validity are central to the quality of research in the natural sciences and quantitative research in the social sciences.

7.1.1 Validity

Validity refers to the *'appropriateness of the measures used, accuracy of the analysis of the results and generalisability of the findings'* (Saunders et al., 2016, p. 202). Therefore, validity refers to the cogency of the study and whether the research measures what it actually is intended to measure (Jacobsen, 2015). In the current study, we used a descriptive design, a deductive approach with quantitative data consisting of both survey data collected by the NII and NCB, along with secondary data collected manually; therefore, we distinguish between internal validity, external validity and conceptual validity (Saunders et al., 2016; Jacobsen, 2015).

External validity is whether the results can be generalised (Jacobsen, 2015) and shows the extent to which we can generalise the findings to an entire population. Threats to external validity largely relate to the response rate and selection methodology (Saunders et al., 2016). In the current study, we assumed that the NII and NCB met the requirements for external validity when they developed their respective models. Regarding the size of our sample, we

know that it was relatively small because of the availability of data. Additionally, the companies represented on the NII and NCB are some of the largest players in each industry in Norway (Pedersen, 2018; NHH, 2017a). This may limit the generalizability of the current study as well. Because most companies are of a certain level in terms of size, we cannot conclude whether our results are representative of small- and medium-sized companies.[16] Furthermore, we can also not conclude whether our results are generalisable to other countries because our research is based on the Norwegian market. However, we operated within several different industries, enabling us to interpret our results across different industries, not just within a single industry.

Furthermore, internal validity establishes a causal link between the variables (Saunders et al., 2016). Thus, causality focuses on establishing a correlation between the cause and effect of the phenomenon investigated. Jacobsen (2015) shows that there are three requirements that must be fulfilled to say with relative certainty that a connection exists: 1) The cause and effect needs to vary together. 2) The cause must come before effect in time. Finally, 3) 'all' other relevant conditions must be checked. Our cross-sectional study only satisfies the first requirement of causality, while the second requirement is not fulfilled, and the last requirement is partially met. The problem with the last requirement is that a cross-sectional study only checks for the circumstances we know about, never for the conditions that we do not know. For us to be able to express ourselves causally in the current study, it is necessary that we have a good theoretical foundation (Simon, 1954). According to Jacobsen (2015, p. 109), this means that we must have '*an assumption that the most important - not all - the explanatory factors are taken into account and that you can explain how phenomena are linked to each other (mechanisms)*. The fact that our cross-sectional study does not meet all the requirements for causality may thus be seen as a limitation. Hence, a disadvantage would be that we ended up with 'thin descriptions', which may seem unrealistic from the phenomenon we actually wanted to investigate. However, this can also be considered an advantage that we were forced to focus on only a few elements in our study. Furthermore, we were also forced to make a careful review of what we considered important and less important

[16] Small and medium-sized enterprises, also called SMEs, *'are non-subsidiary, independent firms which employ fewer than a given number of employees. This number varies across countries. The most frequent upper limit designating an SME is 250 employees, as in the European Union. However, some countries set the limit at 200 employees, while the United States considers SMEs to include firms with fewer than 500 employees. Small firms are generally those with fewer than 50 employees, while micro-enterprises have at most 10, or in some cases 5, workers'* (OECD, 2005, p.1).

in our study, which may have enhanced the internal validity of the current study (Jacobsen, 2015).

However, internal validity will generally be low when a descriptive design is used. This is because internal validity is intended to measure causality, while the current study aimed to establish, test and describe multiple links between several variables (Saunders et al., 2016). Therefore, internal validity is assumed to be low in the present study. Compared with external validity and conceptual validity, however, it is much lower, which is natural in this type of study. Finally, concept validity is the operationalisation of concepts and whether the study has examined what it intends to (Saunders et al., 2016). By using collected data from the NII and NCB, we are confident that the current study had sufficient conceptual validity. In addition, we have been in dialogue with Bekk to ensure that we had the same understanding of the concepts used in the research, which would further address problems associated with the conceptual validity.

7.1.2 Reliability

Reliability refers to *'replication to consistency'* (Saunders et al., 2016, p. 202), which implies how another researcher can replicate an earlier research design and achieve the same findings (Jacobsen, 2015). For the current study, this relates, for instance, to how reliable the data collection was and the data analysis provided. Therefore, the previous research conducted by the NII and NCB and the data gathered by Bekk play a major role here because we were using secondary data to answer our research question.

To enhance and ensure the reliability of the current study, we double-checked that the data initially collected by Bekk were correct by controlling for every single number in the dataset. In addition, we used credible sources and references for recalling financial numbers, such as 'Proff' and annual reports available to the public. This means that if other researchers wanted to re-examine our research project to check if they would get the same results, they would be able to find the same numbers. However, we only collected the income relevant for Norway and the income that customers can impact. Therefore, the numbers for some companies cannot be collected directly from their operating incomes because these incomes are segmented. This may make it more difficult to gather the exact same numbers. However, the overall criteria for the financial information gathered was that the income reflects what

Norwegian customers can impact and the assets and size that contribute to that income; thus, it is possible for other researchers to collect about the same numbers. In addition, by using multiple-source secondary data, we reduced the probability of running into common method bias, which enhance the reliability of the study (Podsakoff et al., 2012; Podsakoff, 2017).

Linked to reliability, there are four mistakes that can be committed – also called threats to reliability (Saunders et al., 2016) – in a study. The first threat concerns the respondents, including that they respond to what they think the researchers want to hear or what the manager wants to hear. Here, we must distinguish between participant error and participant bias. Participant bias occurs when, for example, a participant answers the questions in a politically correct way. However, removing this error can be ensured by promising complete anonymity. On the other hand, participant errors occur when the participant misunderstands the concepts or questions. In the current study, because the CSI and BI are professional actors within their field, we assume that they accounted for these two errors when gathering the data to develop the NII and NCB.

The second threat concerns the researchers, where we also must distinguish between research bias and research errors. Researcher bias implies that we operating as researchers should not acquire other results nor allow subjective opinions to influence the conclusions (Saunders et al., 2016). To address this, it was advantageous that we were two researchers conducting the current study. We were able to double-check that our opinions and interpretations of the results were objective and that we did not try to embellish the results. This has served as a control check that our interpretations are more or less correct. Furthermore, research errors are how researchers influence the respondents (Saunders et al., 2016; Jacobsen, 2015). However, this is less relevant in the current study because we did not have any direct contact with the companies, except when emailing respective managers to control and find missing data for some of the information about the numbers collected. Again, we assume that these are issues that the NII and NCB have taken into account when collecting their data.

7.2 General Limitations

First, because the NII is relatively new, it was only possible to collect data for two years, which limited our time frame. In addition, the sample size was reduced because we could only use the companies that were represented on the NII in both years and because the companies that were not representative had to be excluded. In some of the analyses, the sample size was further reduced because there were some missing values, so our dataset was relatively small when it came to both the time frame and number of cases. This is something that limited our research and what we actually could analyse and investigate. With a longer time period, we would have been able to do a proper longitudinal study. Moreover, our results would have been more robust and less sensitive against random effects. With a bigger sample within one industry, we could have investigated each industry closer to see if there actually were differences between them. In the additional HRM analysis, we had the variables sorted after years, resulting in fewer cases within one variable, in addition to missing values. The results from this HRM analysis showed negative R-square results, indicating too many predictors and mediators relative to a small N. Hence, in reference to the HRM assumptions some analyses may not have run properly with our sample size. However, this limitation was minimised by PROCESS macro which is more adequate for analysing smaller sample sizes.

As mentioned, some of our variables had missing values. For one thing, this limited the companies we could analyse because these cases needed to be excluded when these variables were included in the analysis. Our initial dataset was missing NCB values for 13 companies. Because this was a mediating variable in our research model and perceived as a crucial part of the data analysis, we predicted these values for 2016 and 2017 for the 10 companies that had been represented on the NCB index in previous years. Although the values and development in the values for the different companies on the NCB were pretty consistent, we cannot confirm that this was completely correct. Moreover, if something major had happened in the companies, either positive or negative, it could mean more fluctuation and abnormal change in the NCB scores. This is something that we cannot control for in the OLS prediction or account for in our analysis because the values are predictions, and this represents a limitation in the current study. In addition, as explained in section 4.4.5, it was challenging to obtain consistent numbers across all industries because the reporting standard, international scope and segmentation information varied among the companies. This may give some deviations in our results relative to reality. However, we took an extensive amount of time collecting the

data and made sure that the numbers for the different variables were consistent and matched the income that were collected, along with making standards and guidelines for what to include. Especially within one firm we can conclude with high certainty that the numbers across years is consistent, thus, because we looked at income growth we get comparable ratios. Therefore, even though this may indicate a limitation, we believe it has a minimal impact for our respective analysis.

In addition, most of the companies' scores on the NII and NCB were relatively close on the indexes. A bigger sample and spread in the NII and NCB values would result in a larger portion of the scale being used and a smaller ratio concentrated in a certain interval; we might have been able to see more of a difference in companies on the upper scale of the index relative to those on the lower scale of the index. Thus, it would open up our analysis and discussion to look more into the consequences and differences between companies scoring high and low on these indexes. Furthermore, there may be some limitations when it comes to the interpretation of the results in the current study because our research is based on the customers' perceptions, which means we used soft data. Although it is the customers' perceptions we wanted to measure, this subjective and individual view makes it hard to generalise what companies actually should do to make customers satisfied, loyal and perceive them as innovative.

Finally, because this is a master's thesis, there was limited time and resources available. Additionally, we conducted all the analyses ourselves, which required us to learn about statistical programmes that were new to us. Having more time on the project would have enabled a more thorough study of both the theory and analyses used. However, we still believe our study provides the previous research with novel interesting findings and insights in how perceived firm innovativeness indirectly affects firm performance in the Norwegian market.

7.3 Future Research

The current study provides interesting results regarding how perceived firm innovativeness, customer satisfaction and loyalty affect firm performance, thus providing valuable insights for industry players. Although extensive effort was made to both design the study and test the

findings to ensure the reliability and validity of the results (see sections 7.1.1 and 7.1.2), future studies could ascertain the results' generalisability and the models' potential boundary conditions.

The limitations of the present study also give us insight into what might be interesting to investigate in future research. With a larger sample and increased time period, it would be interesting to investigate the different industries in more detail. For instance, it might be that perceived firm innovativeness has a greater effect on firm performance in some industries relative to others. Based on the fact that perceived firm innovativeness and customers' purchase patterns involve a lot of psychology, the perceived firm innovativeness effect on income might vary across industries. For instance, in some industries with low price levels and high-frequency purchases, it might be that product availability is more important than innovativeness. For example, our dataset included some grocery stores and transportation companies. For these industries, availability and distance to different stores is most likely very important, and this might outweigh a customer perceiving another company as more innovative. Moreover, the nature of these products does not involve much evaluation before purchase because customers use them frequently. Although if customers were buying other, more expensive and less-frequent products, such as a new car, computer or phone, they would probably have evaluated and explored other possibilities and options to a greater extent. Therefore, it would be interesting for future research to separate the industries to a greater extent and look at the differences between them in more detail.

Furthermore, it would be interesting to conduct the additional analysis with a larger sample and a longer timeline to look more in-depth at the time perspective. In addition, some products, such as cars and furniture, are not purchased frequently, thus, it might take time before the companies' innovative efforts are reflected in the income. Therefore, it might be that continuous innovation efforts slowly but surely drive new customers to the company, increasing satisfaction and loyalty for current customers. As mentioned, to build up a consistent image of firm innovativeness, these firm characteristics and behaviours need to be stable over time (Brown & Dacin, 1997), and the overall innovativeness of a firm is what the customers develop their perceptions of (Kunz et. al, 2010). Therefore, both studying when these possible effects happens and how firm performance varies based on a reduction or increase in perceived firm innovativeness would be interesting to investigate in future research.

Additionally, it would be interesting to have data from a larger variety of different companies in terms of size and, if possible, a larger spread in the values of the NII and NCB. By having this, it might be possible to make classifications based on companies that scored low and high on perceived firm innovativeness, so we could have concluded to what extent different scores of perceived firm innovativeness is important for affecting income and the possible consequences of having a relatively low score of perceived firm innovativeness. For instance, it might be that companies ranging from 50 to 70 on the NII do not differ much in terms of their impact on firm performance, while there might be a larger difference when the values range from 30 to 50 or from 70 to 90. Investigating these relationships may be very interesting because this may indicate what level the perceived firm innovativeness should be to exploit the full effects of a company's innovation efforts. In addition, there may be a cut-off where firms should stop spending on innovation, which is highly relevant from a managerial standpoint. For instance, in terms of increasing income growth it may be that after a certain point the marginal value of increasing perceived firm innovativeness is declining. By categorising perceived firm innovativeness, it might also be possible to indicate whether innovativeness at a certain level increases income or whether perceived firm innovativeness is required to just stay in the market.

Additionally, it would be interesting to look more into whether some types of innovation efforts are more profitable than others. This would include looking at what types of innovations most affect the perceived firm innovativeness from the customer's perspective. It might be that some innovative efforts are more beneficial internally, for instance, for better processes, procedures and employees, while other types of innovations are beneficial externally, for instance, through good brand reputation and increased sales. From a managerial point of view, this type of analysis might provide interesting insights into the benefits of different innovations and what should be considered regarding the choices of different innovative efforts to proceed.

Finally, the subjective and individual aspects of different customers also seem interesting to investigate. How customers value innovative efforts and how they value a change in a product or service may vary among different customer segments. Moreover, it might be that some customer segments are more influenced by innovativeness than others. Therefore, this is

something that may have an impact on how companies should communicate their innovative efforts and how they should choose to innovate the organisation in question.

7.4 Conclusion

In the current thesis, we have tried to answer the following research question:

"How do perceived firm innovativeness, customer satisfaction and loyalty affect firm performance?"

To answer this research question, we conducted a multiple-source secondary data study based on data from the NII and NCB, in addition to collecting financial data from annual reports and Proff. Furthermore, we analysed the respective variables by using the HRM and Process Macro, finding significant evidence of mediation.

Therefore, the answer to the research question is that the respective variables have a positive correlation with firm performance and that customer satisfaction and loyalty are mediating the effect between perceived firm innovativeness and firm performance. Because of the significant indirect effect, and the fact that this effect is much larger than the direct effect between perceived firm innovativeness and firm performance (full mediation), we can further conclude that perceived firm innovativeness and firm performance are mediated by customer satisfaction and loyalty. Moreover, perceived firm innovativeness has a stronger effect on customer loyalty than customer satisfaction has on loyalty, which challenges the established theory that usually emphasizes satisfaction as the most important antecedent of loyalty.

However, there is a need for further research to obtain a fuller understanding of how perceived firm innovativeness may affect firm performance in the long run. In addition, we cannot comment on the significance of our results for the entire profitability picture of a firm because our study does not include costs. Moreover, for a firm to succeed in their innovative efforts, it is important for the firm to keep the customer's perspective in mind and to keep innovative efforts stable over time. The result from the current study indicate that managers should be particularly aware of a broader spectrum of factors affecting firm performance, here being perceived firm innovativeness, which is mediated through customer satisfaction and

loyalty. In conclusion, the main part of the research model developed in the current thesis was confirmed. As such, the current thesis offers promising insights for future studies and the ongoing discussion on perceived firm innovativeness in relation to customer satisfaction, loyalty and firm performance.

9. References

Aaker, D. A. & Jacobsen, R. (1994). The financial information content of perceived quality. *Journal of Marketing Research, 31*(2), 191-201.

Aarrestad, I. L. & Hem, L. E. (2008). Ulike vekststrategier for et merke – en sammenligning (Del 1). *Magma, vol. 2*. Retrieved December 17th 2018, from https://www.magma.no/ulike-vekststrategier-for-et-merke-en-sammenligning-del-i.

Amabile, T. M. (1988). A model of creativity and innovation in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, *10*,123-167. Greenwich, CT: JAI Press.

American Innovation Index (AII) (2018). *Market Summary Report.* Retrieved November 25th 2018, from https://americaninnovationindex.com/wp-content/uploads/2018/06/Aii-2018-Market-Summary-Report.pdf?inf_contact_key=58e38f7ea087fc3a0c5b87e0153b118ccf9bd4461a3d056a818c7510be94da56.

Andreassen, G. L. (2018). *Innovasjon og økonomisk ulikhet henger sammen.* Retrieved December 9th 2018, from https://forskning.no/penger-innovasjon-ulikhet/innovasjon-og-okonomisk-ulikhet-henger-sammen/1258024.

Andreassen, T. W. (2016). Kundetilfredshet hindrer innovasjoner. *Innovation and Entrepreneurship. entreprenørskap.* Retrieved November 19th 2018, from https://www.nhh.no/nhh-bulletin/artikkelarkiv/eldre-saker/2015/mai/kundetilfredshet-hindrer-innovasjoner/.

Andreassen, T. W. & Lervik-Olsen, L. (2016). *Service og innovasjon.* 2. utg. Bergen: Fagbokforlaget.

Andreassen, T. W., Kurtmollaiev, S. & Lervik-Olsen, L. (2017). *Bedriftenes innovasjoner for økt kundelojalitet har motsatt effekt* (Blog post). Retrieved November 16th 2018, from http://twa-marketing.blogspot.com/2017/06/nar-bedriftene-delegger-for-seg-selv.html.

Andreassen, T. W., Kurtmollaiev, S., & Lervik-Olsen, L. (2018). *Innovasjon - Slik kundeneopplever det.* Retrieved October 4th 2018, from https://www.nhh.no/nhh-bulletin/artikkelarkiv/2018/mars/innovasjon---slik-kundene-opplever-det/

Barcode Intelligence (n.d.). *Norsk Kundebarometer.* Retrieved September 20th 2018, from http://www.barcode.as/tjenester/norsk-kundebarometer.

Barbera, F. (2013). *Financing, Firm Size and Productive Efficiency: The Effect of Family Ownership.* Retrieved November 25th 2018, from https://pure.bond.edu.au/ws/portalfiles/portal/18230658/financing_firm_size_and_productive_efficiency.pdf.

Beaumont, R. (2012). *Analysing Repeated Measures with Linear Mixed Models (Random Effects Models) (1). Getting Familiar With the Linear Mixed Models (LMM) Options in SPSS.* Version 1. Retrieved December 3rd 2018, from http://www.floppybunny.org/robin/web/virtualclassroom/stats/statistics2/repeated_measures_1_spss_lmm_intro.pdf.

Berry, W. D. (1993). *Understanding Regression Assumptions.* (Sage University Paper series on Quantitative Applications in the Social Sciences, series no. 07-092). Newbury Park, CA: Sage.

Besemer, S. P. & O'Quin, K. (1986). Analyzing Creative Products: Refinement and Test of a Judging Instrument. *The Journal of Creative Behavior, 20*(2), 115-26.

Besanko, D., Dranove, D., Shanley, M. & Schaefer, S. (2013). *Economics of Strategy*, 6th Edition. International Student Version. New Jersey, USA: John Wiley & Sons Inc.

BI (2017). *Norsk Kundebarometer 2017.* Retrieved November 25th 2018, from https://www.bi.no/forskning/norsk-kundebarometer/tidligere-resultater/resultater-2017/.

BI (2018). *Norsk Kundebarometer.* Retrieved October 19th 2018, from https://www.bi.no/forskning/norsk-kundebarometer/.

BI (n.d.). *Om Norsk Kundebarometer.* Retrieved October 24th 2018, from https://www.bi.no/forskning/norsk-kundebarometer/om-norsk-kundebarometer/.

Bitner, M. (1992). Servicescapes: The Impact of Physical Surroundings on Customers and Employees. *Journal of Marketing, 56*(2), 57-71.

Bloom, L. & Bloom, C. (11.08.2017). *The Bandwagon Effect – Are we going to think for ourselves?* (Blog post). Retrieved December 18th 2018, from https://www.psychologytoday.com/us/blog/stronger-the-broken-places/201708/the-bandwagon-effect.

Brown, T. J. & Dacin, P. A. (1997). The Company and the Product: Corporate Associations and Consumer Product Responses. *Journal of Marketing*, *61*(1), 68-84.

Brown, B. & Perry, S. (1994). Removing the financial performance halo from Fortune's 'most admired' companies. *Academy of Management Journal 37*(5): 1347-1359.

Bråthen, B. M. (2017). *Hvorfor er det viktig med merkevarebygging?* Retrieved November 23rd 2018, from https://risingbear.no/hvorfor-er-det-viktig-med-merkevarebygging/.

Boduszek, D. (n.d.). *Hierarchical Multiple Regression.* Retrieved November 11th 2018, from https://webzoom.freewebs.com/danielboduszek/Hierarchical%20Multiple%20Regression%20-%20D.%20Boduszek.pdf.

Buzzell, R. D. & Gale, B. T. (1987). *The PIMS Principles: Linking Strategy to Performance*. Free Press: New York.

Carbone, L. & Haeckel, S. (1994). Engineering Customer Experiences. *Marketing Management*, 3(3), 8-19.

Cho, H-J. & Pucik, V. (2004). Reliability and validity of the Fortune Reputation Survey: measuring innovativeness and quality. *Working paper*, 2004-6, IMD.

Cho, H-J. & Pucik, V. (2005). Relationship between innovativeness, quality, growth, profitability, and market value. *Strategic Management Journal*, *26*, 555-575. doi:10.1002/smj.461.

Christensen, C. M., Anthony, S., Berstell, G. & Nitterhouse, D. (2007). Finding the Right Job for Your Product. *MIT Sloan Management Review*, 48(3), 38-47.

Christensen, C. M., Raynor, M. E. & McDonald, R. (2015). What is Disruptive Innovation? *Harvard Business Review, December issue,* pp. 44-53. Retrieved December 17th 2018, from https://hbr.org/2015/12/what-is-disruptive-innovation.

Coad, A., Segarra A. & Teruel, M. (2013). Like milk or wine: Does firm performance improve with Age?. *Structural Change and Economic Dynamics*, *24*(1), 173-189. DOI: 10.1016/j.strueco.2012.07.002.

Coad, A., Segarra, A. & Teruel, M. (2016). Innovation and firm growth: Does firm age play a role?. *Research Policy*, *45*(2), pp. 387-400. https://doi.org/10.1016/j.respol.2015.10.015.

Cooper, R. G. (1990). New products: what distinguishes the winners. *Research-Technology Management, 33*(6), 27-31.

Cooper, R. G. & Brentani, U. D. (1991). New industrial financial services: what distinguishes the winners. *Journal of Product Innovation Management, 8*(2), 75-90.

Cooper, R. G. & Kleinschmidt, E. J. (1995). Benchmarking the firm's critical success factors in new product development. *Journal of Product Innovation Management, 12*(5), 374-391.

Cooper, R. G. & Kleinschmidt, E. J. (1996). Winning businesses in product development: the critical success factors. *Research-Technology Management, 39*(4), 18-29.

Crawford, C. M. & Di Benedetto, A. C. (2003). *New Products Management*. (7th ed). Burr Ridge, IL: Irwin/McGraw-Hill.

Dalen, A. & Nilsen, A. A. (2017). Rema 1000-sjef slutter etter bestevenn-fiasko. *E24.* Retrieved December 11th 2018, from https://e24.no/naeringsliv/rema-1000/rema-1000-sjef-slutter-etter-bestevenn-fiasko/24149962.

D'Emidio, T., Dorton, D. & Duncan, E. (2015). Service Innovation in a Digital World. *McKinsey Quarterly.* Retrieved September 17th 2018, from https://www.mckinsey.com/business-functions/operations/our-insights/service-innovation-in-a-digital-world.

Dawar, N. (2013). When Marketing is Strategy. *Harvard Business Review*, *9*(12), 100-108.

Dahl, G. A. (2006). Hvordan bør bedrifter finansieres? Retrieved November 24th 2018, from https://www.lederkilden.no/tema/hvordan-bor-bedrifter-finansieres.

Donkers, B., Verhoef, P. C. & de Jong, M. G. (2007). Modeling CLV: A Test of Competing Models in the Insurance Industry. *Quantitative Marketing and Economics, 5*, 163-190.

Edholm, L. (2017). Driftsresultat - En indikator på selskapets lønnsomhet (Blog post). Retrieved October 24th 2018, from https://www.visma.no/blogg/driftsresultat/.

Edvardsson, B. and Olsson, J. (1996). Key concepts for new service development. *The Service Industries Journal*, 16(2), 140-164.

Einarsen, K. (2018). *Innovasjon foregår ikke bare i arbeidslivet.* Retrieved December 9th 2018, from https://forskning.no/innovasjon-kronikk-samfunn/innovasjon-foregar-ikke-bare-i-arbeidslivet/1261583.

Fornell, C., Johnson, M. D., Anderson E. W., Cha, J. & Bryant, B. E. (1996). The American Customer Satisfaction Index: nature, purpose, and findings. *Journal of Marketing, 60*(4), 7-18.

Framnes, R., Pettersen, A. & Thjømøe, H. M. (2011). *Markedsføringsledelse.* 8th edition. Oslo: Universitetsforlaget.

Fugelli, P. (2001). *Tillit.* Retrieved November 24th 2018, from https://tidsskriftet.no/2001/12/kronikk/tillit.

Fripp, G. (2014). *A Step-by-step Guide to Calculating Customer Lifetime Value (CLV).* Retrieved October 19th 2018, from https://www.slideshare.net/frippery/a-step-bystep-guide-to-calculating-customer-lifetime-value.

Foss, N. J., Lyngsie, J. and Zahra, S. A. (2013). The Role of External Knowledge Sources and Organizational Design in the Process of Opportunity Exploitation. *Strategic Management Journal, 34*, 1453-1471.

Gourville, J. T. (2006). Eager Sellers and Stony Buyers: Understanding the Psychology of New-Product Adoption. *Harvard Business Review*. Retrieved September 18th 2018, from https://pdfs.semanticscholar.org/54f8/0578c9c0553d675ef7e265e18028d1656433.pdf.

Haberland, G. S. & Dacin, P. A. (1992). The Development of a Measure to Assess Viewers' Judgments of the Creativity of an Advertisement. *Advances in Consumer Research*, *19*(1), 817-826.

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2010). *Multivariate Data Analysis: A Global Perspective.* 7th edition. Upper Saddle River, NY: Prentice Hall.

Hafstad, A. (01.03.2010). Legen som balansekunstner. *Aftenposten.* Retrieved November 24th 2018, from https://www.aftenposten.no/meninger/i/Bl1JQ/Legen-som-balansekunstner.

Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis - A Regression-Based Aaproach.* New York: The Guilford Press.

Hayes, A. F. (2012). Process: *A Versatile computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling.* p. 7. Retrieved November 14th 2018, from https://is.muni.cz/el/1423/podzim2014/PSY704/50497615/hayes_2012_navod_process.pdf.

Hoff, K. G. (2013). *BED011 Driftsregnskap og budsjettering – en sammenstilt lærebok for NHH.* Oslo: Universitetsforlaget, p. 295.

Hurley, R. F. & Hult, G. T. (1998). Innovation, Market orientation and Organizational Learning: an Integration and Empirical Examination. *Journal of Marketing, 62*(3), 42-54.

IKEA (n.d.). *Lokalisering og bygging - IKEA varehusenes plassering.* Retrieved October

25th 2018, from https://www.ikea.com/ms/no_NO/about_ikea/facts_and_figures/-ekspansjon_norge/lokalisering_og_bygging.html#.

Im, S. & Workman, J. P. (2004). Market Orientation, Creativity, and New Product Performance in High-Technology Firms. *Journal of Marketing, 68*(2), 114-132.

Ittner, C. D. & Larcker, D. F. (1996). Measuring the impact of quality initiatives on firm financial performance. In *Advances in the Management of Organizational Quality.* Vol. 1, Fedor, D.B., Ghosh, S. (eds). JAI Press: Greenwich, CT; 1-37.

Kamins, M. A., Alpert, F. H. & Elliott, M. T. (2000). Independent and Interactive Effects of Exposure Sequence, Pioneership Awareness, and Product Trial on Consumer Evaluation of a Pioneer Brand. *Journal of Consumer Psychology, 9*(4), 223-229.

Keller, K. L. (2003). *Strategic Brand Management. Building, Measuring, and Managing Brand Equity.* 2nd International Edition. Upper Saddle River, New Jersey: Prentice Hall, p. 463.

Kline, R. B. (2011). *Principles and practice of structural equation modeling.* 3rd edition. New York: The Guilford Press.

Knott, A. M. & Vieregger, C. (2015). *All Hail Lage Firm Innovation: Reconciling the Firm Size and Innovation Debate.* p. 2. Retrieved November 25th 2018, from http://3we057434eye2lrosr3dcshy.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/All-Hail-Large-Firms_-Reconciling-the-Firm-Size-and-Innovation-Debate.pdf.

Kunz, W., Schmitt, B. & Meyer, A. (2010). How does perceived firm innovativeness affect the consumer? *Journal of Business Research*, *64*(8), 816-822.

Kurtmollaiev, S., Lervik-Olsen, L. & Andreassen, T. W. (2018). Innovasjon: Det du gjør, er ikke det de ser. *Magma, vol. 7, pp. 21-28.* Retrieved November 18th 2018, from https://www.magma.no/innovasjon-det-du-gjor-er-ikke-det-de-ser.

Jacobsen, D. I. (2015). *Hvordan gjennomføre undersøkelser? Innføring i samfunnsvitenskapelig metode.* 3rd edition. Oslo: Cappelen Damm AS.

Johannessen, A. (2007). *Introduksjon til SPSS.* 3. utgave. Oslo: Abstrakt Forlag AS.

Lem, C. H. (2010). Kundelønnsomhet er viktigere enn produktkalkyler. *Magma, vol. 4*, pp. 7-10. Retrieved December 17th 2018, from https://www.magma.no/kundeloennsomhet-er-viktigere-enn-produktkalkyler.

Lervik-Olsen, L., Kurtmollaiev, S. & Andreassen, T. W. (2016). Innovasjonsevne i norske

bedrifter. *Magma, vol. 7, pp. 24-32.* Retrieved September 17th 2018, from https://www.magma.no/innovasjonsevne-i-norske-bedrifter.

Lovelock, C. & Wright, L. (1999). *Principles of Services Marketing and Management.* Upper Saddle River, NJ: Prentice Hall.

Lowe, B. & Alpert, F. (2015). Forecasting consumer perception of innovativeness. *Technovation*, 45-46, pp. 1-14. ISSN 0166-4972

Maruyama, G. M. (1998). *Basics of Structural Equation Modeling*. Sage: Thousand Oaks, CA.

Madsen, E. L. (2003). Offentlig støtte for innovasjon. *Magma, vol. 2.* Retrieved December 9th 2018, from https://www.magma.no/offentlig-stoette-for-innovasjon.

McGuire, J. B., Schneeweis, T. & Branch, B. (1990). Perceptions of Firm Quality: A Cause or Result of Firm Performance. *Journal of Management, 16*(1), pp. 167-180. https://doi.org/10.1177/014920639001600112

Mizik, N. & Jacobson, R (2008). The Financial Value Impact of Perceptual Brand Attributes. *Journal of Marketing Research, 45*(1), 15-32.

Moorman, C. & Miner, A. S. (1997). The Impact of Organizational Memory on New Product Performance and Creativity. *Journal of Marketing Research, 34*(1), 91-106.

Momrak, A. M. (2012). *Effects of market orientation on business performance – Environmental moderators, effectiveness and efficiency mediators and the role of firm capabilities.* (Master Thesis). Buskerud University College, Hønefoss, Norway. Retrieved November 25th 2018, from https://brage.bibsys.no/xmlui/bitstream/handle/11250/142133/Master2012Momrak.pdf?sequence=1.

Murphy, E. C. & Murphy, M. A. (2002). *Leading on the Edge of Chaos: The 10 Critical Elements for Success in Volatile Times.* University of Michigan: Prentice Hall Press.

Norwegian School of Economics (NHH) (30.04.2017a). IKEA Tops the Norwegian Innovation Index. *NHH Bulletin, Innovation and Entrepreneurship*. Retrieved December 3rd 2018, from https://www.nhh.no/en/nhh-bulletin/article-archive/2017/april2/ikea-lead-the-norwegian-innovation-index/?fbclid=IwAR2SwymLVpVgQod6S_i26bqUZYhcd93GxhNpuuVHdS3QsKuoEmuENdeaDPQ.

Norwegian School of Economics (NHH) (2017b). *Om NII.* Retrieved September 18th 2018, from https://www.nhh.no/norsk-innovasjonsindeks/om-nii/.

Norwegian School of Economics (NHH) (2017c). The Norwegian Innovation Index. Retrieved September 18th 2018, from https://www.nhh.no/en/the-norwegian-innovation-index/.

Neegaard, D. P. (2016). Slik forklarer Rema hvorfor de vil gi deg færre merker å velge mellom. *Aftenposten.* Retrieved from https://www.aftenposten.no/okonomi/i/Lgk2q/Slik-forklarer-Rema-hvorfor-de-vil-gi-deg-farre-merker-a-velge-mellom.

Norheim, A. (2018). *Norge spiller i andredivisjon.* Retrieved December 9th 2018, from https://www.nrk.no/ytring/norge-spiller-i-andredivisjon-1.14289799.

Nyhus, H. (2014). *Kundelojalitet er ikke det samme som kundetilfredshet.* Retrieved December 11th 2018, from http://www.businessnorge.no/retail/kundetilfredshet-og-lojalitet.

Nysveen, H. & Andreassen, T. W. (2014). Innovasjon når markedene endres i turbofart! *Magma, vol. 8, pp. 16-25*. Retrieved November 16th 2018, from https://www.magma.no/innovasjon-nar-markedene-endres-i-turbofart.

OECD (2005). *Small and Medium-Sized Enterprises (SMES).* Retrieved December 10th 2018, from https://stats.oecd.org/glossary/detail.asp?ID=3123.

Oliver, R. L. (1980). A Cognitive Model of Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research, 17*(4), 460-469.

Oliver, R. L. (1999). Whence Consumer Loyalty? *Journal of Marketing, 63*(Special Issue), Fundamental Issues and Directions for Marketing, pp. 33-44. Retrieved October 19th 2018, from https://www.jstor.org/stable/pdf/1252099.pdf?refreqid=excelsior%3Ade07dbb7adc6e924b48a4dd775bfdbe2.

Oslo Manual (2018). *The Measuerment of Scientific and Technological Acitivites – Proposed Guidelines for Collecting and Interpreting Technological Innovation Data.* Retrieved November 20th 2018, from http://www.oecd.org/science/inno/2367580.pdf.

Ordanini, A. L., Miceli, M., Pizzetti & Parasuraman, A. (2011). Crowd-Funding: Transforming Customers into Investors through Innovative Service Platforms. *Journal of Service Management*, *22*, 443-470.

Pallant, J. (2016). *SPSS Survival Manual - A Step by Step Guide to Data Analysis Using IBM SPSS.* Berkshire: Open University Press.

Pedersen, R. (2018). *Kundetilfredshet - Undersøkelser om kunders tilfredshet og lojalitet*

kan gi deg en pekepinn på hvor godt et produkt eller en tjeneste er. Retrieved September 20th 2018, from https://www.smartepenger.no/forbruker/1041-kundetilfredshet.

Peng, H. & Lu, Y. (2012). Model Selection in Linear Mixed Effect Models. *Journal of Multivariate Analysis, p. 109*. https://doi.org/10.1016/j.jmva.2012.02.005.

Pervan, M. & Viši, J. (2013). *Influence of Firm Size on Its Buisiness Success.* Retrieved November 25th 2018, from https://www.semanticscholar.org/paper/Influence-of-Firm-Size-on-Its-Business-Success-Pervan-Vi%C5%A1i/19d56cbbf87f230a7ffba02bdd10112a95e5b869.

Phillips, L. W., Chang, D. R. & Buzzell, R. D. (1983). Product quality, cost position, and business performance: a test of some key hypotheses. *Journal of Marketing* 47(2), 26-43.

Plutchik, R. & Kellerman, H. (1980). *Emotion: Theory, research, and experience: Vol. 1. Theories of emotion*. New York: Academic Press.

Podsakoff, N. P. (2017). A *Tutorial on the Causes, Consequences, and Remedies of Common Method Biases.* Presentation february 25th, 2017. University of Arizona. Retrieved December 3rd 2018, from https://business.unl.edu/outreach/carma/documents/CARMA-Podsakoff-Presentation.pdf.

Podsakoff, P. M., MacKenzie, S. B. & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 65,* 539-569.

Podsakoff, P. M., MacKenzie, S. C., Lee, J-Y. & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of theLiterature and Recommended Remedies. *Journal of Applied Psychology, 88*(5), pp. 879-903.

Preacher, K. J., & Hayes, A. F. (2008). *Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models.* Behavior Research Methods, *40*, 879-891. http://dx.doi.org/10.3758/BRM.40.3.879.

Probstein, S., (2009). *Listen to the Voice of the Customer.* Retrieved October 19th 2018, from https://www.destinationcrm.com/Articles/Web-Exclusives/Viewpoints/Listen-to-the-Voice-of-the-Customer-53239.aspx.

Professional Academy (n.d.). *Marketing Theories – The Marketing Mix – From 4 PS to 7*

PS. Retrieved November 22nd 2018, from https://www.professionalacademy.com/blogs-and-advice/marketing-theories---the-marketing-mix---from-4-p-s-to-7-p-s.

Ringel, M., Taylor, A. & Zablit H. (2015). *The Most Innovative Companies 2015: Four Factors That Differentiate Leaders*. Boston, MA: Boston Consulting Group. Retrieved September 17th 2018, from https://media-publications.bcg.com/MIC/BCG-Most-Innovative-Companies-2015-Nov-2015.pdf.

Robinson, A. (2018). *Want to* Boost Your Bottom Line? Encourage Your Employees to Work on Side Projects. *Inc.* Retrieved November 23rd 2018, from https://www.inc.com/adam-robinson/google-employees-dedicate-20-percent-of-their-time-to-side-projects-heres-how-it-works.html.

Rousler, P., (n.d.). *How Customer Loyalty Drives Profitability*. Retrieved October 19th 2018, from *https://www.webmarketingpros.com/how-customer-loyalty-drives-profitability/.*

Rucci, A. J., Kirn, S. P. & Quinn, R. T. (1998). The employee-customer-profit chain at Sears. *Harvard Business Review, 76*(1), 82-97.

Russel, J., Weiss, A. & Mendelsohn, G. (1989). Affect grid: A single-item scale of pleasure and arousal. *Journal of Personality and Social Psychology*, *57*(3), 439-502.

Ryan, K. J. (2016). 4 Things Google Does to Remain One of the World's Most Innovative Companies. *Inc.* Retrieved November 23rd 2018, from https://www.inc.com/kevin-j-ryan/how-google-remains-one-of-the-worlds-most-innovative-companies.html.

Samuelsen, B. M., Peretz, A. & Olsen, L. E. (2007a). Er det nok at kundene har en positiv holdning til merkevaren din?. Based on a chapter in the book "Merkevareledelse på norsk" written of Samuelsen, B. M., Peretz, A. and Olsen, L. E. Retrieved September 19th 2018, from https://www.lederkilden.no/tema/er-det-nok-at-kundene-har-en-positiv-holdning-til-merkevaren-din.

Samuelsen, B. M., Silseth, P. R., Lorentzen, B. G. & Lervik-Olsen, L. (2007b). Dynamiske perspektiv på kunderelasjoner. *Magma, vol. 2.* Retrieved September 19th 2018, from https://www.magma.no/dynamiske-perspektiv-paa-kunderelasjoner.

Sander, K. (2017). *Hvilke fordeler gir en merkevare kunden?* Retrieved November 23rd 2018, from https://estudie.no/fordeler-merkevarer/.

Sanburn, J. (2011). *5 Reasons Borders Went Out of Business (and What Will Take Its Place)*. Retrieved November 28th 2018, from http://business.time.com/2011/07/19/5-reasons-borders-went-out-of-business-and-what-will-take-its-place/.

Saunders, M., Lewis, P. & Thornhill, A. (2016). *Research Methods For Business Students.* 7th edition. Harlow: Pearson Education Limited.

Schoeffler, S., Buzzell, R. D. & Heany, D. F. (1974). Impact of strategic planning on profit performance. *Harvard Business Review, 52*(2), 137-145.

Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge: Harvard University Press.

Schølberg, O. (2009). Finansteori anvendt i praksis. Magma, *vol. 8.* Retrieved November 23rd 2018, from https://www.magma.no/finansteori-anvendt-i-praksis.

Selart, M. (08.02.2018). Analysemodell. *Lecture at the Norwegian School of Economics (NHH)*.

Selnes, F. (2002). Markedsstrategi - markedsandel eller kundelojalitet? *Magma, vol. 2.* Retrieved November 19th 2018, from https://www.magma.no/markedsstrategi-markedsandel-eller-kundelojalitet.

Selnes, F. (2012). *Innføring i markedsføringsledelse* (1. utg). Oslo: akademika forlag.

Shah, S., Tahir, S. H., Anwar, J. & Ahmad, M. (2016). Does Size Matter in Determining Firms' Performance? Comparative Analysis of Listed Companies. *City University Research Journal*, *6*(2), pp. 344-353.

Short, J. C., McKelvie, A., Ketchen Jr., D. J. & Chandler, G. N. (2009). Firm and industry effects on firm performance: A generalization and extension for new ventures. *Strategic Entrepreneurship Journal*. https://doi.org/10.1002/sej.53.

Silseth, P. R. (01.12.2016). *Norsk Kundebarometer - Verdien av tilfredse kunder.* Presentation in collaboration with Norwegian Business School and Barcode Intelligence. Retrieved October 23rd 2018, from http://docplayer.me/25944553-Tema-for-foredraget-norsk-kundebarometer-verdien-av-tilfredse-kunder.html.

Silseth, P. R. (2018). *Norsk Kundebarometer - Innsikt i kundetilfredshet.* Retrieved September 19th 2018, from http://www.analysen.no/images/Presentasjoner/2018/2018.05.23_Pal_Silseth_Norsk_Kundebarometer.pdf.

Silseth, P. R. (2017). Lojalitetens mange ansikt. *BI Business Review*. Retrieved November 24th 2018, from https://www.bi.no/forskning/business-review/articles/2017/05/lojalitetens-mange-ansikt/.

Simon, H. A. (1954). Spurious Correlation: A Causal Interpretation. *Journal of the*

American Statistical Association, 49(267), 467-479.

Smith, R. E., MacKenzie, S. B., Xiaojing, Y., Buchholz, L. M. & Darley, W. K. (2007). Modelling the Determinants and Effects of Creativity in Advertising. *Marketing Science, 26*(6), 819-833.

Smith, E. R. (2014). *Research Design.* In: Reis, H. T. & Judd, C. M. (Eds). Handbook of Research Methods in Social and Personality. New York: Cambridge University Press, p. 27.

Statistics Norway (SSB) (n.d). *Standard for næringsgruppering (SN).* Retrieved November 11th 2018, from https://www.ssb.no/klass/klassifikasjoner/6.

Statistics Norway (SSB) (2018). Virksomheter. Retrieved November 24th 2018, from https://www.ssb.no/virksomheter-foretak-og-regnskap/statistikker/bedrifter.

Statista (July, 2018). *U.S. customer satisfaction with Google from 2002 to 2018 (index score).* Retrieved November 23th 2018, from https://www.statista.com/statistics/185966/us-customer-satisfaction-with-google/.

Statistical Solutions (n.d.a). *What is Multiple Linear Regression?* Retrieved November 11th 2018, from https://www.statisticssolutions.com/what-is-multiple-linear-regression/.

Statistical Solutions (n.d.b). *Homoscedasticity.* Retrieved November 11th 2018, from https://www.statisticssolutions.com/homoscedasticity/.

Stokkedal, R. (2017). *Innkjøpsfunksjonens påvirkning på bedriftens lønnsomhet.* Retrieved October 24th 2018, from http://www.tungt.no/logistikk/internlogistikk/innkjopsfunksjonens-pavirkning-pa-bedriftens-lonnsomhet-2005410.

Tabachnick, B. G. & Fidell, L. S. (2013). *Using Multivariate Statistics* (6th edn). Boston: Pearson Education, p. 128.

Thaler, R. (1980). Toward a Positive Theory of Consumer Choice. *Journal of Economic Behavior and Organization*, *1*(1), pp. 39–6. https://doi.org/10.1016/0167-2681(80)90051-7.

Thoresen, P. & Skøien, J. (2013). *Bedring av lønnsomhet og likviditet i SMB-markedet.* Retrieved December 17th 2018, from https://www.lederkilden.no/tema/strategi_virksomhetsutvikling/lonnsomhet_likviditetsforbedring/bedring_av_lonnsomhet_og_likviditet.

Tulsian, M. (2014). Profitability Analysis (A Comparative Study of SAIL & TATA Steel). *Journal of Economics and Finance, 3*(2), *Ver. 1*, pp. 99-22. Retrieved October 24th 2018, from http://www.iosrjournals.org/iosr-jef/papers/vol3-issue2/Version-1/C03211922.pdf.

Tversky, A. & Kahneman, D. (1981). The Framing of Decisions and the Psychology of Choice". *Science, 211*(4481), pp. 453-258. doi: 10.1126/science.7455683.

University of California, Los Angeles (UCLA) (n.d.). *Analyzing and Visualizing Interactions in SAS.* Retrieved November 18th 2018, from https://stats.idre.ucla.edu/sas/seminars/analyzing-and-visualizing-interactions/.

Usero, B. and Fernández, Z. (2009). First come, first served: How market and non-market actions influence pioneer market share. *Journal of Business Research, 62*(11), 1139-1145.

Vargo, S. & Lusch, R. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68, 1-17.

Visma (n.d.a). *Inntekt - Hva er inntekt?.* Retrieved October 24th 2018, from https://www.visma.no/eaccounting/regnskapsordbok/i/inntekt/.

Visma (n.d.b). *Avkastning - hva er avkastning?* Retrieved November 23rd 2018, from https://www.visma.no/eaccounting/regnskapsordbok/a/avkastning/.

Wagner, H. M. (1984). Profit wonders, investment blunders. *Harvard Business Review, 62*(5), 121-135.

Webber, A. E. (2008). B2B Customer Experience Priorities in An Economic Downturn: Key Customer Usability In a Soft Economy. *Forrester Research*.

Wendt, M. (2007). *Considerations before Pooling Data from Two Different Cycles of the General Social Survey.* p. 2. Retrieved December 11th 2018, from http://www23.statcan.gc.ca/imdb-bmdi/document/8011_D1_T9_V1-eng.pdf.

Wig, K. (26.09.2017). Eksperter: Derfor trenger Rema både "Æ" og bestevenner. *E24.* Retreived from https://e24.no/naeringsliv/rema-1000/eksperter-derfor-trenger-rema-baade-ae-og-bestevenner/24150183.

Wilke, J. & Sorvillo, N. (2005). Targeting early adopters – a means for new product survival. *Consume Insights, 5*, p. 15-17.

Wilson, A., Zeithaml, V. A., Bitner, M. J. & Gremler, D. D. (2012). *Service Marketing,*

Integrating Customer Focus Across the Firm. Second European Edition, McGraw-Hill.

Wirtz, J. & Lovelock, C. (2016). *Services marketing: people, technology, strategy.* Hackensack, NJ: World Scientific Publishing.

Wojcicki, S. (2011). *The Eight Pillars of Innovation.* Retrieved October 25th 2018, from https://www.thinkwithgoogle.com/marketing-resources/8-pillars-of-innovation/.

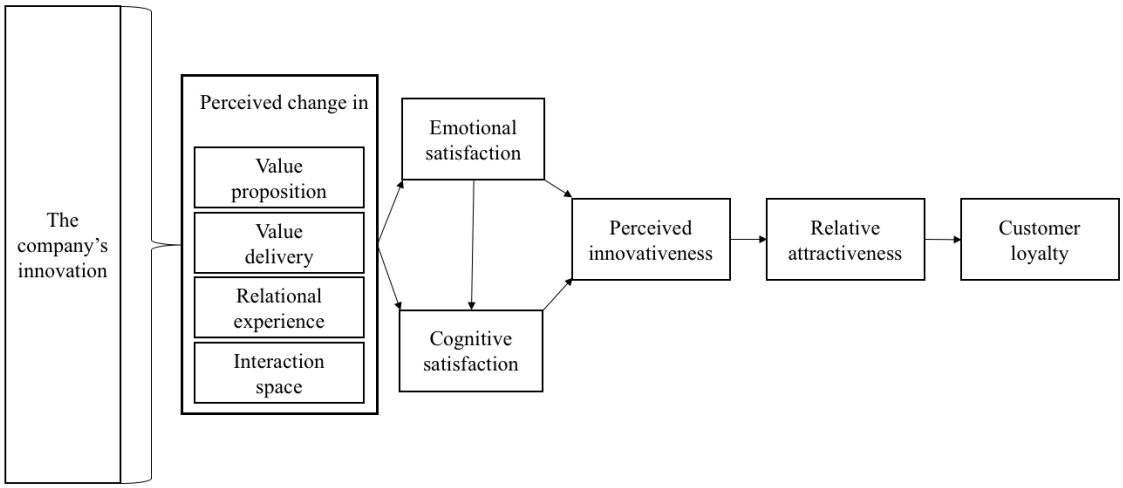
Yin, R. K. (2018). *Case Study Research and Applications.* (6th ed.). Thousand Oaks, CA: Sage Publications Inc.

Zomerdijk, L. G. & Voss, C. A. (2010). Service Design for experience-centric services. *Journal of Service Research*, 13(1), 67-82.

Appendices

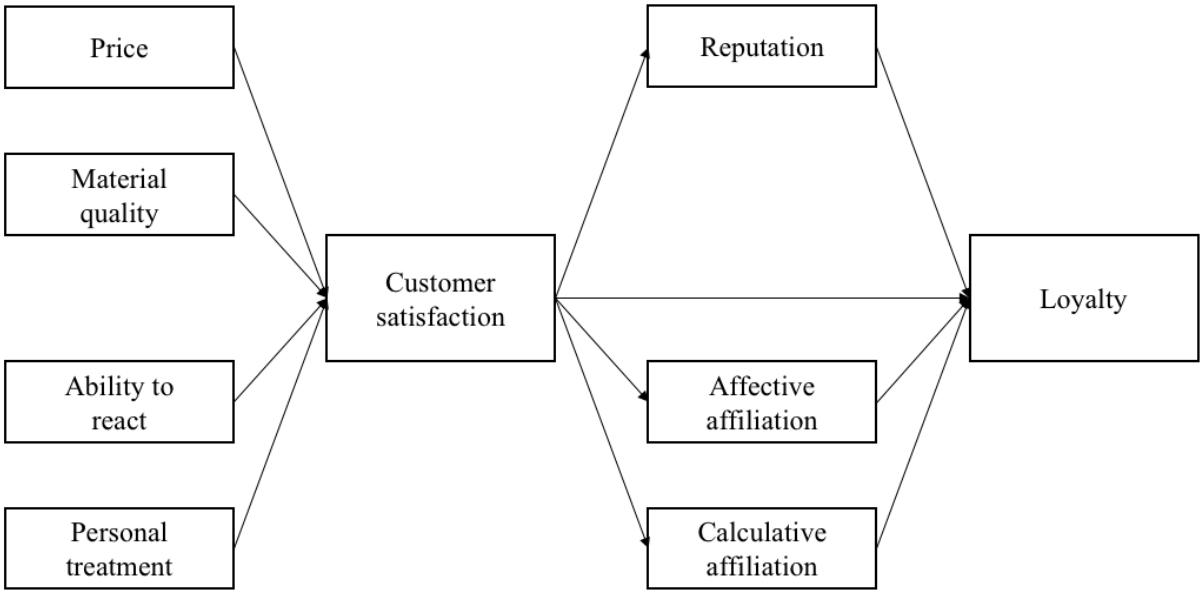
In this chapter, models, figures and output from the analyses will be presented. Their corresponding heading is referred to in the text were they are used.

Appendix A - The Conceptual Model of the Norwegian Innovation Index



Appendix A illustrates what afects the customers perception of companies innovativeness, and with what consequences. The figure shows that the changes in the customers experiences can be considered to have occurred in the actual value proposition, value delivery, interaction space or relational experience itself. The changes may affect cognitive and/or emotional satisfaction, which affects the customer's perception of the company's innovativeness. This in turn lead to increased relative attractiveness, giving the company a clearer competitive advantage, which in turn will lead to a higher probability of customer loyalty. Companies perceived as innovative are also perceived as being more attractive in the marketplace. These positive impressions or attitudes to the business are translated by automating re-purchases from the company. If perceived firm innovativeness decrease because the company has not inovated for a while or failed in a number of innovations, the customer's perceived firm innovativeness of the company decrease, RA decrease, and customer loyalty decrease. The likelihood of re-purchase also decrease – which threatens future cash flow (Lervik-Olsen et al., 2016).

Appendix B - The Conceptual Model of the Norwegian Customer Barometer



Appendix B shows the NCB's research model. The figure illustrates that quality along with price affects customer satisfaction. Quality is hereby operationalized as material quality, ability to react and persoanl treatment. Customer satisfaction, on the other hand, affects the brand's reputation and the customer's affective (emotional) and calculative (rational) affiliation with the brand. In addition to the indirect effect customer satisfaction has on loyalty through reputation and affiliations, the customer's satisfaction directly affects loyalty. It lies in the logic of the model (and reality) that the left side will need more industry and/or company customization if the purpose is to maximise explained variance in customer satisfaction and increase business decision-making (Samuelsen et al., 2007b).

Appendix C – Mixed-Effect Modelling

Regression Mixed Model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,023[a]	0,001	-0,010	10,53963282464
2	,327[b]	0,107	0,067	10,12926088396

a. Predictors: (Constant), Id

b. Predictors: (Constant), Id, NII Loyalty, NCB Satisfaction, NII Innovativeness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1,745	2,280		0,765	0,446
	Id	0,016	0,075	0,023	0,216	0,830
2	(Constant)	-16,637	13,588		-1,224	0,224
	Id	0,015	0,073	0,020	0,200	0,842
	NII Innovativeness	0,007	0,221	0,005	0,032	0,975
	NCB Satisfaction	-0,339	0,247	-0,185	-1,372	0,174
	NII Loyalty	0,650	0,277	0,415	2,350	0,021

a. Dependent Variable: Income Development

MIXED Income Growth By Time

Type III Tests of Fixed Effects[a]

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	50,400	8,303	0,006
Time	1	50,442	0,283	0,597

a. Dependent Variable: Income Development .

Estimates of Fixed Effects[a]

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	3,607066	1,287830	51	2,801	0,007	1,021640	6,192492
[Time=1,00]	-1,153809	2,169579	50,442	-0,532	0,597	-5,510591	3,202972
[Time=2,00]	0[b]	0					

a. Dependent Variable: Income Development .

b. This parameter is set to zero because it is redundant.

MIXED Income Growth by Time NIIInnovativeness, NCBSatisfaction, NIILoyalty

Type III Tests of Fixed Effects[a]

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	47,102	4,213	0,046
Time	1	47,250	0,833	0,366

a. Dependent Variable: Income Development .

Estimates of Fixed Effects[a]

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	3,159570	1,330029	48	2,376	0,022	0,485367	5,833774
[Time=1,00]	-2,011561	2,203694	47,250	-0,913	0,366	-6,444204	2,421081
[Time=2,00]	0[b]	0					

a. Dependent Variable: Income Development .

b. This parameter is set to zero because it is redundant.

Appendix D - Descriptives, test of normailty, histogram, Q-Q and Outliers

Income Growth with all outliers (DV)

Descriptives (DV – with outlier)

			Statistic	Std. Error
Income Development	Mean		6,3202544568	3,44745924449
	95% Confidence Interval for Mean	Lower Bound	-0,5185773279	
		Upper Bound	13,1590862415	
	5% Trimmed Mean		2,8342830611	
	Median		2,3183841930	
	Variance		1212,267	
	Std. Deviation		34,81763166452	
	Minimum		-25,08538832	
	Maximum		337,58842831	
	Range		362,67381663	
	Interquartile Range		9,12092808	
	Skewness		8,701	0,239
	Kurtosis		83,077	0.474

Extreme Values (DV – with outlier)

			Case Number	Value
Income Development	Highest	1	102	337,58842831
		2	53	53,23563605
		3	26	34,30666526
		4	81	29,74977642
		5	18	28,40620203
	Lowest	1	95	-25,08538832
		2	72	-23,52235413
		3	77	-21,27167987
		4	51	-16,36637227
		5	4	-13,41195342

Tests of Normality (DV – with outlier)

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Income Development	0,322	102	0,000	0,288	102	0,000

a. Lilliefors Significance Correction

Income Growth without the most extreme outliers (DV)

Descriptives (DV)

			Statistic	Std. Error
Income Development	Mean		3,0403715474	1,07232933827
	95% Confidence Interval for Mean	Lower Bound	0,9129006818	
		Upper Bound	5,1678424130	
	5% Trimmed Mean		2,6412587949	
	Median		2,3075446024	
	Variance		116,139	
	Std. Deviation		10,77677647444	
	Minimum		-25,08538832	
	Maximum		53,23563605	
	Range		78,32102437	
	Interquartile Range		8,87035455	
	Skewness		1,048	0,240
	Kurtosis		5,115	0,476

Tests of Normality (DV)

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Income Development	0,107	101	0,006	0,908	101	0,000

a. Lilliefors Significance Correction

Perceived Firm Innovativeness (IV)

Descriptives (IV)

			Statistic	Std. Error
NII Innovativeness	Mean		54,4691682961	0,66993178314
	95% Confidence Interval for Mean	Lower Bound	53,1400427191	
		Upper Bound	55,7982938732	
	5% Trimmed Mean		54,0679492551	
	Median		53,1000000000	
	Variance		45,330	
	Std. Deviation		6,73273109515	
	Minimum		39,52065702	
	Maximum		77,70000000	
	Range		38,17934298	
	Interquartile Range		7,56237198	
	Skewness		1,048	0,240
	Kurtosis		1,922	0,476

Tests of Normality (IV)

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
NII Innovativeness	0,126	101	0,000	0,934	101	0,000

a. Lilliefors Significance Correction

Customer Satisfaction (M1)

Descriptives (M1)

			Statistic	Std. Error
NCB Satisfaction	Mean		72,410633	0,5922132
	95% Confidence Interval for Mean	Lower Bound	71,234615	
		Upper Bound	73,586651	
	5% Trimmed Mean		72,574167	
	Median		72,625450	
	Variance		32,967	
	Std. Deviation		5,7417201	
	Minimum		51,9500	
	Maximum		85,1000	
	Range		33,1500	
	Interquartile Range		6,7250	
	Skewness		-0,632	0,249
	Kurtosis		2,162	0,493

Tests of Normality (M1)

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
NCB Satisfaction	0,074	94	,200*	0,958	94	0,004

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Customer Loyalty (M2)

Descriptives (M2)

			Statistic	Std. Error
NII Loyalty	Mean		65,4783302462	0,64731019291
	95% Confidence Interval for Mean	Lower Bound	64,1940852598	
		Upper Bound	66,7625752326	
	5% Trimmed Mean		65,4793132155	
	Median		65,0000000000	
	Variance		42,320	
	Std. Deviation		6,50538692707	
	Minimum		48,90000000	
	Maximum		85,20760634	
	Range		36,30760634	
	Interquartile Range		7,22200790	
	Skewness		0,131	0,240
	Kurtosis		0,996	0,476

Tests of Normality (M2)

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
NII Loyalty	0,057	101	,200*	0,982	101	0,191

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Appendix E – HRM with Income Growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1,034	6,409		-0,161	0,872					
	Assets	-7,037E-06	0,000	-0,244	-1,617	0,110	-0,079	-0,186	-0,177	0,523	1,912
	Age	-0,002	0,030	-0,007	-0,053	0,958	-0,115	-0,006	-0,006	0,613	1,631
	Size	0,002	0,001	0,336	2,124	0,037	0,185	0,241	0,232	0,477	2,096
	Retail	3,671	5,988	0,171	0,613	0,542	0,193	0,072	0,067	0,153	6,527
	Finance and Insurance	0,119	7,261	0,004	0,016	0,987	-0,080	0,002	0,002	0,249	4,022
	Information and Communication	-2,538	7,413	-0,077	-0,342	0,733	-0,172	-0,040	-0,037	0,239	4,192
	Transport	-0,162	6,424	-0,006	-0,025	0,980	-0,102	-0,003	-0,003	0,195	5,125
2	(Constant)	-14,076	12,508		-1,125	0,264					
	Assets	-6,513E-06	0,000	-0,226	-1,494	0,140	-0,079	-0,173	-0,163	0,518	1,931
	Age	0,013	0,032	0,060	0,399	0,691	-0,115	0,047	0,043	0,529	1,889
	Size	0,002	0,001	0,272	1,634	0,107	0,185	0,189	0,178	0,429	2,333
	Retail	2,768	6,015	0,129	0,460	0,647	0,193	0,054	0,050	0,151	6,628
	Finance and Insurance	-1,880	7,423	-0,057	-0,253	0,801	-0,080	-0,030	-0,028	0,236	4,231
	Information and Communication	-4,324	7,534	-0,130	-0,574	0,568	-0,172	-0,067	-0,062	0,229	4,359
	Transport	-0,153	6,404	-0,006	-0,024	0,981	-0,102	-0,003	-0,003	0,195	5,125
	NII Innovativeness	0,248	0,205	0,155	1,213	0,229	0,210	0,141	0,132	0,724	1,382
3	(Constant)	-15,882	18,104		-0,877	0,383					
	Assets	-5,019E-06	0,000	-0,174	-1,085	0,281	-0,079	-0,129	-0,118	0,461	2,168
	Age	0,012	0,032	0,056	0,372	0,711	-0,115	0,044	0,041	0,529	1,890
	Size	0,002	0,001	0,274	1,645	0,105	0,185	0,193	0,179	0,429	2,334
	Retail	3,679	6,057	0,171	0,607	0,546	0,193	0,072	0,066	0,149	6,709
	Finance and Insurance	-1,728	7,517	-0,052	-0,230	0,819	-0,080	-0,027	-0,025	0,231	4,331
	Information and Communication	-1,501	7,911	-0,045	-0,190	0,850	-0,172	-0,023	-0,021	0,208	4,796
	Transport	-0,206	6,434	-0,008	-0,032	0,975	-0,102	-0,004	-0,003	0,194	5,164
	NII Innovativeness	-0,041	0,325	-0,025	-0,125	0,901	0,210	-0,015	-0,014	0,287	3,478
	NCB Satisfaction	-0,228	0,279	-0,122	-0,817	0,416	0,095	-0,097	-0,089	0,536	1,864
	NII Loyalty	0,508	0,377	0,306	1,346	0,183	0,266	0,159	0,147	0,229	4,365

a. Dependent Variable: Income Development

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,359[a]	0,129	0,045	10,52967450642	0,129	1,543	7	73	0,167
2	,382[b]	0,146	0,051	10,49588961725	0,017	1,471	1	72	0,229
3	,411[c]	0,169	0,050	10,50540988154	0,022	0,935	2	70	0,398

a. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Assets , Retail
b. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Assets , Retail,
c. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Assets , Retail,
d. Dependent Variable: Income Development

Correlations

		Income Development	Assets	Age	Size	Retail	Fin. & Ins.	Info. & Com.	Transport	NII Innovativeness	NCB Satisfaction	NII Loyalty
Pearson Correlation	Income Development	1,000	-0,079	-0,115	0,185	0,193	-0,080	-0,172	-0,102	0,210	0,095	0,266
	Assets	-0,079	1,000	0,364	0,560	-0,150	0,405	-0,050	-0,074	0,057	-0,114	-0,152
	Age	-0,115	0,364	1,000	0,198	-0,346	0,361	0,356	-0,049	-0,223	-0,190	-0,314
	Size	0,185	0,560	0,198	1,000	-0,139	0,200	-0,132	-0,123	0,257	0,026	0,115
	Retail	0,193	-0,150	-0,346	-0,139	1,000	-0,356	-0,356	-0,512	0,119	0,033	0,068
	Finance and Insurance	-0,080	0,405	0,361	0,200	-0,356	1,000	-0,135	-0,194	0,125	0,198	0,157
	Information and Communication	-0,172	-0,050	0,356	-0,132	-0,356	-0,135	1,000	-0,194	-0,004	-0,258	-0,319
	Transport	-0,102	-0,074	-0,049	-0,123	-0,512	-0,194	-0,194	1,000	-0,304	-0,002	-0,033
	NII Innovativeness	0,210	0,057	-0,223	0,257	0,119	0,125	-0,004	-0,304	1,000	0,438	0,730
	NCB Satisfaction	0,095	-0,114	-0,190	0,026	0,033	0,198	-0,258	-0,002	0,438	1,000	0,666
	NII Loyalty	0,266	-0,152	-0,314	0,115	0,068	0,157	-0,319	-0,033	0,730	0,666	1,000
Sig. (1-tailed)	Income Development		0,217	0,126	0,043	0,027	0,212	0,043	0,154	0,018	0,182	0,004
	Assets	0,217		0,000	0,000	0,067	0,000	0,310	0,231	0,287	0,137	0,064
	Age	0,126	0,000		0,033	0,000	0,000	0,000	0,313	0,012	0,033	0,001
	Size	0,043	0,000	0,033		0,099	0,032	0,111	0,129	0,008	0,409	0,145
	Retail	0,027	0,067	0,000	0,099		0,000	0,000	0,000	0,117	0,377	0,251
	Finance and Insurance	0,212	0,000	0,000	0,032	0,000		0,089	0,026	0,107	0,028	0,058
	Information and Communication	0,043	0,310	0,000	0,111	0,000	0,089		0,026	0,482	0,006	0,001
	Transport	0,154	0,231	0,313	0,129	0,000	0,026	0,026		0,001	0,492	0,371
	NII Innovativeness	0,018	0,287	0,012	0,008	0,117	0,107	0,482	0,001		0,000	0,000
	NCB Satisfaction	0,182	0,137	0,033	0,409	0,377	0,028	0,006	0,492	0,000		0,000
	NII Loyalty	0,004	0,064	0,001	0,145	0,251	0,058	0,001	0,371	0,000	0,000	
N	Income Development	101	101	101	87	101	101	101	101	101	94	101
	Assets	101	101	101	87	101	101	101	101	101	94	101
	Age	101	101	101	87	101	101	101	101	101	94	101
	Size	87	87	87	87	87	87	87	87	87	81	87
	Retail	101	101	101	87	101	101	101	101	101	94	101
	Finance and Insurance	101	101	101	87	101	101	101	101	101	94	101
	Information and Communication	101	101	101	87	101	101	101	101	101	94	101
	Transport	101	101	101	87	101	101	101	101	101	94	101
	NII Innovativeness	101	101	101	87	101	101	101	101	101	94	101
	NCB Satisfaction	94	94	94	81	94	94	94	94	94	94	94
	NII Loyalty	101	101	101	87	101	101	101	101	101	94	101

ANOVA[a]

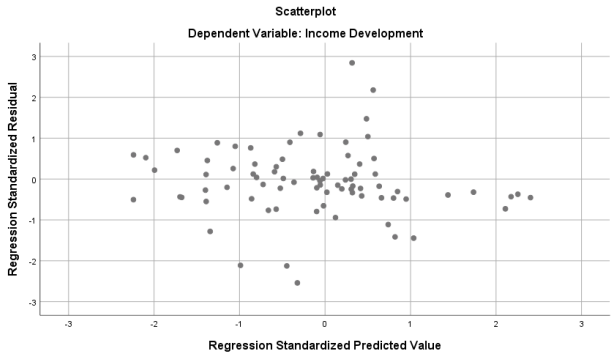
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1197,308	7	171,044	1,543	,167[b]
	Residual	8093,805	73	110,874		
	Total	9291,113	80			
2	Regression	1359,327	8	169,916	1,542	,158[c]
	Residual	7931,786	72	110,164		
	Total	9291,113	80			
3	Regression	1565,658	10	156,566	1,419	,190[d]
	Residual	7725,455	70	110,364		
	Total	9291,113	80			

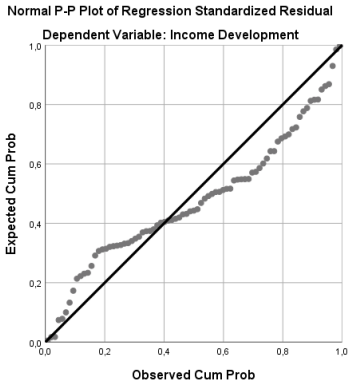
a. Dependent Variable: Income Development

b. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Assets , Retail

c. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Assets , Retail, NII Innovativeness

d. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Assets , Retail, NII Innovativeness, NCB Satisfaction, NII Loyalty





Appendix F – HRM with Loyalty

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	68,965	3,339		20,654	0,000					
	Age	-0,047	0,017	-0,370	-2,845	0,006	-0,314	-0,314	-0,293	0,626	1,597
	Size	0,000	0,000	0,100	0,814	0,418	0,115	0,094	0,084	0,701	1,427
	Retail	-1,158	3,269	-0,089	-0,354	0,724	0,068	-0,041	-0,036	0,166	6,025
	Finance and Insurance	3,924	3,818	0,196	1,028	0,307	0,157	0,119	0,106	0,290	3,445
	Information and Communication	-3,916	4,111	-0,196	-0,952	0,344	-0,319	-0,110	-0,098	0,250	3,994
	Transport	-1,329	3,519	-0,085	-0,378	0,707	-0,033	-0,044	-0,039	0,210	4,761
2	(Constant)	27,703	4,565		6,069	0,000					
	Age	-0,002	0,012	-0,013	-0,149	0,882	-0,314	-0,017	-0,010	0,534	1,872
	Size	-0,001	0,000	-0,174	-2,082	0,041	0,115	-0,237	-0,138	0,629	1,590
	Retail	-3,331	2,118	-0,257	-1,573	0,120	0,068	-0,181	-0,104	0,164	6,086
	Finance and Insurance	-1,232	2,512	-0,062	-0,490	0,625	0,157	-0,057	-0,032	0,279	3,589
	Information and Communication	-8,835	2,693	-0,442	-3,280	0,002	-0,319	-0,358	-0,217	0,242	4,125
	Transport	-0,666	2,269	-0,042	-0,293	0,770	-0,033	-0,034	-0,019	0,210	4,765
	NII Innovativeness	0,768	0,075	0,795	10,251	0,000	0,730	0,768	0,679	0,731	1,368
3	(Constant)	8,795	5,754		1,529	0,131					
	Age	-0,001	0,010	-0,005	-0,061	0,952	-0,314	-0,007	-0,004	0,534	1,873
	Size	0,000	0,000	-0,123	-1,650	0,103	0,115	-0,191	-0,097	0,615	1,625
	Retail	-3,024	1,875	-0,234	-1,613	0,111	0,068	-0,187	-0,095	0,164	6,094
	Finance and Insurance	-2,067	2,230	-0,103	-0,927	0,357	0,157	-0,109	-0,054	0,277	3,613
	Information and Communication	-7,122	2,411	-0,356	-2,954	0,004	-0,319	-0,329	-0,173	0,237	4,225
	Transport	-0,974	2,009	-0,062	-0,485	0,629	-0,033	-0,057	-0,028	0,210	4,770
	NII Innovativeness	0,617	0,074	0,638	8,343	0,000	0,730	0,701	0,489	0,587	1,703
	NCB Satisfaction	0,367	0,080	0,324	4,613	0,000	0,666	0,478	0,271	0,696	1,436

a. Dependent Variable: NII Loyalty

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,466[a]	0,218	0,154	5,98326234692	0,218	3,429	6	74	0,005
2	,824[b]	0,679	0,648	3,85704635042	0,462	105,073	1	73	0,000
3	,867[c]	0,752	0,725	3,41215325191	0,073	21,277	1	72	0,000

a. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Retail

b. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Retail, NII

c. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Retail, NII

d. Dependent Variable: NII Loyalty

Correlations

		NII Loyalty	Age	Size	Retail	Fin. & Ins.	Info. & Com.	Transport	NII Innovativeness	NCB Satisfaction
Pearson Correlation	NII Loyalty	1,000	-0,314	0,115	0,068	0,157	-0,319	-0,033	0,730	0,666
	Age	-0,314	1,000	0,198	-0,346	0,361	0,356	-0,049	-0,223	-0,190
	Size	0,115	0,198	1,000	-0,139	0,200	-0,132	-0,123	0,257	0,026
	Retail	0,068	-0,346	-0,139	1,000	-0,356	-0,356	-0,512	0,119	0,033
	Finance and Insurance	0,157	0,361	0,200	-0,356	1,000	-0,135	-0,194	0,125	0,198
	Information and Communication	-0,319	0,356	-0,132	-0,356	-0,135	1,000	-0,194	-0,004	-0,258
	Transport	-0,033	-0,049	-0,123	-0,512	-0,194	-0,194	1,000	-0,304	-0,002
	NII Innovativeness	0,730	-0,223	0,257	0,119	0,125	-0,004	-0,304	1,000	0,438
	NCB Satisfaction	0,666	-0,190	0,026	0,033	0,198	-0,258	-0,002	0,438	1,000
Sig. (1-tailed)	NII Loyalty		0,001	0,145	0,251	0,058	0,001	0,371	0,000	0,000
	Age	0,001		0,033	0,000	0,000	0,000	0,313	0,012	0,033
	Size	0,145	0,033		0,099	0,032	0,111	0,129	0,008	0,409
	Retail	0,251	0,000	0,099		0,000	0,000	0,000	0,117	0,377
	Finance and Insurance	0,058	0,000	0,032	0,000		0,089	0,026	0,107	0,028
	Information and Communication	0,001	0,000	0,111	0,000	0,089		0,026	0,482	0,006
	Transport	0,371	0,313	0,129	0,000	0,026	0,026		0,001	0,492
	NII Innovativeness	0,000	0,012	0,008	0,117	0,107	0,482	0,001		0,000
	NCB Satisfaction	0,000	0,033	0,409	0,377	0,028	0,006	0,492	0,000	
N	NII Loyalty	101	101	87	101	101	101	101	101	94
	Age	101	101	87	101	101	101	101	101	94
	Size	87	87	87	87	87	87	87	87	81
	Retail	101	101	87	101	101	101	101	101	94
	Finance and Insurance	101	101	87	101	101	101	101	101	94
	Information and Communication	101	101	87	101	101	101	101	101	94
	Transport	101	101	87	101	101	101	101	101	94
	NII Innovativeness	101	101	87	101	101	101	101	101	94
	NCB Satisfaction	94	94	81	94	94	94	94	94	94

ANOVA[a]

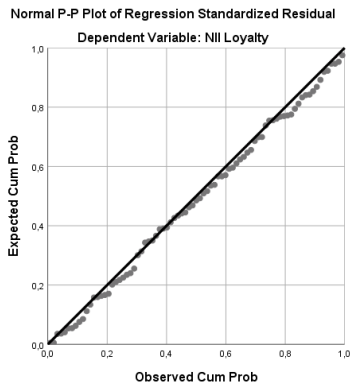
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	736,447	6	122,741	3,429	,005[b]
	Residual	2649,158	74	35,799		
	Total	3385,605	80			
2	Regression	2299,598	7	328,514	22,082	,000[c]
	Residual	1086,007	73	14,877		
	Total	3385,605	80			
3	Regression	2547,324	8	318,415	27,349	,000[d]
	Residual	838,281	72	11,643		
	Total	3385,605	80			

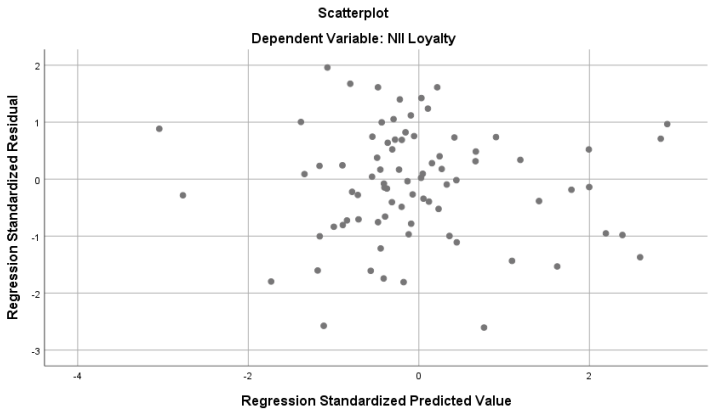
a. Dependent Variable: NII Loyalty

b. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Retail

c. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Retail, NII Innovativeness

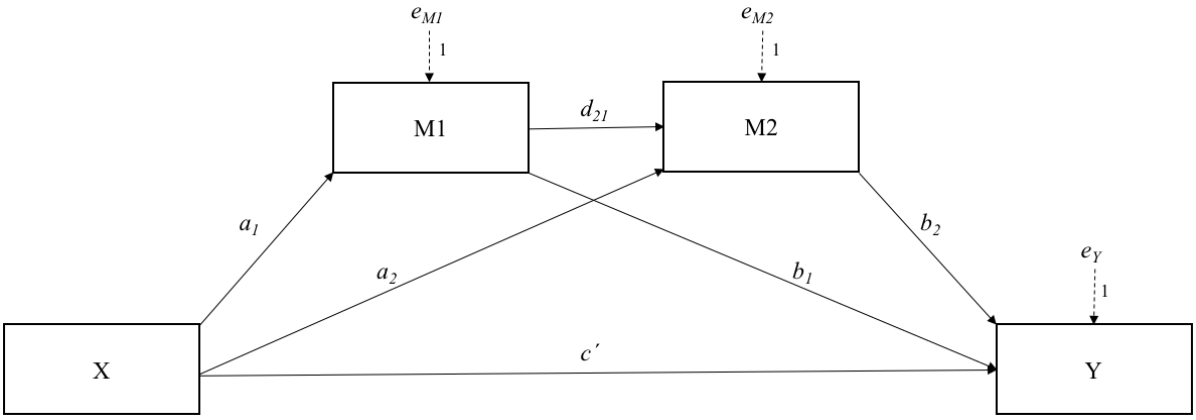
d. Predictors: (Constant), Transport, Age, Size, Finance and Insurance, Information and Communication, Retail, NII Innovativeness, NCB Satisfaction





Appendix G – Model 6: Statistical Diagram

In reference to our research model, we are using Model 6 in process, in which the first mediator is assumed to be causally prior to the second mediating variable in a causal chain model (Hayes, 2013). Figure 5 shows the that model 6 is investigating multiple different effects, both direct and three indirect effects. In relation to our research model, X will be Perceived Firm Innovativeness, M1 will be Customer Satisfaction and M2 Customer Loyalty, while Y is the dependent variable Income Growth. The important paths that is in line with our hypothesised research model are a1, d21 and b2. However, Model 6 analyse multiple different relationships and effects between different variables that is not captured in our research model.



"Illustration of multiple mediation design with two mediators. X is hypothesized to exert indirect effects on Y through M1 and M2" (Preacher & Hayes, 2008, p. 881).

Indirect effect of X on Y through M_i only= $a_i b_i$

Indirect effect of X on Y through M_1 and M_2 in serial= $a_1 d_{21} b_2$

Direct effect of X on Y=c´

The statistical diagram illustrates the different types of paths[17]. The effects in model 6 can be explained as a composition of three individual regressions:

$$M_1 = i_{M1} + a_1 X + e_{M1}$$

$$M_2 = i_{M2} + a_2 X + d_{21} M_1 + e_{M2}$$

$$Y = i_y + c'X + b_1 M_1 + b_2 M_2 + e_Y$$

[17] Path a1 and a2 is important to see the individual indirect effects. a-paths shows the effect from the independent variable. Path d21 is important for the indirect effect through all the variables. d21 captures the X→ M1→ M2→ Y relationship. Path b1 and b2 illustrates the effect M1 and M2 has on Y. b-paths shows the effect on dependent variable. Path c' illustrates the direct effect X has on Y.

The two first regressions explain how the two variables M_1 and M_2 are estimated and the third regression is the final estimation. Further, i and e represent the constant and an error term, while the b´s, a´s and the c´, are the variables´ respective coefficients. The third equation is the final regression with the purpose of estimating the mediating effects and the direct effect of X on Y.

In this study, the macro is used as recommended by Preacher and Hayes (2008) due to relatively small sample size and therefore supposedly not multivariate normal distribution. The macro uses bootstrapping and is therefore not constrained by assumptions of normality in the data, resulting in a superior method for conducting the mediation analysis. Bootstrapping is a nonparametric resampling method used to estimate a sample distribution that is not dependent on normal distribution. The method draws a number of samples from the original sample (one case can be selected 0-∞ times), with replacement, and then uses these to estimate the indirect effect in each resampled dataset. The process is repeated k times, preferably at least 1000, resulting in an empirical approximation of the sampling distribution, also giving basis for the Confidence Interval (CI) (Preacher and Hayes, 2008). This method is used based on the recommendations and discussions presented in Preacher and Hayes (2008), who claims that use of distribution of product approach or bootstrapping is superior to other methods such as the Sobel test or causal steps approach.

Appendix H – Mediating Analyses

```
**************************************************************************
Model  : 6
    Y  : IncomeDe
    X  : NIIInnov
   M1  : NCBSatis
   M2  : NIILoyal

Sample
Size:  94

**************************************************************************
OUTCOME VARIABLE:
 NCBSatis

Model Summary
          R       R-sq        MSE          F        df1        df2       p
      ,4383      ,1921    26,9228    21,8800     1,0000    92,0000    ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    52,7013     4,2474    12,4079      ,0000    44,2656    61,1370
NIIInnov      ,3621      ,0774     4,6776      ,0000      ,2083      ,5158

**************************************************************************
OUTCOME VARIABLE:
 NIILoyal

Model Summary
          R       R-sq        MSE          F        df1        df2       p
      ,8237      ,6785    14,7592    96,0165     2,0000    91,0000   ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      ,9061     5,1420      ,1762      ,8605    -9,3078    11,1200
NIIInnov      ,5204      ,0638     8,1623      ,0000      ,3938      ,6471
NCBSatis      ,5008      ,0772     6,4878      ,0000      ,3475      ,6541

**************************************************************************
OUTCOME VARIABLE:
```

IncomeDe

Model Summary

R	R-sq	MSE	F	df1	df2	p
,3264	,1065	101,5075	3,5768	3,0000	90,0000	,0170

Model

	coeff	se	t	p	LLCI	ULCI
constant	-16,4608	13,4872	-1,2205	,2255	-43,2555	10,3339
NIIInnov	,0084	,2201	,0381	,9697	-,4288	,4456
NCBSatis	-,3351	,2448	-1,3686	,1745	-,8214	,1513
NIILoyal	,6480	,2749	2,3570	,0206	,1018	1,1941

********** TOTAL EFFECT MODEL **********

OUTCOME VARIABLE:

IncomeDe

Model Summary

R	R-sq	MSE	F	df1	df2	p
,2266	,0513	105,4336	4,9795	1,0000	92,0000	,0281

Model

	coeff	se	t	p	LLCI	ULCI
constant	-16,4290	8,4053	-1,9546	,0537	-33,1226	,2647
NIIInnov	,3418	,1532	2,2315	,0281	,0376	,6460

********** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **********

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
,3418	,1532	2,2315	,0281	,0376	,6460	,0326	,2266

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
,0084	,2201	,0381	,9697	-,4288	,4456	,0008	,0056

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	,3334	,1602	,0341	,6670
Ind1	-,1213	,1181	-,3775	,0927

Ind2	,3372	,1679	,0424	,7018
Ind3	,1175	,0657	,0127	,2680

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	,0318	,0143	,0036	,0599
Ind1	-,0116	,0106	-,0318	,0108
Ind2	,0322	,0136	,0048	,0582
Ind3	,0112	,0058	,0014	,0239

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	,2210	,0991	,0249	,4167
Ind1	-,0804	,0727	-,2188	,0740
Ind2	,2236	,0945	,0326	,4064
Ind3	,0779	,0397	,0094	,1639

Indirect effect key:

Ind1 NIIInnov -> NCBSatis -> IncomeDe

Ind2 NIIInnov -> NIILoyal -> IncomeDe

Ind3 NIIInnov -> NCBSatis -> NIILoyal -> IncomeDe

********** ANALYSIS NOTES AND ERRORS **********

Appendix I – Additional Analyses:

Income Growth17

Descriptives (DV – Additional Analysis)

			Statistic	Std. Error
Income Development2017	Mean		3,6070660540	1,30064426037
	95% Confidence Interval for Mean	Lower Bound	0,9946451732	
		Upper Bound	6,2194869348	
	5% Trimmed Mean		3,1410097642	
	Median		2,0870909559	
	Variance		86,275	
	Std. Deviation		9,28845789641	
	Minimum		-16,36637227	
	Maximum		34,30666526	
	Range		50,67303753	
	Interquartile Range		8,04569139	
	Skewness		0,974	0,333
	Kurtosis		2,197	0,656

Tests of Normality (DV – Additional Analysis)

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Income Development2017	0,145	51	0,009	0,932	51	0,006

a. Lilliefors Significance Correction

Appendix J – Additional Analyses: HRM (Income Growth 2017)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	7,061	8,353		0,845	0,404					
	Assets2017	-1,571E-06	0,000	-0,064	-0,279	0,782	-0,002	-0,049	-0,046	0,523	1,912
	Age2017	-0,011	0,038	-0,063	-0,296	0,769	-0,137	-0,051	-0,049	0,612	1,634
	Size2017	0,001	0,001	0,202	0,847	0,403	0,198	0,146	0,140	0,479	2,090
	Retail	-3,411	7,788	-0,185	-0,438	0,664	0,091	-0,076	-0,072	0,153	6,557
	Finance and Insurance	-5,918	9,461	-0,207	-0,625	0,536	-0,075	-0,108	-0,103	0,249	4,019
	Information and Communication	-7,195	9,653	-0,252	-0,745	0,461	-0,164	-0,129	-0,123	0,239	4,184
	Transport	-4,706	8,371	-0,210	-0,562	0,578	-0,045	-0,097	-0,093	0,195	5,128
2	(Constant)	-14,360	16,169		-0,888	0,381					
	Assets2017	-9,876E-07	0,000	-0,040	-0,179	0,859	-0,002	-0,032	-0,029	0,520	1,921
	Age2017	0,009	0,040	0,050	0,226	0,823	-0,137	0,040	0,037	0,544	1,837
	Size2017	0,001	0,001	0,097	0,396	0,695	0,198	0,070	0,064	0,441	2,270
	Retail	-4,430	7,661	-0,241	-0,578	0,567	0,091	-0,102	-0,094	0,151	6,606
	Finance and Insurance	-8,502	9,424	-0,298	-0,902	0,374	-0,075	-0,158	-0,146	0,241	4,152
	Information and Communication	-9,640	9,593	-0,338	-1,005	0,322	-0,164	-0,175	-0,163	0,232	4,302
	Transport	-4,308	8,208	-0,193	-0,525	0,603	-0,045	-0,092	-0,085	0,195	5,133
	NII Innovativeness2016	0,399	0,260	0,286	1,536	0,134	0,291	0,262	0,249	0,757	1,321
3	(Constant)	-16,831	24,273		-0,693	0,493					
	Assets2017	-1,038E-06	0,000	-0,042	-0,168	0,868	-0,002	-0,031	-0,028	0,442	2,265
	Age2017	0,009	0,041	0,048	0,212	0,834	-0,137	0,039	0,035	0,539	1,856
	Size2017	0,001	0,001	0,100	0,396	0,695	0,198	0,072	0,066	0,435	2,297
	Retail	-4,380	7,908	-0,238	-0,554	0,584	0,091	-0,101	-0,093	0,151	6,612
	Finance and Insurance	-8,450	9,971	-0,296	-0,848	0,403	-0,075	-0,153	-0,142	0,229	4,366
	Information and Communication	-9,513	10,082	-0,333	-0,944	0,353	-0,164	-0,170	-0,158	0,224	4,464
	Transport	-4,255	8,520	-0,190	-0,499	0,621	-0,045	-0,091	-0,083	0,192	5,195
	NII Innovativeness2016	0,390	0,379	0,280	1,029	0,312	0,291	0,185	0,172	0,378	2,648
	NCB Satisfaction2017	0,087	0,366	0,055	0,239	0,813	0,213	0,044	0,040	0,534	1,872
	NII Loyalty2017	-0,053	0,424	-0,037	-0,125	0,902	0,227	-0,023	-0,021	0,320	3,123

a. Dependent Variable: Income Development2017

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,313[a]	0,098	-0,093	9,71219169701	0,098	0,512	7	33	0,819
2	,400[b]	0,160	-0,050	9,51803302643	0,062	2,360	1	32	0,134
3	,402[c]	0,162	-0,118	9,82050843663	0,002	0,030	2	30	0,971

a. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Assets2017, Retail

b. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Assets2017, Retail, NII

c. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Assets2017, Retail, NII

d. Dependent Variable: Income Development2017

Correlations

		Income Development 2017	Assets 2017	Age2017	Size2017	Retail	Fin. & Ins.	Info. & Com.	Transport	NII Innovativeness2016	NCB Satisfaction 2017	NII Loyalty 2017
Pearson Correlation	Income Development2017	1,000	-0,002	-0,137	0,198	0,091	-0,075	-0,164	-0,045	0,291	0,213	0,227
	Assets2017	-0,002	1,000	0,363	0,560	-0,151	0,406	-0,049	-0,073	0,071	-0,099	-0,175
	Age2017	-0,137	0,363	1,000	0,196	-0,352	0,363	0,358	-0,044	-0,193	-0,229	-0,314
	Size2017	0,198	0,560	0,196	1,000	-0,138	0,200	-0,132	-0,123	0,251	0,076	0,105
	Retail	0,091	-0,151	-0,352	-0,138	1,000	-0,358	-0,358	-0,514	0,105	0,068	0,071
	Finance and Insurance	-0,075	0,406	0,363	0,200	-0,358	1,000	-0,133	-0,191	0,117	0,155	0,188
	Information and Communication	-0,164	-0,049	0,358	-0,132	-0,358	-0,133	1,000	-0,191	0,015	-0,240	-0,307
	Transport	-0,045	-0,073	-0,044	-0,123	-0,514	-0,191	-0,191	1,000	-0,302	-0,065	-0,058
	NII Innovativeness2016	0,291	0,071	-0,193	0,251	0,105	0,117	0,015	-0,302	1,000	0,540	0,657
	NCB Satisfaction2017	0,213	-0,099	-0,229	0,076	0,068	0,155	-0,240	-0,065	0,540	1,000	0,658
	NII Loyalty2017	0,227	-0,175	-0,314	0,105	0,071	0,188	-0,307	-0,058	0,657	0,658	1,000
Sig. (1-tailed)	Income Development2017		0,496	0,169	0,099	0,262	0,300	0,125	0,378	0,019	0,073	0,055
	Assets2017	0,496		0,004	0,000	0,144	0,002	0,365	0,305	0,311	0,252	0,109
	Age2017	0,169	0,004		0,102	0,006	0,004	0,005	0,380	0,087	0,059	0,012
	Size2017	0,099	0,000	0,102		0,187	0,097	0,196	0,214	0,050	0,318	0,248
	Retail	0,262	0,144	0,006	0,187		0,005	0,005	0,000	0,232	0,322	0,309
	Finance and Insurance	0,300	0,002	0,004	0,097	0,005		0,175	0,089	0,207	0,147	0,094
	Information and Communication	0,125	0,365	0,005	0,196	0,005	0,175		0,089	0,459	0,050	0,014
	Transport	0,378	0,305	0,380	0,214	0,000	0,089	0,089		0,016	0,329	0,342
	NII Innovativeness2016	0,019	0,311	0,087	0,050	0,232	0,207	0,459	0,016		0,000	0,000
	NCB Satisfaction2017	0,073	0,252	0,059	0,318	0,322	0,147	0,050	0,329	0,000		0,000
	NII Loyalty2017	0,055	0,109	0,012	0,248	0,309	0,094	0,014	0,342	0,000	0,000	
N	Income Development2017	51	51	51	44	51	51	51	51	51	48	51
	Assets2017	51	51	51	44	51	51	51	51	51	48	51
	Age2017	51	51	51	44	51	51	51	51	51	48	51
	Size2017	44	44	44	44	44	44	44	44	44	41	44
	Retail	51	51	51	44	51	51	51	51	51	48	51
	Finance and Insurance	51	51	51	44	51	51	51	51	51	48	51
	Information and Communication	51	51	51	44	51	51	51	51	51	48	51
	Transport	51	51	51	44	51	51	51	51	51	48	51
	NII Innovativeness2016	51	51	51	44	51	51	51	51	51	48	51
	NCB Satisfaction2017	48	48	48	41	48	48	48	48	48	48	48
	NII Loyalty2017	51	51	51	44	51	51	51	51	51	48	51

ANOVA[a]

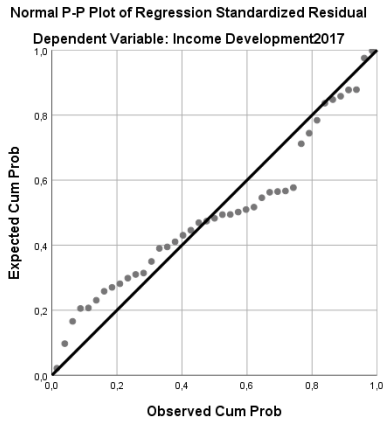
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	338,238	7	48,320	0,512	,819[b]
	Residual	3112,780	33	94,327		
	Total	3451,018	40			
2	Regression	552,044	8	69,005	0,762	,638[c]
	Residual	2898,974	32	90,593		
	Total	3451,018	40			
3	Regression	557,746	10	55,775	0,578	,818[d]
	Residual	2893,272	30	96,442		
	Total	3451,018	40			

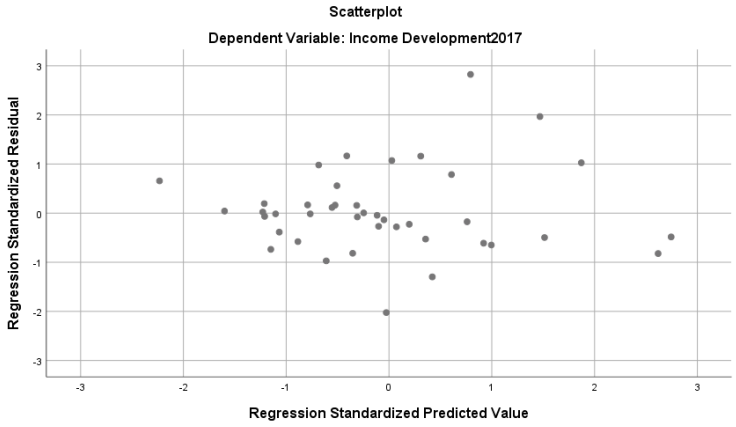
a. Dependent Variable: Income Development2017

b. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Assets2017, Retail

c. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Assets2017, Retail, NII Innovativeness2016

d. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Assets2017, Retail, NII Innovativeness2016, NCB Satisfaction2017, NII Loyalty2017





Appendix K – Additional Analyses: HRM with Loyalty 2017

Descriptive Statistics

	Mean	Std. Deviation	N
NII Loyalty2017	65,5649285268	6,46490268000	51
Age2017	67,12	51,059	51
Size2017	1504,77	1731,837	44
Retail	0,49	0,505	51
Finance and Insurance	0,12	0,325	51
Information and Communication	0,12	0,325	51
Transport	0,22	0,415	51
NII Innovativeness2016	54,8509803922	6,66373386470	51
NCB Satisfaction2017	72,5665687500	5,79920927303	48

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	68,638	4,857		14,133	0,000					
	Age2017	-0,050	0,024	-0,394	-2,069	0,046	-0,314	-0,334	-0,312	0,625	1,600
	Size2017	0,000	0,001	0,096	0,534	0,597	0,105	0,091	0,080	0,703	1,423
	Retail	-0,617	4,744	-0,048	-0,130	0,897	0,071	-0,022	-0,020	0,165	6,053
	Finance and Insurance	5,197	5,550	0,262	0,936	0,356	0,188	0,159	0,141	0,291	3,441
	Information and Communication	-2,949	5,974	-0,148	-0,494	0,625	-0,307	-0,084	-0,074	0,251	3,986
	Transport	-1,041	5,116	-0,067	-0,203	0,840	-0,058	-0,035	-0,031	0,210	4,765
2	(Constant)	32,891	7,798		4,218	0,000					
	Age2017	-0,015	0,019	-0,122	-0,799	0,430	-0,314	-0,138	-0,091	0,551	1,813
	Size2017	0,000	0,001	-0,121	-0,851	0,401	0,105	-0,147	-0,097	0,642	1,558
	Retail	-1,923	3,582	-0,150	-0,537	0,595	0,071	-0,093	-0,061	0,164	6,083
	Finance and Insurance	1,563	4,238	0,079	0,369	0,715	0,188	0,064	0,042	0,283	3,538
	Information and Communication	-6,608	4,554	-0,333	-1,451	0,156	-0,307	-0,245	-0,165	0,245	4,084
	Transport	-0,009	3,858	-0,001	-0,002	0,998	-0,058	0,000	0,000	0,209	4,777
	NII Innovativeness2016	0,655	0,126	0,675	5,191	0,000	0,657	0,670	0,589	0,760	1,315
3	(Constant)	16,362	10,309		1,587	0,122					
	Age2017	-0,013	0,018	-0,106	-0,735	0,468	-0,314	-0,129	-0,079	0,550	1,818
	Size2017	0,000	0,001	-0,082	-0,612	0,545	0,105	-0,108	-0,065	0,632	1,582
	Retail	-1,403	3,381	-0,110	-0,415	0,681	0,071	-0,073	-0,044	0,164	6,111
	Finance and Insurance	1,313	3,992	0,066	0,329	0,744	0,188	0,058	0,035	0,282	3,540
	Information and Communication	-4,805	4,360	-0,242	-1,102	0,279	-0,307	-0,191	-0,118	0,237	4,222
	Transport	0,127	3,633	0,008	0,035	0,972	-0,058	0,006	0,004	0,209	4,779
	NII Innovativeness2016	0,485	0,140	0,500	3,464	0,002	0,657	0,522	0,370	0,547	1,829
	NCB Satisfaction2017	0,345	0,151	0,309	2,284	0,029	0,658	0,374	0,244	0,623	1,606

a. Dependent Variable: NII Loyalty2017

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,478[a]	0,229	0,093	6,15749779706	0,229	1,682	6	34	0,155
2	,759[b]	0,575	0,485	4,63739371749	0,347	26,943	1	33	0,000
3	,797[c]	0,635	0,544	4,36667202962	0,060	5,219	1	32	0,029

a. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Retail

b. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Retail, NII Innovativeness2016

c. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Retail, NII Innovativeness2016,

d. Dependent Variable: NII Loyalty2017

Correlations

		NII Loyalty2017	Age2017	Size2017	Retail	Fin. & Ins.	Info. & Com.	Transport	NII Innovativeness2016	NCB Satisfaction 2017
Pearson Correlation	NII Loyalty2017	1,000	-0,314	0,105	0,071	0,188	-0,307	-0,058	0,657	0,658
	Age2017	-0,314	1,000	0,196	-0,352	0,363	0,358	-0,044	-0,193	-0,229
	Size2017	0,105	0,196	1,000	-0,138	0,200	-0,132	-0,123	0,251	0,076
	Retail	0,071	-0,352	-0,138	1,000	-0,358	-0,358	-0,514	0,105	0,068
	Finance and Insurance	0,188	0,363	0,200	-0,358	1,000	-0,133	-0,191	0,117	0,155
	Information and Communication	-0,307	0,358	-0,132	-0,358	-0,133	1,000	-0,191	0,015	-0,240
	Transport	-0,058	-0,044	-0,123	-0,514	-0,191	-0,191	1,000	-0,302	-0,065
	NII Innovativeness2016	0,657	-0,193	0,251	0,105	0,117	0,015	-0,302	1,000	0,540
	NCB Satisfaction2017	0,658	-0,229	0,076	0,068	0,155	-0,240	-0,065	0,540	1,000
Sig. (1-tailed)	NII Loyalty2017		0,012	0,248	0,309	0,094	0,014	0,342	0,000	0,000
	Age2017	0,012		0,102	0,006	0,004	0,005	0,380	0,087	0,059
	Size2017	0,248	0,102		0,187	0,097	0,196	0,214	0,050	0,318
	Retail	0,309	0,006	0,187		0,005	0,005	0,000	0,232	0,322
	Finance and Insurance	0,094	0,004	0,097	0,005		0,175	0,089	0,207	0,147
	Information and Communication	0,014	0,005	0,196	0,005	0,175		0,089	0,459	0,050
	Transport	0,342	0,380	0,214	0,000	0,089	0,089		0,016	0,329
	NII Innovativeness2016	0,000	0,087	0,050	0,232	0,207	0,459	0,016		0,000
	NCB Satisfaction2017	0,000	0,059	0,318	0,322	0,147	0,050	0,329	0,000	
N	NII Loyalty2017	51	51	44	51	51	51	51	51	48
	Age2017	51	51	44	51	51	51	51	51	48
	Size2017	44	44	44	44	44	44	44	44	41
	Retail	51	51	44	51	51	51	51	51	48
	Finance and Insurance	51	51	44	51	51	51	51	51	48
	Information and Communication	51	51	44	51	51	51	51	51	48
	Transport	51	51	44	51	51	51	51	51	48
	NII Innovativeness2016	51	51	44	51	51	51	51	51	48
	NCB Satisfaction2017	48	48	41	48	48	48	48	48	48

ANOVA[a]

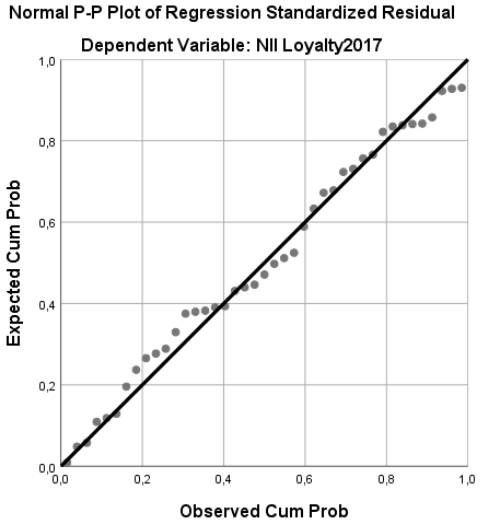
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	382,696	6	63,783	1,682	,155[b]
	Residual	1289,102	34	37,915		
	Total	1671,799	40			
2	Regression	962,120	7	137,446	6,391	,000[c]
	Residual	709,679	33	21,505		
	Total	1671,799	40			
3	Regression	1061,628	8	132,704	6,960	,000[d]
	Residual	610,170	32	19,068		
	Total	1671,799	40			

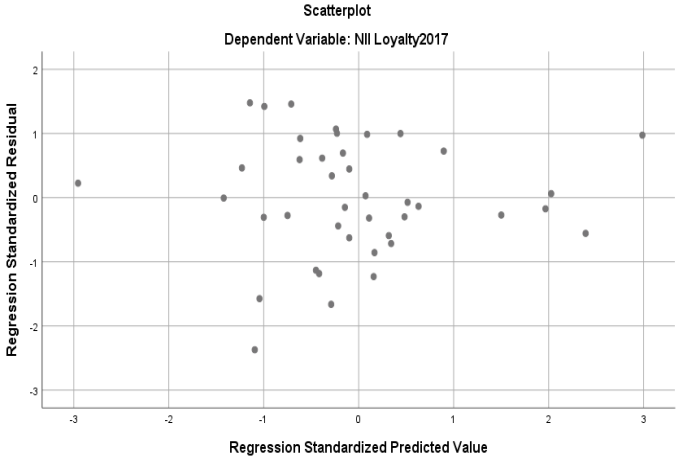
a. Dependent Variable: NII Loyalty2017

b. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Retail

c. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Retail, NII Innovativeness2016

d. Predictors: (Constant), Transport, Age2017, Size2017, Finance and Insurance, Information and Communication, Retail, NII Innovativeness2016, NCB Satisfaction2017





Appendix L – Additional Analyses: Mediating Analysis

```
**************************************************************************
Model  : 6
    Y  : IncomeDe
    X  : NIIInnov
   M1  : NCBatisf
   M2  : NIILoyal

Sample
Size:  48

**************************************************************************
OUTCOME VARIABLE:
 NCBSatisf

Model Summary
R         R-sq        MSE          F        df1        df2          p
,5398    ,2914      24,3501    18,9135     1,0000    46,0000      ,0001

Model
              coeff         se          t          p       LLCI       ULCI
constant    47,4716     5,8141     8,1649      ,0000    35,7683    59,1749
NIIInnov      ,4579      ,1053     4,3490      ,0001      ,2460      ,6699

**************************************************************************
OUTCOME VARIABLE:
 NIILoyal

Model Summary
R         R-sq        MSE          F        df1        df2          p
,7602    ,5779      19,3229    30,7998     2,0000    45,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     7,3837     8,1056      ,9109      ,3672    -8,9420    23,7095
NIIInnov      ,4389      ,1114     3,9385      ,0003      ,2144      ,6633
NCBSatisf     ,4714      ,1313     3,5889      ,0008      ,2068      ,7359

**************************************************************************
```

OUTCOME VARIABLE:
IncomeDe

Model Summary

R	R-sq	MSE	F	df1	df2	p
,3082	,0950	83,8301	1,5396	3,0000	44,0000	,2176

Model

	coeff	se	t	p	LLCI	ULCI
constant	-25,3031	17,0380	-1,4851	,1446	-59,6412	9,0351
NIIInnov	,3201	,2691	1,1892	,2407	-,2223	,8625
NCBSatisf	,0770	,3103	,2481	,8052	-,5483	,7023
NIILoyal	,0813	,3105	,2618	,7947	-,5445	,7071

********** TOTAL EFFECT MODEL **********
OUTCOME VARIABLE:
IncomeDe

Model Summary

R	R-sq	MSE	F	df1	df2	p
,2999	,0899	80,6340	4,5460	1,0000	46,0000	,0384

Model

	coeff	se	t	p	LLCI	ULCI
constant	-19,2289	10,5802	-1,8174	,0757	-40,5259	2,0681
NIIInnov	,4085	,1916	2,1321	,0384	,0228	,7943

********** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **********

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
,4085	,1916	2,1321	,0384	,0228	,7943	,0439	,2999

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
,3201	,2691	1,1892	,2407	-,2223	,8625	,0344	,2349

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	,0885	,1571	-,2497	,3857
Ind1	,0353	,1759	-,3277	,3724

Ind2	,0357	,1135	-,2012	,2553
Ind3	,0175	,0569	-,0815	,1508

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	,0095	,0172	-,0248	,0437
Ind1	,0038	,0195	-,0329	,0440
Ind2	,0038	,0123	-,0224	,0270
Ind3	,0019	,0063	-,0095	,0165

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	,0650	,1152	-,1581	,3020
Ind1	,0259	,1300	-,2171	,2964
Ind2	,0262	,0824	-,1475	,1865
Ind3	,0129	,0426	-,0622	,1133

Indirect effect key:

Ind1 NIIInnov -> NCBSatisf -> IncomeDe

Ind2 NIIInnov -> NIILoyal -> IncomeDe

Ind3 NIIInnov -> NCBSatisf -> NIILoyal -> IncomeDe

********** ANALYSIS NOTES AND ERRORS **********