

Monica Paulsen
Marthe Myren Leistad

BI Norwegian Business School
- Master Thesis -

- Always logged-in -

Course code and name:
GRA 1903 Master Thesis

Hand-in date:
03.09.2012

Campus:
BI Oslo

Supervisor:
Associate Professor Line Lervik Olsen

Program:
Master of Science in Strategic Marketing Management

“This thesis is part of the MSc programme at BI Norwegian Business School.
The school takes no responsibility for the methods used, results found and conclusions drawn.”

Oslo, August 25th 2012

Acknowledgements

This thesis is submitted to BI Norwegian Business School as a completion of our MSc degree in Strategic Marketing Management.

We are leaving BI with a backpack full of invaluable competence, knowledge, encouragement and relevant business insight. We would like to thank all the remarkable professors and students who have contributed to our education the past five years. Especially, a huge thank to our devoted supervisor Line Lervik Olsen. Your competence, guidance, time and insightful feedback have truly been a huge part of this thesis. In addition, we would like to thank Giulia Calabretta and Tor Walin Andreassen for recognising the relevance of our topic and contributing to insightful guidance and feedback.

During our exchange semester in South Africa, Cape Town, we really felt the always logged-in abstinence. The African continent is far behind on developing Internet connection, and both cost and getting connected was a huge frustration. Knowing how the European continent and Norway have become so dependent on the Internet, it was strange to experience a less connected world.

Lastly, we wish to thank our partners and family for support during our education and Master Thesis. We are now more than ever ready for our future careers, both at Kraft Foods Norway.

Best regards,

Monica Paulsen

Marthe Myren Leistad

Content

ACKNOWLEDGEMENTS	I
1.0 INTRODUCTION	1
1.1 THE RELEVANCE AND IMPORTANCE OF THE ALWAYS LOGGED-IN RESEARCH.....	1
1.2 THEORETICAL AND MANAGERIAL CONTRIBUTIONS.....	3
1.3 RESEARCH QUESTION	5
2.0 LITERATURE REVIEW	6
2.1 TRENDS.....	6
2.2 ALWAYS LOGGED-IN.....	7
2.3 ANTECEDENTS OF ALWAYS LOGGED-IN	7
2.3.1 <i>Technology readiness</i>	7
2.3.2 <i>Network externalities</i>	9
2.3.3 <i>Fear of Losing Out</i>	11
2.3.4 <i>Internet usage: Excessive Internet use and Habit</i>	13
2.3.5 <i>Flow</i>	16
2.4 CONSEQUENCE OF ALWAYS LOGGED-IN	17
2.4.1 <i>Customer Engagement</i>	17
3.0 CONCEPTUAL MODEL	20
4.0 METHODOLOGY	21
4.1 SUBJECTS AND RESEARCH DESIGN	21
4.2 SURVEY DEVELOPMENT, SAMPLING TECHNIQUE AND DATA COLLECTION	21
4.3 INSTRUMENT DEVELOPMENT	22
4.3.1 <i>Operationalisation of the constructs</i>	22
4.4 RELIABILITY AND VALIDITY	25
4.4.1 <i>Validity</i>	25
4.4.2 <i>Reliability</i>	26
4.5 PRETESTING	26
4.6 ANALYTICAL PROCEDURES	26
5.0 RESULTS	28
5.1 CHARACTERISTICS OF THE SAMPLE	28
5.2 EXPLORATORY FACTOR ANALYSIS	30
5.3 RELIABILITY - CRONBACH ALPHA.....	32
5.4 CONFIRMATORY FACTOR ANALYSIS: THE MEASUREMENT MODEL	33
5.4.1 <i>Model Fit</i>	35
5.4.2 <i>Validity and Reliability</i>	36

5.5 STRUCTURAL EQUATION MODEL	38
5.5.1 Model Fit.....	38
5.5.2 Comparing the measurement and structural model.....	39
5.5.3 Testing hypothesised relationships.....	39
5.6 MEDIATING EFFECTS	41
5.7 MAIN FINDINGS SUMMARIZED	43
6.0 DISCUSSION	44
6.1 MANAGERIAL IMPLICATIONS.....	46
7.0 LIMITATIONS AND FUTURE RESEARCH.....	49
7.1 LIMITATIONS.....	49
7.2 FUTURE RESEARCH	50
8.0 REFERENCES	51
9.0 APPENDIX.....	58
APPENDIX 1: OBSERVED MEASURES.....	58
APPENDIX 2: QUESTIONS AND SCALES.....	59
APPENDIX 3: SURVEY (ORIGINAL QUESTIONNAIRE IN NORWEGIAN).....	59
APPENDIX 4: SAMPLING	63
APPENDIX 5: GENDER.....	63
APPENDIX 6: AGE	63
APPENDIX 7: ELECTRONIC DEVICE	64
APPENDIX 8: HOURS CONNECTED TO THE INTERNET DAILY	64
APPENDIX 9: TIME SPENT ON INTERNET OR IT AT WORK/ STUDIES	65
APPENDIX 10: MISSING VALUES	65
APPENDIX 11: OUTLIERS	66
APPENDIX 12: NORMALITY	66
APPENDIX 13: MULTICOLLINARITY	67
APPENDIX 14: KMO AND BARLETT'S TEST, FOR EFA NR 1	67
APPENDIX 15: KMO AND BARLETT'S TEST, FOR EFA NR 2	67
APPENDIX 16: TOTAL VARIANCE EXPLAINED – EIGENVALUES FOR EFA NR 1	68
APPENDIX 17: TOTAL VARIANCE EXPLAINED – EIGENVALUES FOR EFA NR 2	68
APPENDIX 18: ROTATED PATTERN MATRIX FOR EFA NR 1	69
APPENDIX 19: ROTATED PATTERN MATRIX FOR EFA NR 2	70
APPENDIX 20: TECHNOLOGY READINESS FACTORS – DRIVERS AND INHIBITORS	70
APPENDIX 21: SQUARED INTERCONSTRUCT CORRELATIONS MATRIX.....	71
APPENDIX 22: SYNTAX.....	71
APPENDIX 23: STRUCTURAL EQUATION MODEL.....	74

APPENDIX 24: MEDIATING EFFECTS.....	75
APPENDIX 25: PRELIMINARY THESIS REPORT	76

List of figures

<i>Figure 1: The Conceptual model</i>	20
<i>Figure 2: The Measurement model</i>	34
<i>Figure 3: The Empirical model</i>	41

List of Tables

<i>Table 1: Factor names</i>	32
<i>Table 2: Cronbach alpha values</i>	33
<i>Table 3: Fit indices for the measurement model</i>	35
<i>Table 4: AVE and CR for the measurement model</i>	37
<i>Table 5: Fit statistics for the structural model</i>	38
<i>Table 6: Parameter estimates and t-values for the SEM paths</i>	39
<i>Table 7: Summary of the hypotheses</i>	43

Executive summary

Trends are all about right timing and understanding consumers' needs, wants and preferences when developing successful product and service innovations. Trend research is emerging and plays a vital role for driving revenue and sustainable business growth. However, existing trend literature is scarce and managers are lacking information and guidance, thus it is important to develop a deeper understanding of underlying consumer trends in the market. Our research builds on theories within marketing, psychology and economics.

This thesis is a contribution to the existing and on-going trend research conducted by Andreassen, Calabretta and Olsen, at BI Norwegian Business School. Our research aims to generate a deeper understanding of the underlying trend *always logged-in*, as this is a highly relevant topic influencing people's individual lives, companies and the society in several ways. Specifically, our interest is to identify and explore the drivers behind the emerging trend always logged-in, and whether the trend influences a business related variable. We hypothesise that the drivers' technology readiness, network externalities, fear of losing out, excessive Internet use, habit and flow, are all influencing consumers to always being logged-in. Additionally, we hypothesise that always logged-in affects online consumer engagement.

Data on Norwegian Internet users is collected in collaboration with Norstat, to achieve a highly representative sample. Our proposed model is tested through exploratory factor analysis, confirmatory factor analysis and structural equation model. The results reveal that technology readiness, fear of losing out and excessive Internet use have an impact on always logged-in. Furthermore, our study supports the assumption that always logged-in affects online customer engagement. This research will help managers generate a deeper understanding of the trend always logged-in, and thus enable them to exploit business opportunities within this field which in turn will offer higher customer value and ultimately increased firm value.

1.0 Introduction

This master thesis can be seen as a contribution to the existing and on-going trend research *Value-Driven Service Innovation* sponsored by the Norwegian Research council, and conducted at BI Norwegian Business School. The trend research has identified the following seven consumer trends: *Always on the go, Always logged-in, Return on time, Quality information faster, Nowism, Look at me now, and Privacy* (Andreassen, Calabretta and Olsen 2012). Our research seeks to contribute to a deeper understanding of the underlying trend always logged-in, as this is a highly relevant topic which is influencing people's individual lives, companies and the society in several ways. On a personal level consumers are reporting Internet to be an integral part of their everyday lives, and cannot imagine a life without it. Several consumers believe Internet is so important that they assign it to the lowest level in Maslow's hierarchy of needs (Cisco 2011a). The international "Connected world report 2011" from Cisco (2011a) states that Internet has and will continue to have a significant impact on businesses in relation to their communication, work lifestyles, corporate cultures and talent acquisition. Moreover, within society Internet has contributed to connecting the world and creating a society online. An example which illustrates Internet's importance in society is the vital role Internet and social media played in the Arab Spring in North Africa and the Middle East in 2011 (Globalis 2012). Arab spring used social media and technologies like Twitter, TwitPic, Facebook and YouTube to spread information and generate social protest against the form of government as well as illuminate the need for better human rights. Furthermore, our research contributes to identifying causes and consequences behind the trend always logged-in and to assessing if these are affecting and/or being affected by the overall trend.

1.1 The relevance and importance of the always logged-in research

In 2011 Nokia was the world's largest manufacturer of mobile devices, with a global market share of 23 percent in the second quarter (Gartner 2011). Nokia has gone from boasting the position as a market leader to experience a financial crisis with a net loss of NOK 9.2 billion in 2011, compared to their solid net profit of NOK 13.8 billion in 2010 (Aftenposten 2012). This loss was mainly due to their bad performance within the smartphone market (Dagens IT 2012). Several

industry analysts argue that Nokia ended up in this situation because of their lack of attention to the new emerging consumer wants and trends within the mobile phone market, such as the consumer trend always logged-in. Nokia's failure to generate the right innovation to the market fast enough resulted in several product flops.

Developing and launching new products and services can be an expensive, time consuming and risky activity for companies. Research conducted within new product development informs that the failure rate is approximately 45 percent for fully commercialised products launched in developed western economies (Page 1993; Edgett, Shipley and Forbes 1992). Although the failure rate varies between different products and services, it is important to determine what the critical success factors of new product- and service development are. Research within this field has identified consumer needs, wants and preferences as some of the most important success factors (Cooper and Kleinschmidt 1987; Ernst 2002). Schneider and Hall (2011) point out that unsuccessful innovation launches are often caused by inappropriate timing of the product- or service launch.

To ensure sustainable future business growth, companies have to start early in developing new and successful products and services. Since future consumer needs and wants rapidly change and are hard to predict, companies have to rely on underlying consumer trends in the innovation process. Trend research provides executives and other decision makers with early assessments of antecedents and opportunities (Fenn 2011). We argue that generating a deeper understanding of consumer trends is a valuable asset for companies to reduce the risk of launching unsuccessful products or services, and thus driving future growth and success.

Andreassen et al. (2012, 45) define the trend always logged-in as "*people's need and willingness to access information and services through the Internet at anytime and from anywhere.*" When discussing the trend always logged-in we are referring to the Internet and more precisely to the use of Internet (e.g. e-mail, online newspapers, Internet banking, weather forecasts, etc.). Since Internet opened for public use in the early 1990s, customers' online presence has rapidly increased. In 2011, 92 percent of the Norwegian households had Internet access (SSB 2012a), and the average Internet use varied between 62 to 150 minutes per

day among different age groups (SSB 2012b). Many Norwegians use the Internet to read online newspapers and search for information about goods and services. In 2011, 73 percent of the Norwegian population bought a product/service online, 85 percent accessed their Internet banking, and 70 percent used online sources to collect information (SSB 2012c). The above figures illustrate the widespread use of Internet in the society and the importance of getting a better and deeper understanding of customers' involvement within the online environment. The influence of Internet today is so significant that imagining a world without it is almost impossible. Today's generation is growing up as "digital natives" in a world where analogue technology belongs to the past. The variety of different Information and Communication Technology (ICT) is regarded as a prerequisite for consumers to be always logged-in. This generic term refers to technological gathering, transmission, processing, storage and presentation of information (Store Norske Leksikon 2011). In Norway today, on average there are 1.4 desktops and 2 laptops in every household (TNS Gallup 2011). 41 percent say they use a computer every day, and as much as 37 percent inform that they use both computers and mobile phones or tablets logged on to the Internet daily (TNS Gallup 2011). Recent years' development within technology has made it possible to go online anywhere and at any time. Technology will continue to develop further, and our habits and daily life will probably depend even more on the connection to the Internet at all times.

1.2 Theoretical and managerial contributions

Research within trends has primarily been conducted within the field of innovation research. We will take this a step further and discuss trend research within the fields of marketing and innovation. The literature on always logged-in is scarce and incomplete, forcing us to look into theories from several research areas. More exactly, three fields are of interest. We build our research on theories from the *marketing* literature; more precisely on Technology Readiness and Customer Engagement. Furthermore, we look into theories within *psychology*; specifically research on Belongingness, Habits, Excessive Internet use and Flow. Lastly, within the academia of *economics*, we build our research on Network Externalities.

As illustrated with the Nokia example earlier, ignoring trends might lead to decreased market share and lost profit. A good understanding of trends in consumer lifestyle is an important factor in order to reduce failures and instead launch successful products or services. Possessing only a little knowledge about a trend is often insufficient in order to get a good understanding of why the trend influences consumer behaviour and lifestyle. This trend research will help managers generate a deeper understanding of the trend, which will support them in developing new innovations in accordance with existing consumer needs and wants. Being proactive rather than reactive within trend spotting is important since it equips companies with a first mover advantage, which can make them successful within their industry. Contradictory to Nokia, Apple saw the importance of the trend always logged-in and launched the successful smartphone *iPhone*. The “smartphone revolution” within the mobile phone market changed the rules of the industry, and especially Nokia was unable to follow up on the changing consumer trends. Moreover, this research will first and foremost benefit companies providing or considering providing products or services online. In addition, this research will benefit businesses delivering technology devices and services, as smartphones, laptops and tablets. Generating valuable always logged-in knowledge will reduce the economic risk attached to product and service innovation in the online environment.

Further on in the thesis we present our research question. Thereafter follows a literature review on trends, technology readiness, network externalities, fear of losing out, habit, excessive Internet use, flow and customer engagement. We elaborate upon and discuss these theories, which in turn leads to our hypotheses and the development of our empirical model. In the following, we present the empirical method, data analysis and results, with data collected among Norwegian Internet users. Finally, the findings are discussed in light of theoretical and practical implications, limitations of the study, and directions for future research.

1.3 Research question

Based on the above presentation of the relevance and importance of the always logged-in topic, and the following literature review, we present our research question:

What are the antecedents to the consumer trend always logged-in, and is there a relationship between the trend and online customer engagement?

Today's online environment has a significant impact on people's professional and private lives. Cisco informs that more than six out of ten college students and young employees indicate that they could not live without the Internet (2011a). They claim that Internet is an integral part of their daily lives. In addition, the study reports that one out of three participants believes that Internet is as important as air, water, food, and shelter (Cisco 2011a). Together with several other Internet related results these findings provide insight and evidence of the importance of this trend research. For companies to understand and deliver upon the next generation's needs and wants, a trend research that explores and provides a better understanding of the trend always logged-in, is needed.

2.0 Literature Review

2.1 Trends

According to Marseille and Roos (2005, 68), trends are shaped by “*changes in the behaviour of societies, markets and the consumers who drive them*”. Trends may differ in size, e.g. micro trends (Penn and Zalesne 2007), and their lifespan, e.g. “fads” (Lloyd 1991). For every major trend, there will always be a strong or a weak counter trend. Literature within trends and the antecedents of trends are a rather underexplored research field. So far researchers have mostly focused on trends within the context of fashion industry (Miller, McIntyre and Mantrala 1993). Although research within trends is scarce, several marketing research and consulting firms (e.g. www.trendsresearch.com, www.trendspotting.com, www.cifs.dk, www.gartner.com) are contributing with new and valuable information through trend analyses and reports.

It is all about picking the right trend, using it at the right time and the right way. Multiple factors will play a part in creating a success or a failure. Malcome Gladwell (2000) has written a world renowned book called “The Tipping Point” where he talks about understanding the emergence of trends. He presents the term “the tipping point” which he describes as the dramatic moment when there is a sudden change, like a boiling point. Moreover, it is when the unexpected becomes expected, where radical change is more than possible, it is a certainty. The author introduces three characteristics of this phenomenon: the first is like a virus making the audience “infected”. Second, incremental changes provide big effects, and the last characteristic is that the change happens in a hurry and not steadily and slowly. This change can go both ways, towards success or failure. There is a tipping point at the introduction of any new technology. Take mobile phones for instance; in the 1990s they got smaller and cheaper, and by 1998 their service improved, making technology achieve a tipping point where suddenly everyone owned a mobile phone. In this thesis we will not focus on “fads” which are short-term trends; instead our focus will be long-term macro-trends that have an impact on our society.

2.2 Always logged-in

As previously stated, always logged-in is related to people's need and willingness to access information and services through the Internet at anytime and from anywhere. Andreassen et al. (2012) reason that the increasing mobility and identity of life in developed countries, reduce people's attachment to tangible objects, by becoming more demanding when it comes to accessing their virtual life and intangible services. This contributes to peoples underlying assumption that all intangible and virtual should always be accessible through the online environment (Andreassen et al. 2012).

2.3 Antecedents of always logged-in

Through our research we have identified six phenomena which we argue are the main antecedents behind the trend always logged-in. Always logged-in requires an interaction between technology and human beings. We therefore argue that how easily people will embrace new technologies that allow them to be online, will depend upon their *technology readiness*. Furthermore, we posit that customer's utility of always being logged-in increases as the number of other logged-in consumers increases. This antecedent is referred to as *network externalities*. Moreover, we argue that the consumer's *fear of losing* out on information, services and online social contact is a reason why consumers are always logged-in to the Internet. Also, we discuss whether the use of the Internet has caused *excessive Internet use*, because of consumer's dependency on the Internet, making them always logged-in. Furthermore, always logged-in may be considered a habitual behaviour, since many are logged-in on a frequent basis, repetitively and automatically. We name this antecedent *habit*. In addition, we discuss whether the experience of forgetting time and space while online may increase and cause the consumers to be always logged-in. This phenomenon is referred to as *flow*. The arguments for their impact on the dependent variable, always logged-in, will be discussed below.

2.3.1 Technology readiness

Being always logged-in requires an interaction between technology and the consumer (Colby and Parasuraman 2003). The consumer's willingness to interact and use technology depends on several factors. Within academia there is a

growing body of research trying to explain and predict user adoption of technology. The most accepted model within this field is the technology readiness (TR) model. The TR construct refers to “*people’s propensity to embrace new technologies for accomplishing goals in home life and work*” (Parasuraman 2000, 308). Parasuraman (2000) empirically confirmed the link between people’s level of TR and their predisposition to using technology.

The underlying theory of TR is based on people’s general beliefs that technology is a combination of positive and negative feelings. According to Parasurman (2000) people can be arrayed along a technology belief continuum from strongly positive at one end to strongly negative at the other. Positive feelings push a person towards usage of new technologies, while negative feelings may hold a consumer back. The TR construct consists of four dimensions: *optimism* and *innovativeness* which are drivers of technology readiness, and *discomfort* and *insecurity* which are inhibitors (Parasuraman 2000). Optimism refers to a positive view of technology, and a conviction that technology can give people increased control, flexibility and efficiency. Innovativeness depicts people’s tendencies to be technology pioneers and thought leaders. Discomfort relates to a perception of lack of control over technology and a feeling of being overwhelmed by it. Finally, insecurity involves a distrust of technology and doubts about its capability to function properly. By comparing the different American “national technology readiness surveys” throughout the last ten years Colby (2009) has created an understanding of how the TR dimensions have evolved. Results show that people have become less optimistic over the last years, while their innovativeness level is still the same. In regards to the dimensions discomfort and insecurity the findings demonstrate that people have become more comfortable and secure with technology. Overall, the results confirm that people have gradually become more technologically ready.

While Lin, Shih and Sher (2007) state that consumers’ TR level has a positive impact on online service quality perceptions, and subsequent online behaviour, others have found that this link is still sparse and confounding (Liljander, Gillberg, Gummerus and van Riel 2006; Zeithaml, Parasuraman and Malhotra 2002). The findings from Liljander et al. (2006) showed that the TR construct had little impact on attitudes towards self-service technology (SST), adoption

behaviour, and SST evaluations within the airline industry. These findings lead Liljander et al. (2006) to question the power of the TR dimensions alone to explain individuals' technology adoption behaviour.

Moreover, it is uncertain whether TR can be seen as an antecedent to the trend always logged-in, as no one has studied the effect of TR within the context of trends. On the other hand, consumers have to interact with a variety of technological hardware and software components to be online, and it is therefore realistic to assume that consumers' TR will affect the trend always logged-in. Additionally, Colby et al. (2003) stated that TR is strongly correlated with the use of the Internet and e-services. Based on these statements we argue that consumers' TR-level will affect their need and willingness of being always logged-in. We therefore hypothesise the following based on the TR drivers (optimism and innovativeness) and inhibitors (discomfort and insecurity) connected to customer propensity of always being logged-in:

H_{1a}: Optimism and innovativeness will have a positive effect on consumers' behaviour of always being logged-in.

H_{1b}: Discomfort and insecurity will have a negative effect on consumers' behaviour of always being logged-in.

2.3.2 Network externalities

When the value of a product or service is dependent upon the number of other people using it, the phenomenon is referred to as network externalities (Katz and Shapiro 1985). This phenomenon only becomes significant after a certain percentage of people using the product or service has been achieved, called the critical mass. Evidence of network externalities has been found in markets like telecommunication (Rohlf's 1974; Oren and Smith 1981), banking (Kauffman, McAndrews and Wang 2000), peer-to-peer music-sharing (Asvanund et al. 2004) and Internet (Cooper and Madden 2008). Internet with its variety of different e-services like e-mail, company websites, Instant Messaging Services, Skype, eBay, blogs, Wikipedia and Facebook, features a network effect. Kaplan and Haenlein (2010) state that social media (e.g. Facebook) show positive network externalities in the sense that they become more attractive to join the more participants they already have.

Although the concept is widely accepted, some authors have concluded that the empirical importance of network externalities has been greatly overstated (Liebowitz and Margolis 1995). This makes us question how strong the influence of network externalities is within the Internet market, and how relevant network externalities are as a driver for the trend always logged-in. Contradictory to this criticism, several authors have stated that telecommunication and Internet services are a classic example of network externalities (Cooper et al. 2008; Wang, Hsu and Fang 2005).

When discussing network externalities literature has mostly focused on positive network externalities. Srinivasan, Lilien and Rangaswamy (2004, 41) state that *“positive network externalities exist when a customer's utility for a product increases as the number of consumers who use identical or compatible products increase.”* On the other hand, negative network externalities might also occur as the utility of a product decreases as more consumers use the product or service. The examples related to Internet services provided above illustrate positive network externalities; as more people and companies use the Internet, the more valuable the Internet becomes to each owner. However, after a certain point as more customers use the Internet, the value of the Internet might decrease as congestion occurs. Exceeding the capacity of the Internet might result in slower Internet speed for the users. The telecommunication providers in Norway are continually building out and improving network capacity to prevent negative network externalities from occurring. Based on this we argue that the trend always logged-in is mainly influenced by positive network externalities, hence network externalities are affecting the trend in a positive way.

The leading scholars in the field, Katz and Shapiro (1985), distinguish between direct and indirect network externalities. However other researchers have questioned the concept of indirect network externalities and consider network externalities as one common phenomenon (Page and Lopatka 2000). *“A product exhibits direct network externalities when the utility of a product to each user in a network depends on the number of users”* (Srinivasan et al. 2004, 42). Moreover, *“indirect network externalities arise when there is a positive link between the utility to a customer and the number of other users of the product because of complementary products”* (Srinivasan et al. 2004, 42). Direct network

externalities are influencing the trend always logged-in because an increasing number of consumers using the Internet lead to an increase in the value for each of the other consumers. Additionally, indirect network externalities are present through the improvement of software applications and hardware components that results in better quality, becoming cheaper and more accessible, as the number of overall users increases. These improvements will in turn attract more users as the quality of the Internet and its related components become better. Based on this we argue that consumers who are always logged-in are influenced by both direct- and indirect network externalities.

Applying the concept of network externalities from economic theory within the field of innovation and marketing will contribute to a wider understanding of the phenomenon. Although it has been found evidence of network externalities within the Internet market, no one has investigated if this phenomenon is a driving force behind the trend always logged-in. However, there are consistent findings in the literature that network externalities alter customer behaviour, and we therefore argue that network externalities positively affect Internet users when it comes to the need and willingness of always being logged-in at any time and from anywhere. Hence,

H_{2a}: Direct network externalities will have a positive effect on consumers' behaviour of always being logged-in.

H_{2b}: Indirect network externalities will have a positive effect on consumers' behaviour of always being logged-in.

2.3.3 Fear of Losing Out

The Internet is a powerful arena, and people are fascinated by it on different levels. A person can experience high expectations from others to be present online, a need to belong, afraid of missing out and the social risk of not being present online. We consider the individual fear of “losing out” of information, services and online social contact as an antecedent of always logged-in.

Literature to be discussed regarding this phenomenon is social exclusion and the need to belong. Social exclusion is an emerging concept within the areas of education, sociology, psychology, politics and economics, which characterizes

forms of social disadvantage. According to Bossert, D'Ambrosio and Peragine (2007, 778) "*individuals can be socially excluded only in comparison with other members of society, depending on the extent to which an individual is able to associate and identify himself with others*". We can draw comparison to social exclusion if we look at the Internet and its arena as an online society. If an individual is not logged in and not taking part in the online society, he or she might feel socially excluded from the online environment. This results in the consumer's need to always stay logged-in.

A person's need to belong is seen as a fundamental human motivation (Baumeister and Leary 1995), and scientists have stated that humans need to form and maintain interpersonal bonds (Freud 1930). This is also presented by Maslow (1968) when he ranked "love and belongingness need" in the middle of his motivational pyramid. Research shows that most actions by humans are based on the need to belong (Baumeister et al. 1995), but the intensity differs between individuals and cultures. Two social psychologists; Baumeister and Leary (1995) have researched the field of the need to belong. They define it as "*a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships*" (Baumeister et al. 1995, 497). When a person's need to belong is unfulfilled, a feeling of loneliness, social isolation and alienation may result. According to Mellor et al. (2008) the need to belong depends on the person's living condition; for instance, if the person is living alone he or she has less need of belongingness. Chou, Condrón and Belland (2005) argue that humans need social recognition, interpersonal contact and a sense of belonging to live a balanced life. Internet allows the consumer to communicate and socialise with others. Research argues that the "accompaniment" function is desirable since the interactivity feature of the Internet helps people stay connected (Chou et al. 2005). The findings above are in accordance with the Cisco research (2011b), where 40 percent consider the Internet more important in their lives, compared to human social activities.

So far, there is a lack of research investigating if fear of losing out and belongingness have an effect on trends, specifically the trend always logged-in. However, we see an important link when researching the existing literature and considering the importance of human social contact and the fact that in today's

environment Internet has become an important communication and socialisation platform. By not being logged-in and participating in the online environment, it can be difficult to be part of the online society, resulting in a feeling of exclusion and not belonging. Such a feeling may be one cause why people are logged on to the Internet and take part in the online “community”. Thus, we hypothesise:

H₃: Fear of losing out will have a positive effect on consumers' behaviour of always being logged-in.

2.3.4 Internet usage: Excessive Internet use and Habit

When discussing the area of Internet usage, we present two interesting constructs in literature: habit and excessive Internet use. These two areas are presented differently on the dependency scale; “habits” are psychologically dependant, whereas “excessive Internet use” is centred towards both psychological and physical dependency.

2.3.4.1 Excessive Internet use

Young (1996), Wang (2001) and (Chou et al. 2005) present the issue of increasing use of Internet, and discusses the evolving phenomenon “Internet addiction”. Kandell (1998, 12) defines Internet addiction as “*a psychological dependence on the Internet, regardless of the type of activity once logged on*”. Research indicates that maladaptive patterns of Internet use constitute behavioural addiction (Chou et al. 2005). According to Greenfield (1999) the qualities of Internet, especially its speed, accessibility, the potency of its content and intensity of information accessed online, is what contributes to addiction. We question if the phenomenon could be an antecedent behind the consumer’s need to always stay logged-in. According to Wang (2001), some people feel so excited about this new ICT-revolution and appear to have a hard time getting off; they are “hocked”. As reported by the Cisco study (2011b) students claim they cannot visualise a life without Internet.

Researchers speculate that once a person is considered “addicted” to the Internet this behaviour may override all other variables that affect the trend. The terminology “Internet addiction” is controversial and little empirical evidence exists (Griffiths 2000). As a consequence, researchers are debating whether it can

be seen as a true addiction which creates problematic behaviour (Young 1996, Wang 2001). We argue that the term “Internet addiction” is too extreme and not applicable in describing the normal consumer’s interaction with the Internet.

Chou et al. (2005) emphasise that the Internet is easy to use which results in enhanced human-computer interaction. Griffiths (1998) and Chou et al. (2005) apply the term “excessive use” of Internet. Chou et al. (2005) discuss a new angle of “excessive Internet use” and argue that the Internet itself is not addictive, but some Internet applications, especially the use of interactive functions (e.g. chat rooms and gambling) seem to trigger compulsive Internet use and overinvolvement. According to Faber, O’Guinn, and Krych (1987, 132), compulsive consumption is seen as “*an inappropriate behaviour, typically excessive, and clearly disruptive to the lives of individuals who appear impulsively driven to consume*”. Grohol (1999) presents a new view. He argues that the socialisation element of Internet is what makes it so appealing, especially for people with social difficulties. The Internet provides a sense of community and social acceptance. As stated in the Cisco study, being updated on Facebook is more important than spending time with friends in person (Cisco 2011b).

Literature linking excessive use and Internet together is not scarce. However, there is lack of investigation on whether excessive Internet use and the trend always logged-in are related. Still, existing literature shows evidence that Internet applications, the Internet’s ease of use and socialisation are enhancing the interaction and use. Therefore, it is realistic to assume that excessive Internet use functions as a driver, having a positive effect on the need and willingness of always being logged-in. Thus, we hypothesise:

H₄: *Excessive Internet use will have a positive effect on consumers' behaviour of always being logged-in.*

2.3.4.2 Habit

Verplanken and Aarts (1999, 104) define habits as “*learned sequences of acts that have become automatic responses to specific cues, and are functional in obtaining certain goals or end-states.*” For behaviour to become habitual, a person needs to perform it on a frequent basis, repetitively. The execution of an action must be

pared with the response to a specific cue (Hull 1943, Tolman 1932). If this is completed and no conscious decision needs to be taken, the behaviour has become a habit and as a consequence: automatic (Verplanken and Orbell 2003). Moreover, the authors also argue that habits help people organize their everyday lives and that it helps create an identity to each person. Ouellette and Wood (1998) discusses that people are likely to carry out favourable intentions of a behaviour that they have frequently performed in the past. In other words, past behaviour is a predictor of future behaviour (Verplanken et al. 2003).

Habit is considered a pattern of behaviour, like checking email or logging on to the Internet. This is triggered by environmental stimuli (e.g. seeing the smartphone or computer tablet next to the breakfast table) and then a task is performed (logging on to the Internet and checking e-mail). This is an unconscious action. Once a habit has been established, the behaviour requires little or no attention, minimal effort (Aarts, Verplanken and van Knippenberg 1998), and can be performed together with other tasks. According to Verplanken et al. (2003) and Ouellette et al. (1998) habits are mostly intentional, limitedly controllable, conducted with lack of awareness and are considered efficient. Habits are mostly intentional, meaning there is no planned behaviour, instead functional and goal oriented. If always logged-in could be established as a habit, the goal in this context might be to use the Internet to get access to information and services at anytime and from anywhere.

Recent years' technological development has led to Internet becoming a natural part of people's everyday lives. The Cisco report (2011a) supports this, by arguing that one in three consumers' consider Internet as important as water, food, air and shelter. In addition, the report informs that the laptop is used as a primary source to acquire information and news. We may have thought carefully about the different communication tools the first time we used the Internet, but by the hundredth time we probably didn't. The habits of sending an email rather than calling a person, booking cinema tickets online instead of offline, reading the newspaper online, and several other Internet habits have led us to a stage where we are always logged-in. As far as we know, habits in the context of trends, here the trend always logged-in, have never been explored earlier. Interestingly, a prior study conducted by LaRose, Mastro and Eastin (2001) supports our assumptions

that habit is found to be a significant predictor of Internet usage. Based on this reasoning we hypothesise:

H₅: Habits will have a positive effect on consumers' behaviour of always being logged-in.

2.3.5 Flow

Csikszentmihályi (1975) presents the interesting phenomenon *flow*, which is emerging in the discussion of online human impact. Flow is defined as “*an optimal, extremely enjoyable experience when an individual engage in an activity with total involvement, concentration and enjoyment, and experience an intrinsic interest and the sense of time distortion during his/her engagement*” (Chen, Wigand and Nilan 2000, 263). The concentration of flow is so intense during the activity, making no room for irrelevant actions, thoughts or problems. The idea of flow is like being in “the zone” forgetting time and space, hours seem like minutes. A person in flow is described as very focused, having clear goals, getting instant feedback during the activity, and being challenged in areas where the person holds skills (Csikszentmihályi 1975).

Chen et al. (2000) and Hoffman and Novak (1996) have adopted the flow theory and applied it to the World Wide Web phenomenon. They suggest that activities carried out online may facilitate the presence of flow. Research proposes that to understand customer behaviour online, the flow construct is an important element (Novak, Hoffmann and Yung 2000). According to Novak et al. (2000, 22) web flow is a cognitive state experienced through online navigation which is determined by (1) *high levels of skill and control*; (2) *high levels of challenge and arousal*; (3) *focused attention*; and it is (4) *enhanced by interactivity and telepresence*. Chen et al. (2000) states that a person achieving flow is so involved that irrelevant thoughts and actions are ignored, resulting in complete focus on the task at hand. Activities that are reported to especially lead to web-flow are searching, surfing or navigating, reading or writing, and chatting. Web users are reporting several emotional states during web-flow: a feeling of discovery, immersed pleasure, time going fast, and absorbed interest. Flow is seen as a positive experience while online, but may not be a daily experience. Based on the research of Novak et al. (2000), we adopt their perspective on flow, and focus our

research on two dimensions; (1) *time distortion and telepresence*, and (2) *challenges and skills*. Time distortion refers to the consumer losing track of time, while telepresence is achieved when forgetting the immediate surroundings when online. To be in flow, a person needs to feel challenged by the tasks he or she performs online and at the same time execute the skills he or she possesses.

Based on the existing phenomenon of flow, we speculate whether flow could be an important participator in keeping us always logged-in. So far flow has been researched in the context of Internet, but no evidence reveals that it may increase consumers' need and willingness to always stay logged-in. According to the recognized Hungarian researcher Csikszentmihalyi (1990), flow has been noted as a useful construct to describing human-computer interactions, and an important contributor to understanding online customer behaviour (Novak et al. 2000). We believe that flow works as a contributor keeping us always logged-in, not playing a part in making us go online. Based on these arguments we argue that flow is related to always logged-in, working as a driver affecting the trend. Thus, we hypothesise:

H_{6a}: *Experience of time distortion and telepresence will have a positive effect on consumers' behaviour of always being logged-in.*

H_{6b}: *Experience of skills and challenges will have a positive effect on consumers' behaviour of always being logged-in.*

2.4 Consequence of always logged-in

In addition to the antecedents discussed above we identified customer engagement as a potential consequence of the trend always logged-in. This statement is based on the assumption that the interactive functions of Internet have led to online communities where relationships and engagement evolve, which in turn creates a foundation for customer engagement. The argument for always logged-in impact on customer engagement will be discussed below.

2.4.1 Customer Engagement

“Customer engagement” is a relatively new term that has only emerged in academic marketing and service literature the past five years (Brodie et al. 2011). This has led to a great deal of research reviewing the literature and presenting

different definitions to understand the concept better (Brodie et al. 2011; Verhoef, Reinartz and Krafft 2010).

Brodie et al. (2011, 260) define CE as

a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g. a brand) in focal service relationships. It occurs under a specific set of context dependent conditions generating differing CE levels; and exists as a dynamic, iterative process within service relationships that co-create value. CE plays a central role in a nomological network governing service relationships in which other relational concepts (e.g. involvement, loyalty) are antecedents and/or consequences in iterative CE processes. It is a multidimensional concept subject to a context- and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioural dimensions.

This definition incorporates a multidimensional perspective of customer engagement, including behavioural, emotional and cognitive aspects. Our interest is to only focus on the behavioural dimension of CE, since we find this dimension more relevant and interesting from a company perspective. Van Doorn et al. (2010, 253) posit that customer engagement behaviour (CEB) “*goes beyond transactions, and may be specifically defined as customer behavioural manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers*”. Although CEB has a customer-to-company relationship focus in this definition, the authors state that CEB may be present in a much broader network of actors including current and potential customers, suppliers, general public, regulators, and firm employees. In this research we choose to focus on customer engagement between consumers and companies.

As a consequence of the trend always logged-in, people have developed a second life online next to the real world. Together with the interactive function of web 2.0, an online community where consumers and companies can communicate more easily than before, have evolved. This online arena offer companies the possibility to build long-term relationships with their customers. Achieving relationships may work as a foundation for getting consumers engaged in company activities and brands. Consequently this can result in customer engagement behaviour, like visiting company websites, searching for information, writing reviews and reading comments, be attentive to brand information,

recommending and engaging friends, blogging, and becoming disappointed if the brand or company were to cease to be available (Calder, Malthouse and Schaedel 2009; Van Doorn et al. 2010). Furthermore, researchers suggest that customer engagement generates enhanced corporate performance, which includes sales growth, superior competitive advantage and profitability (Neff 2007; Sedley 2008; Voyles 2007). The reasoning behind this statement is based on the knowledge that engaged customers play an important role in viral marketing by providing comments, referrals and recommendations on specific brands (Brodie et al. 2011).

Online customer engagement is different from offline engagement as the nature of the customer's interactions with a brand, company and other customers differ on the Internet. Although several authors have explored the nature and scope of the online consumer engagement concept (Brodie et al. 2011; Mollen and Wilson 2010), no one has investigated this phenomenon in relations to trends. Our interest is to investigate if online consumer engagement behaviour could be seen as a consequence of the emerging trend always logged-in. Sashi (2012) supports this assumption by informing that a survey provided by Forrester Consulting in 2008 indicate that companies believe Internet is essential for building customer engagement. We argue that the trend always logged-in leads customers to take part and involve themselves in online company activities and brands more often than before. We therefore hypothesise:

H₇: The need and willingness to always being logged-in will have a positive effect on customer engagement behaviour online.

3.0 Conceptual Model

To summarize our literature review, we present a conceptualisation of our research question and hypotheses through a conceptual model to clarify the pathways (figure 1). The conceptual model includes six causes influencing the trend always logged-in. We propose that the technological aspect, technology readiness, influences the trend both in a positive and negative way. Furthermore, network externalities, operating as a functional aspect, affect the trend only in a positive way. Moving over to the personal drivers in the model we propose that the fear of losing out, excessive Internet use, habit and flow constructs are all affecting the trend always logged-in in positive ways.

Presenting the main construct, always logged-in, we argue that this construct is operating as an intermediate variable. First of all, always logged-in is functioning as a consequence to all the presented drivers above. At the same time, we take this a step further and hypothesise that always logged-in will have a positive effect on the customer's online behavioural engagement.

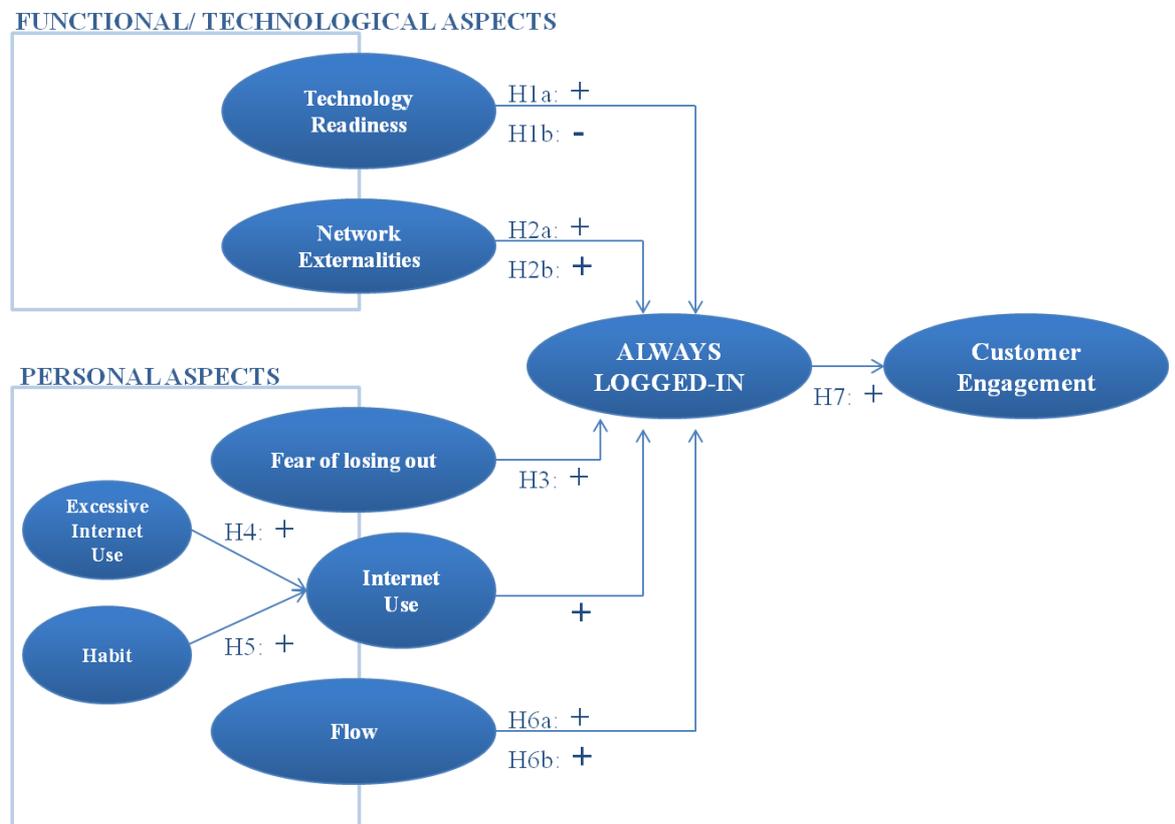


Figure 1: The Conceptual model

4.0 Methodology

We will in the following part go through our chosen methodology in order to provide an understanding of the empirical foundation and data collection. The methodology is presented and then discussed in regards to its strengths and weaknesses within validity and reliability.

4.1 Subjects and research design

This study seeks to generate a deeper understanding of the trend always logged-in by identifying its underlying drivers, and examine the likelihood of the trend affecting a business related factor. To achieve this, our research is based on a mixed method design. Since little or no research has been done to investigate the trend always logged-in, the first part of our thesis takes on a qualitative research design. The primary goal of the qualitative research design is to use an exploratory research method that provides us with insights and understanding of the problem setting (Malhotra 2010). The data collection method includes several interviews and discussions with professors responsible for the trend research at BI Norwegian Business School. Through this process we identified a conceptual model consisting of six drivers and one business related factor working as a consequence of the trend.

The second part of the analysis was based upon a quantitative research design, as our goal was to determine relationships between one variable and another in a population. A survey was used to collect the necessary data, as this data collection method has its strength in obtaining massive information from groups of people. Among the different types of survey design we chose to apply an inferential survey design method, as our goal was to test hypothesised relationships between variables (Easterby-Smith, Thorpe and Jackson 2008).

4.2 Survey development, sampling technique and data collection

We started the process of developing our questionnaire by using validated scales where they existed, together with developing new scales where it was needed. The development of new items was generated based on the do's and do not's of question wording by Burns and Bush (2009). After the first draft, researchers

within the field provided helpful comments on both the English and Norwegian version of the questionnaire. All questions were translated from English to Norwegian and then back to English to ensure a reliable questionnaire. The questionnaire ended up consisting of 66 items. After pretesting, representative samples of 600 Norwegian respondents were collected from a telephone survey conducted by the professional data collection company *Norstat*. *Norstat* acknowledges ESOMARs "Code of conduct" as the basis for their fieldwork, and all their systems and routines are in accordance with ESOMAR rules and regulations (Norstat 2012a). The probability sampling design, stratified random sampling, was used by *Norstat* to select the respondents (Easterby-Smith et al. 2008, 216). The Norwegian population was divided into two strata based on whether the respondents had a mobile phone or a home telephone (appendix 4). Afterwards, a random sample from half of the respondents was drawn. The target group consisted of respondents from 15-85 years of age, all being Internet users. The telephone survey used the computer-assisted telephone interviewing (CATI) technique. Overall, the data collection method provided us with a fast collection method that allowed for high geographical flexibility, and a good respondent cooperation.

4.3 Instrument development

4.3.1 Operationalisation of the constructs

The best way to ensure content validity is to select and adapt items from previously validated instruments. To the extent possible we borrowed items from prior research and developed new items where there were no relevant items to use. The questions and scales are displayed in appendix 2. All questions beside the demographics were measured on a 7-point likert scale ranging from 1 "strongly disagree" to 7 "strongly agree". In addition, number 8 on the scale provided the respondents with the option to answer "I don't know".

Parasuraman (2000) developed, refined and validated the technology readiness construct. This 36-item construct consists of the four dimensions optimism, innovativeness, discomfort and insecurity (Parasuraman 2000). We choose to use an abbreviated version consisting of only 10 items that have been tested and used by others (Parasurman and Colby 2001; Victorino, Karniouchina and Verma

2009). The items are to some extent adjusted to the Internet context and translated into Norwegian. The Norwegian wording is in accordance with prior translation of the TRI into Norwegian (Andreassen, Olsen and Calabretta 2010).

According to Srinivasan et al. (2004), there is no well-established way to measure the construct of network externalities. Thus, we had to develop a new measure for network externalities. Based on the dimensions proposed by Srinivasan et al. (2004) and Molina-Castillo, Munuera-Alema'n and Calantone (2011) we developed new items corresponding to the two dimensions direct network externalities and indirect network externalities. The items were developed in order to fit into the context of Internet.

Leary, Kelly, Cottrell, & Schreindorfer's (2006) research presents a modified version of the Need to Belong Scale. The scale considers respondents' "*desire to be accepted by other people, seek opportunities to belong to social groups and react negatively when they were rejected*" (Mellor et al. 2008, 4). We adopted and adjusted the measurement scale to create the best fitted scale for our research. This resulted in a five-item scale to measure the consumer's fear of losing out. Moreover, the items were adjusted to fit the Internet context.

To measure the consumer's Internet habit, we turn to compulsive behaviour to find an appropriate measurement scale. Valence, d'Astous and Fortier (1988, 426) present the Original Measurement Scale of Compulsive Buying, inspired by Faber and O'Guinn (1989, 1992). We find two of the four researched dimensions particularly relevant, namely the tendency to go online and reactive aspects. The two dimensions are adopted and transformed into an abbreviated one-dimensional four-item version to better fit our research in the Internet context.

Based on Verplanken and Orbell's (2003) research on past behaviour frequency, we adapt their Self-Report Index of habit strength. The Index focuses on "*history of repetition, the difficulty of controlling behaviour, lack of awareness, efficiency and identity*" (Verplanken et al. 2003, 1317). The Self-Report Index is a one-dimensional structure consisting of a 12-item scale. Results show that the instrument is both reliable and valid. We adopt the scale and create an abbreviated

version. The reason for reducing the scale is the overlap with other constructs. Moreover, the items were slightly adjusted to fit the Internet context.

We adapt Novak, Hofman and Yung's (2000) scale of web flow. The scale is based on "*high levels of skills and control, high levels of challenge and arousal, focused attention, and is enhanced by interactivity and telepresence*" (Novak et al. 2000, 22). In total, 13 constructs are presented along with web usage variables. Because of its length, an abbreviated version of the scale was created. The dimensions chosen and then adjusted into two dimensions within the Internet context were: (1) time distortion and telepresence, and (2) challenges and skills. According to Novak et al. (2000) skills, challenges and telepresence had a positive, significant and direct effect on flow. Chen (2000), Csikszentmihályi (1975) and Hoffmann and Novak (1996) also found that challenges and skills are the most important antecedents of flow.

The construct always logged-in is adopted from the existing and on-going trend research conducted at BI Norwegian Business School (Andreassen et al. 2012). Based on the research's in-depth interviews and focus groups with experts in the fields of innovation and technological development, and the always logged-in definition, an 11-item measurement scale was developed.

At this point in time there has not been developed any validated scale for the customer engagement construct within academia. This forced us to develop a new scale for the behavioural dimension of customer engagement. We chose to only focus on the behavioural dimension of customer engagement as we found this dimension more economically relevant and interesting for companies. Additionally, we found it hard to create good items that captured the dimensions of cognitive and emotional customer engagement. The CEB items were created to occur on a continuum from the lowest to the highest range of the behavioural dimension of online customer engagement (Ghuneim 2006).

Overall, the items was translated into Norwegian, which made some of the wording limited from its original English form since the Norwegian language lacks such a variety of words.

4.4 Reliability and validity

Reliability and validity are critical factors when assessing errors that might influence the results. Reliability refers to the variable consistency when repeated, and if the variable measures what it is intended to measure (Hair et al. 2010). Furthermore, validity is concerned with a measure that correctly represents the study concept, and to what extent it is free from nonrandom or systematic error (Hair et al. 2010). Reliability and validity are closely related, and unless there is a reliable measure, the measure will not be valid (Robson 2002). However, even though reliability is required, it is not enough to guarantee validity.

4.4.1 Validity

External validity refers to the extent to which the results of a study can be generalised or extended to others beyond the current sample. We argue that the external validity of this study is high, since the data was collected from Norstat consumer panel consisting of 78.000 respondents (Norstat 2012b). Additionally, Norstat is a professional bureau that holds knowledge of how one should control for a representative collection. *Construct validity* is the extent to which our measured items in reality reflect the theoretical latent constructs that the items are intended to measure (Hair et al. 2010). In addition to having acceptable levels of goodness-of-fit (GOF), the measurement model must show evidence of construct validity. Assessing the construct validity is very important in our case, since several of the scales used in the questionnaire are untested in prior studies. One important component of construct validity is *content validity*, which is the evaluation of the correspondence among the items to be included in a summated scale and its conceptual definition (Hair et al. 2010). In this thesis, content validity was accounted for by using ratings from expert judges and pretesting the questionnaire among different subpopulations. Another component of construct validity is *convergent validity* in which indicators of a specific construct share a high proportion of variance or converge (Hair et al. 2010). The convergent validity is evaluated through assessing the factor loadings in the result section. Reliability is also an indicator of convergent validity. The reliability measure Chronbach's alpha is used to measure the construct validity in the next section. *Discriminant validity* is also considered a component of construct validity, and captures if the construct is truly different from other constructs (Hair et al. 2010).

In addition, discriminant validity means that individually measured variables should only represent one latent variable (Hair et al. 2010). This has been accounted for by systematic assessment of the indicators to avoid overlaps.

4.4.2 Reliability

Reliability measures the degree to which a set of indicators of a latent construct is internally consistent in their measurement. The indicators of a reliable construct are highly interrelated, demonstrating measure of the same thing. Hair et al. (2010) recommend a minimum of three to four indicators per construct, since few indicators are preferred to ensure satisfying representation of the construct. A commonly used measure of reliability is the Cronbach's alpha, which assesses consistency of the entire scale. The approved lower limit for Cronbach's alpha is 0.7, although in exploratory research it can decrease to 0.6 (Hair et al. 2010). The Cronbach's alpha value for each construct is presented in the result section.

4.5 Pretesting

Before the data collection took part we pretested the questionnaire to eliminate potential problems. The pretest was carried out on ten respondents from a representative sample of students and employees from different companies, ranging from 24 to 62 years of age. Additionally, some specialists in question construction were confronted with the survey. The pre-survey was accomplished through personal interviews after the respondents had read through and answered the paper-based version of the questionnaire. We encouraged the respondents to give comments regarding question content, wording, sequencing, question difficulty and the instructions. We implemented most of the valuable feedback; spelling errors, difficult question wording and adding examples to some questions. For a complete version of the Norwegian questionnaire please see appendix 3. For a translated English version, see appendix 1.

4.6 Analytical procedures

The data collected via telephone interviews with Norstat were first run through SPSS in order to be cleaned and check if the statistical assumptions were met. SPSS, or Statistical Package for the Social Science, is a widely distributed

software program which allows our data to be analysed (Janssens et al. 2008). First of all there were no uncompleted questionnaires needed to be removed from the data set. Moreover, the sample contained some missing values. The respondents and items that had over 10 percent missing values were removed from the data set. Then the normality distribution for each item was evaluated which confirmed that they passed the rules of thumb. After these analyses, an Exploratory Factor Analysis (EFA) was taken on to examine the underlying patterns of the variables and to check them for construct validity, as some of the scales were newly developed for this research. At the end, a reliability analysis was conducted to calculate the Cronbach alpha (α) for each of the eleven constructs that were created through the EFA analysis.

Furthermore, a Confirmatory Factor Analysis (CFA) and a Structural Equation Model (SEM) were calculated using LISREL 8.8. When applying CFA we used Maximum Likelihood as extraction method to combine all 11 constructs and their items together to produce a single factor solution. See figure 2 for the CFA-model. For SEM, a syntax was written in SPSS to create a *dat-file*, which later was converted into a *cov-file* using PRELIS (see appendix 22 for syntax). First, the covariation matrix was computed in SPSS, which then was transformed into LISREL. The covariation matrix allowed LISREL to read the covariation among the variables, and was used to run a SEM with the Maximum Likelihood extraction method. This analysis produced an output file of the model fit that was evaluated based on the recommended rules of thumb. Furthermore, regression analysis was conducted in SPSS to investigate if any mediation between the variables existed.

5.0 Results

In the result section we will thoroughly go through the obtained results from the data analysis.

5.1 Characteristics of the sample

As using Internet was a criterion for being part of the study, the study started with a screening question that eliminated all respondents not using the Internet. Thus, all the respondents in the survey are Internet users. The sample provides a representative gender distribution of 47 percent males and 53 percent females (Appendix 5). Furthermore, the age range varies from 15 to 85 with an average age of 48 (Appendix 6). The respondents answered that 39 percent and 27 percent used a laptop or a computer to connect to the Internet, while 24 percent and 9 percent used a mobile phone or a tablet (Appendix 7). The remaining 1 percent of the respondents used other electronic devices like game consoles or TVs with Internet connection. Moreover, on average the respondents answered that they are connected to the Internet almost 8 hours per day (appendix 8). This is roughly the same as a normal working day in Norway. Additionally, looking deeper into the data one can see that 20 percent and 12 percent of the respondents answered that they are connected one and two hours per day to the Internet, while 13 percent are connected to the Internet 24 hours per day (appendix 8). Lastly, the respondents answered how much of their time they used on Internet or IT for their current work or studies. On this question, 24.8 percent answered that they never used Internet/IT, while 30.7 percent used Internet/IT up to 20 percent of their time, 14.7 percent used Internet/IT up to 40 percent of their time, 12 percent used Internet/IT up to 60 percent of their time, 9.8 percent used Internet/IT up to 80 percent of the time, and lastly, 8 percent used up to 100 percent of their time on Internet/IT (appendix 9).

The missing values in our dataset is related to respondents answering “I don’t know” to the items. Overall, the total number of missing values in the dataset is 463, which corresponds to only 1.3 percent of the total number of observations. There are five questions that have missing values between 7 percent to 10.5 percent of the total sample (Appendix 10). These five items are related to the technology readiness and the always logged-in construct. The rest of the items

have between 0 percent to 3 percent missing values (Appendix 10). Furthermore, after eyeballing the data we discovered that there are 14 individual cases (respondent 60, 290, 312, 344, 348, 379, 459, 463, 470, 549, 551, 552, 554 and 555) with missing values over 10 percent. As a rule of thumb Hair et al. (2010, 47) state that “*missing data under 10 percent for an individual case or observation can generally be ignored, except when the missing data occurs in a specific nonrandom fashion*”. Based on this rule of thumb by Hair et al. (2010) we ignore the missing values regarding the observations, however we delete the 14 individual cases with missing values above 10 percent.

Furthermore, it is also important to examine observations that can be identified as distinctly different from other observations. These extreme observations are characterised as outliers. Through assessing the box plots for each item we found that question s38, s39, s42 and s56 had a total of 37 extreme outliers (Appendix 11). These 37 outlier observations corresponded to a number of 33 respondents that were thoroughly checked. Additionally, we found that respondents 347 and 330 had a unique combination of extreme values across several variables that made them stand out from the others. After checking all respondents we found their answers to be sincere and honest, and we therefore decided to keep the respondents. Respondents 347 and 330 were also seen to represent valid and representative elements of the population, and therefore retained.

The normality distribution was looked into through assessing the two measures kurtosis and skewness on an item and construct level. In appendix 12 the kurtosis and skewness values are reported on a construct level. Kurtosis refers to the “peakedness” or “flatness” of the distribution, while skewness is used to describe the balance of the distribution (Hair et al. 2010). There is no clear consensus regarding an acceptable degree of non-normality. However, kurtosis values outside the range of -3 to 3, and skewness values outside the range of -1 to 1, are considered substantial (Finney and DiStefano 2006; Hair et al. 2010). As seen in appendix 12 there are no kurtosis values outside the recommended range, but two skewness values for the constructs habit and customer engagement are outside the recommended range. Moreover, Hair et al. (2010) argue that skewness and kurtosis are less of a concern with large samples (i.e. above 200 respondents). Thus, with a sample of 600 respondents we argue that the small variation from the

normal distribution is not a large concern.

As multicollinearity is a statistical assumption for our analysis, this was checked by examining the correlation matrix for the independent variables in appendix 13. Multicollinearity is explained as the “*extent to which a variable can be explained by the other variables in the analysis*” (Hair et al. 2010, 2). High correlations of generally 0.9 and higher is an indication of multicollinearity (Hair et al. 2010). All of the correlations differ significantly from zero, and no one of them is greater than 0.6 (appendix 13). In all likelihood, multicollinearity is thus not a problem.

5.2 Exploratory Factor Analysis

To gather information on the interrelationships amongst variables, an Exploratory Factor Analysis (EFA) was conducted. The results generated from EFA are useful when developing a theory that leads to a proposed measurement model which is tested by using Confirmatory Factor Analysis (CFA). EFA reduces the number of items by finding the strength of associations between them, and revealing a set of underlying factors based on correlation amongst these items. According to Tabachnick and Fidell (1996) at least 300 respondents is optimal for EFA. Since we have 600, we are confident that EFA will generate few difficulties. Given that our research is exploratory, and many of the constructs are newly developed, it is important to thoroughly present the EFA since the analysis creates a foundation for further analysis.

When reviewing the factorability of the data, Bartlett’s test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy are examined (appendix 14). Bartlett’s test revealed statistical significance ($0.00 < 0.05$). According to the KMO index, our data is considered good since the value 0.908 exceeds the minimal requirement of 0.6. The tests reveal that EFA is appropriate for our data.

When applying EFA we were able to experiment with a different number of factors until a satisfying solution was detected. Managing this, we applied Kaiser’s criterion technique presenting Eigenvalues, where factors with values 1.00 or higher are extracted. The total variance explained table presents a 13 factor structure with eigenvalues over 1.00 (appendix 16), ranging from the least

(1.8 percent) to the most (23.9 percent) exploratory factor. Cumulative, the total variance explained was 55.3 percent.

Furthermore, we address the strength of the intercorrelation between items based on the correlation matrix. According to Tabachnick et al. (1996) all coefficients greater than 0.30 need inspection. To identify the number of underlying factors we applied maximum likelihood as an extraction method. To interpret the factors closely, the rotated component matrix was investigated for intercorrelations, where promax allowed factors to correlate. The rotated solution revealed 7 out of 13 factors successfully loading on specific items (appendix 18). Unfortunately, the following items; s4, s6, s25 and s51, did not load substantially on one factor. In addition, cross loadings appeared for question s27 and s47. As a result, we removed all loadings under 0.3 and all cross loadings.

The items belonging to TR revealed a factor structure together with items from always logged-in (factor eight) and flow (factor five). In addition, the proposed four factors of TR could not be confirmed. Others have reported similar problems with the dimensionality of TR (Liljander et al. 2006). However, Parasuraman (2000) groups these four factors into drivers and inhibitors. Based on this issue, we performed a separate EFA on TR isolated with a priori criterion of two factors in accordance to Parasurman (2000). An almost perfect two factor structure appeared (appendix 20) with exception of item s4 that had a factor loading below 0.3. Based on the presented issues of TR, we decided to hold TR outside the EFA for further analysis. Lastly, prior research argues that the habit scale resulted in a one-dimensional construct. This is not coherent with our results, and as a consequence items s28 and s29 from factor 12 were deleted.

A respecified EFA was formed after deleting all items discussed above. The KMO value 0.900 exceeded the requirement of 0.6, and Bartlett's test of sphericity reached statistical significance ($0.00 < 0.05$) (appendix 15). Hence, the new EFA is appropriate for the data. The Kaiser's criterion technique presents ten factors with eigenvalues exceeding 1.00, with a cumulative total variance explained of 56.9 percent (appendix 17), ranging from 2.7 to 26.6 percent.

Analysing the rotated component matrix for intercorrelations, the new solution revealed nine out of ten factors loading successfully on specific items (appendix 19). Unfortunately, factor five revealed three items under 0.3. As a consequence, the items were excluded from further analysis. Furthermore, factor nine included only two items, and based on the rule of thumb we should avoid factors with less than three items. Nevertheless, the loadings were high and the items based on a proven scale, so consequently the factor was not deleted. In addition, factor ten representing two always logged-in items was deleted. By interpreting the two items it is clear that they represent a work-life and professional view. This is a sub dimension of always logged-in which will not be investigated in this thesis.

The EFA resulted in an eleven factor structure, including technology readiness. As a satisfactory factor solution has been detected, we name the factors based on our interpretation of the significant items content. The two technology readiness factors are included in table 1, as factor 10 and 11.

Nr	Factors	Factor names
2	Direct Network Externalities	DNE
7	Indirect Network Externalities	INE
6	Fear of Losing out	FOLO
8	Habit	HABIT
4	Excessive Internet Use	EIU
3	FLOW - Time Distortion, Telepresence and Challenges	FLOW1
9	FLOW - Skills	FLOW2
5	Always Logged-in	ALI
1	Customer Engagement	CE
10	Technology Readiness - Drivers	TRDR
11	Technology Readiness - Inhibitors	TRIN

Table 1: Factor names

5.3 Reliability - Cronbach alpha

The Cronbach alpha measure for each of the twelve constructs was estimated based on the constructs developed from the EFA. The results are displayed in table 2 below.

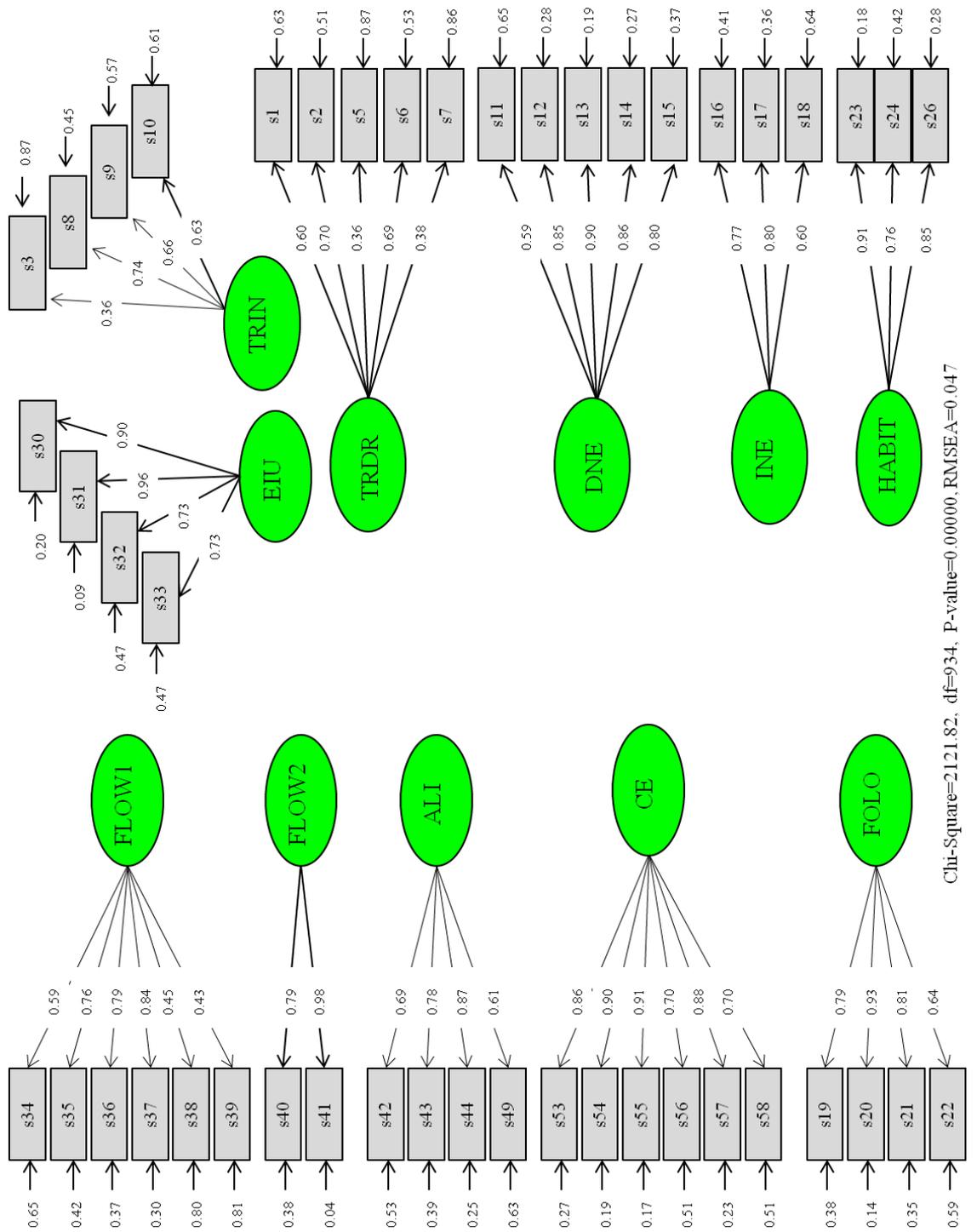
Construct	Observed Measures	Nr. Of items	Cronbach's Alpha
Technology Readiness - Drivers	s1 s2 s5 s6 s7	5	0.739
Technology Readiness - Inhibitors	s3 s8 s9 s10	4	0.659
Network Externalities - Direct	s11 s12 s13 s14 s15	5	0.896
Network Externalities - Indirect	s16 s17 s18	3	0.774
Fear of losing out	s19 s20 s21 s22	4	0.840
Habits	s23 s24 s26	3	0.805
Excessive Internet Use	s30 s31 s32 s33	4	0.853
Flow - Time, Telepresence & Challenge	s34 s35 s36 s37 s38 s39	6	0.782
Flow - Skills	s40 s41	2	n/a
Always logged-in	s42 s43 s44 s49	4	0.784
Customer Engagement	s53 s54 s55 s56 s57 s58	6	0.891

Table 2: Cronbach alpha values

From the table above one can see that all of the constructs have a reliability score that are over the recommend lower limit of 0.7, except for the technology readiness – inhibitor construct. This construct has a Cronbach alpha value of 0.659. Running the option “scale if item was deleted” gave us an output that described the Cronbach alpha values if each of the different values were deleted. This analysis informed that the Cronbach alpha level as a whole was to increase to 0.699 if question s3: “*I often find new technology too complicated to be useful*”, was deleted. The deletion of this item would increase the Cronbach alpha value some, but the value would still not exceed the recommend limit of 0.7. At this point in time we chose to keep this question, since this is part of a well tested and validated technology readiness study conducted by Parasuraman (2000).

5.4 Confirmatory factor analysis: The measurement model

To test the measurement model, a confirmatory factor analysis (CFA) was run in LISREL. To evaluate the model validity we started by assessing the model fit, and then the validity and reliability of the model. The measurement model with its standardised loadings is displayed in figure 2 on the next page.



Chi-Square=2121.82, df=934, P-value=0.00000, RMSEA=0.047

Figure 2: The Measurement model

5.4.1 Model Fit

The goodness-of-fit (GOF) measures are divided up in the following three groups: absolute fit indices, incremental fit indices, and parsimony fit indices. When reporting on GOF indices Hair et al. (2010) suggest that one should not report on all indices. However, one should at least report on one incremental index and one absolute index, in addition to the chi-square value (χ^2) and the associated degrees of freedom (df). The reported fit indices from the measurement model are displayed in table 3 below.

Fit indices	Recommended value	Measurement model
χ^2 statistic	-	2121.82
df	-	934
Normed χ^2	Below 2.0 is very good / Between 2.0 and 5.0 is acceptable	2.27
p-value	Above 0.5	0.000
Goodness of fit (GFI)	Above 0.9	0.77
Root mean error of approximation (RMSEA)	Below 0.05 indicates close fit / Between 0.05-0.07 indicates acceptable fit	0.047
Standardized root mean residual (SRMR)	Below 0.08	0.076
Normed fit index (NFI)	Above 0.9	0.96
Comparative fit index (CFI)	Above 0.9	0.98
Adjusted goodness of fit (AGFI)	Above 0.9	0.74
* Recommended values from Hair et al. (2010) and Malhotra (2010)		

Table 3: Fit indices for the measurement model

The χ^2 has a value of 2121.82, with 934 df and a p-value of 0.000. The p-value is significant ($0.00 < 0.05$), which indicates that the χ^2 test rejects the model. Thus, the χ^2 goodness of fit does not indicate that the sampling correlation matrix equals the fitted correlation matrix. It is important to mention that there are two mathematical properties which are problematic with the χ^2 statistics according to Hair et al. (2010). First, as the number of observations increases, the χ^2 value will increase. Second, the χ^2 statistic is likely to be greater when the number of observed variables increases. With a sample size of 586 respondents and 46 observed measures, we argue that the χ^2 test might be affected by the large sample size and the many observed variables. Based on these arguments one should evaluate other GOF statistics that correct for large samples and increased model complexity. The normed χ^2 is 2.27, and suggests an acceptable fit of the CFA model. Furthermore, the RMSEA value is 0.047, and a 90 percent confidence interval shows that the true value is between 0.044 and 0.049. The RMSEA value

of 0.047 indicates a close model fit. Moreover, the SRMR value of 0.076 is below the recommended value of 0.08, and the GFI is 0.77 and also under the recommended value. Moving from the absolute fit indices to the incremental fit indices, the NFI value is 0.96, which is considered acceptable. In addition, the CFI value is 0.98 which indicates a model that fits well. Lastly, we evaluate the parsimony fit indices. The AGFI estimate is 0.74 and below the recommended value of 0.9. In summary, one could say that the model scores below some of the recommended values, on the contrary others values extracted from the model indicate a good model fit. We argue that the model has a reasonably good fit and it is suitable to proceed to further examination of the model results.

5.4.2 Validity and Reliability

Convergent Validity - There are several ways available to estimate the relative amount of convergent validity among the items measured. We will evaluate the factor loadings, the average variance extracted (AVE) and the construct reliability (CR) estimate. Cronbach's alpha and CR are two alternative reliability estimates. We have chosen to discuss CR in addition to Cronbach's alpha under this paragraph, as CR is often used in conjunction with SEM models.

First, we assess the factor loadings. Hair et al. (2010, 709) assert that "*at a minimum, all factor loadings should be statistically significant*". In addition, the rule of thumb suggests that the standardized loadings should at a minimum be higher than 0.5, and ideally higher than 0.7 (Hair et al. 2010). One should start by assessing the statistical significance of each estimated parameter. This should be done through evaluation of the t-values for each estimated parameter. With the alpha level equal to five percent the threshold value is 1.96. T-values that exceed 1.96 are regarded as significant; hence one could reject the H_0 ($H_0: \lambda = 0$, $H_A: \lambda \neq 0$); "*non significant estimates suggest an item should be dropped*" (Hair et al. 2010, 708). The t-values of the measurement model range from 8.12 to 68.85, indicating that all the paths are significant. Next we discuss the standardized factor loadings that are displayed in figure 2 above. According to this figure, one can see that the TRIN construct has one factor loading below 0.5, and that the TRDR and FLOW1 constructs have two factor loadings below the minimum value of 0.5. According to Hair et al. (2010) these low factor loadings are

candidates for deletion, but we choose to keep them as these items are collected from tested scales. The rest of the factor loadings are above the recommended value of 0.5, amongst which several are above the ideal value of 0.7.

Second and third, we discuss the AVE and CR values for each construct, displayed in table 4. AVE is calculated “*as the mean variance extracted for the items loading on a construct, and is a summary indicator of convergence*” (Hair et al. 2010, 709). An AVE of 0.5 or more indicates a satisfactory convergent validity.

Average Variance Extracted and Construct Reliability											
	TRDR	TRIN	DNE	INE	HABIT	FOLO	EUI	FLOW1	FLOW2	ALI	CE
AVE	0.38	0.38	0.65	0.53	0.71	0.64	0.70	0.44	0.79	0.55	0.69
CR	0.70	0.70	0.85	0.77	0.88	0.87	0.90	0.82	0.88	0.83	0.93

Table 4: AVE and CR for the measurement model

All latent constructs except TRIN, TRDR and FLOW1, have an AVE above the recommended value of 0.5. These low values indicate that the measurement error is larger than the variance captured by the construct, and that the individual indicators, as well as the construct, are questionable. Next we are moving on to discussing the CR values. As a general guideline, a CR value of 0.7 or higher is considered good. Estimates between 0.6 and 0.7 may be considered acceptable if the estimates of the model validity are good (Malhotra 2010). The different constructs' CR values range from 0.70 to 0.93. All the constructs exceed 0.7, suggesting adequate reliability.

Discriminant validity – To investigate whether there is good evidence of discriminant validity we need to compare the AVE estimates for each factor with the squared interconstruct correlations associated with that factor. The rule states that the AVE for the construct should be higher than the square of the interconstruct correlations associated with that factor; “*the logic here is that the latent construct should explain more of the variance in its item measures than it shares with another construct*” (Hair 2010, 710). All the AVE estimates from table 4 are greater than the corresponding interconstruct squared correlations from appendix 21, except for the constructs TRDR and HABIT, TRDR and FLOW2, TRDR and ALI, and FLOW1 and FLOW2. Between these constructs the squared interconstruct correlation is greater than the AVE estimate. These results indicate

that there are some problems with the discriminant validity between some of the constructs.

5.5 Structural Equation Model

Finishing up the measurement model we move over to the structural model. Our focus shifts from emphasising the relationships between latent constructs and the observed variables, to focusing on the relationships between constructs. We will first evaluate the model fit, then compare the measurement and structural model and lastly test the hypothesised relationships. The empirical model is displayed in figure 3 on page 41.

5.5.1 Model Fit

The fit statistics for the structural model are presented in table 5 below.

Fit indices	Recommended value	Structural model
χ^2 statistic	-	2775.49
df	-	943
Normed χ^2	Below 2.0 is very good / Between 2.0 and 5.0 is acceptable	2.94
p-value	Above 0.5	0.000
Goodness of fit (GFI)	Above 0.9	0.83
Root mean error of approximation (RMSEA)	Below 0.05 indicates close fit / Between 0.05-0.07 indicates acceptable fit	0.058
Standardized root mean residual (SRMR)	Below 0.08	0.078
Normed fit index (NFI)	Above 0.9	0.94
Comparative fit index (CFI)	Above 0.9	0.96
Adjusted goodness of fit (AGFI)	Above 0.9	0.80
* Recommended values from Hair et al. (2010) and Malhotra (2010)		

Table 5: Fit statistics for the structural model

The χ^2 value is 2775.49, with 943 df, and a p-value of 0.00. The p-value is significant ($0.00 < 0.05$), which indicates that the χ^2 test rejects the model. Moreover, the normed χ^2 test is 2.9 suggesting an acceptable fit of the structural model. The RMSEA is 0.058, with a 90 percent confidence interval of 0.055 to 0.060, indicating an approximate model fit. Next, the GFI value is 0.83 and the AGFI value 0.8, both of which are under the recommended value of 0.9 or higher. Lastly, the SRMR value of 0.078 is below the recommended value of 0.08. Moving on from absolute fit indices to the incremental fit indices, we present the NFI and CFI values. The NFI is 0.94 and the CFI 0.96, in other words above the

recommended value associated with good model fit. Summing up one could say that the model shows an approximate good model fit, and we will therefore proceed to further analysis.

5.5.2 Comparing the measurement and structural model

When comparing the measurement model and the structural models in terms of the differences in fit statistics, one can see that the measurement model does to some degree have a better fit statistics. Therefore, we argue that the fit of the structural model is not significantly worse than the fit of the measurement model, and according to Malhotra (2010) this is evidence for the validity of the structural theory.

5.5.3 Testing hypothesised relationships

Table 6 illustrates the standardised parameter estimates and the corresponding t-values between the paths in our structural model.

Paths	Standardised parameter estimates	t-values	Significance
TRDR → ALI	0.48	5.05	Significant
TRIN → ALI	0.12	2.55	Not significant
DNE → ALI	-0.04	-0.66	Not significant
INE → ALI	-0.05	-0.89	Not significant
FOLO → ALI	0.19	3.32	Significant
EIU → ALI	0.28	4.50	Significant
HABIT → ALI	0.09	1.40	Not significant
FLOW1 → ALI	-0.06	1.18	Not significant
FLOW2 → ALI	-0.08	-1.13	Not significant
ALI → CE	0.39	7.90	Significant

Table 6: Parameter estimates and t-values for the SEM paths

The relationships between technology readiness drivers and always logged-in, and technology readiness inhibitor and always logged-in, are both represented with positive and significant parameter estimates. For technology readiness drivers the parameter estimate is significant at a 5 percent confidence level, as the t-value ($1.96 < 5.05$) falls above the critical value. The path is in addition to its significance in the expected direction, thus hypothesis H_{1a} is supported. Moreover, the path between technology readiness inhibitors and always logged-in is

significant ($1.96 < 2.55$), but the parameter estimate (0.12) is not presented in the expected negative direction. This result in no significant difference, thus H_{1b} is not supported. Next, we are evaluating the paths between direct network externalities and always logged-in, and indirect network externalities and always logged-in. From table 6 above one can see that both paths have negative parameter estimates (-0.04 and -0.05) and insignificant paths ($1.96 > -0.66$ and $1.96 > -0.89$), hence both H_{2a} and H_{2b} are not supported. Furthermore, we discuss the relationship between fear of losing out and always logged-in. The path has a parameter estimate of 0.19 with a corresponding t-value above the critical level ($1.96 > 3.32$), hence H_3 is supported. Next, the path between excessive Internet use and always logged-in has a parameter estimate of 0.28. Moreover, the corresponding t-value is above the critical limit ($1.96 < 4.50$), revealing support for H_4 . The path between habits and always logged-in has a parameter estimate of 0.09 and a corresponding t-value under the critical level ($1.96 > 1.40$), hence H_5 is not supported. Furthermore, we present the last two paths between the drivers and always logged-in. The path between flow1 and always logged-in has a parameter estimate of -0.06 and a t-value below the critical level ($1.96 > 1.18$), thus H_{6a} is not supported. In addition, the path between flow2 and always logged-in has a parameter estimate of -0.08 and a t-value below the critical level ($1.96 > -1.13$), so H_{6b} is not supported either.

Lastly, we are shifting focus from the drivers to the relationship between always logged-in and its consequence, customer engagement. From table 6 above one can see that the path has a parameter estimate of 0.39. Corresponding to this parameter estimate, the t-value is above the critical level, revealing a significant path. Thus, the study supports H_7 .

The size of the coefficients displayed in figure 3 below indicates that technology readiness driver is the variable with the largest impact on always logged-in, whereas the excessive Internet use variable has the second largest impact on always logged-in. Lastly, people's fear of losing out reveals the smallest impact on their behaviour of always being logged-in. Moreover, always logged-in has a substantial impact on customer engagement (0.39) and provides evidence of a relationship as well.

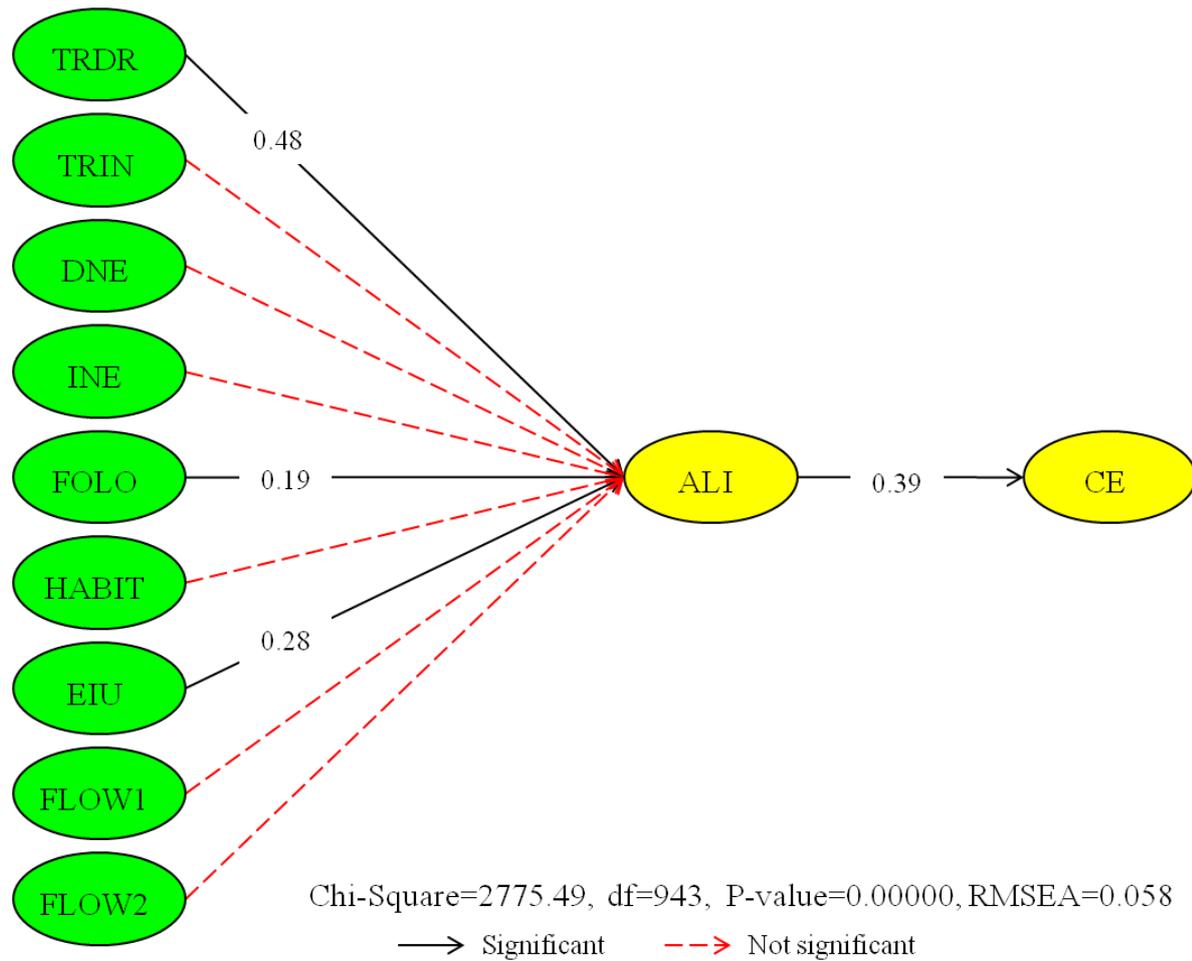


Figure 3: The Empirical model

5.6 Mediating effects

In the literature review, we predicted that all drivers were working as independent variables, having a direct effect on the dependent variable always logged-in. As five of the nine drivers showed insignificant paths from the independent to the dependent variables in the SEM analysis, we were curious to investigate further if these drivers could be working as mediators instead of direct drivers. Baron and Kenny assert that a “given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion” (1986, 1176). A mediator presents evidence to why or how an effect occurs. The drivers showing significance (TRDR, EIU and FOLO) were investigated as independent variables through the mediating model.

To test the linkages of the mediating model, we performed a series of regression models in SPSS that were estimated through three regression equations presented by Baron et al. (1986). We preferred to use SPSS since it is broadly used throughout the social sciences and one of the most popular programs used to conduct regression analysis (Preacher and Hayes 2004). In addition, SPSS is claimed to perform all tests mandatory to establish mediation in accordance with Baron and Kenny criteria. First, we regressed the dependent variable on the independent variable in a simple regression. Second, we regressed the mediator on the independent variable in a simple regression. And third, we regressed the dependent variable on both the independent variable and the mediator using multiple regressions. Baron et al. (1986) inform that for each regression equation the significant level must be evaluated, where all significant findings result in no mediating effect.

When evaluating the results from the regression analysis (appendix 24), the predicted mediators DNE, HABIT, FLOW1 and FLOW2 revealed no mediating relationship between the significant drivers (TRDR, EIU and FOLO) and always logged-in. Evaluating the fifth insignificant driver, INE, results show in regression analysis three that TRDR was significant ($0.00 < 0.05$), while INE was not ($0.181 > 0.05$), revealing no mediating effect. The two other drivers (EIU and FOLO) also showed no mediating effects. Based on the presented results, no mediating effects between the drivers and always logged-in were discovered.

5.7 Main findings Summarized

Summarizing the results in table 7 below, one can see that we have support for four hypotheses, and no support for six hypotheses.

Hypothesis	Results
H1a: Optimism and innovativeness will have a positive effect on consumers' behaviour of always being logged-in.	Significant
H1b: Discomfort and insecurity will have a negative effect on consumers' behaviour of always being logged-in.	Not significant
H2a: Direct network externalities will have a positive effect on consumers' behaviour of always being logged-in.	Not significant
H2b: Indirect network externalities will have a positive effect on consumers' behaviour of always being logged-in.	Not significant
H3: Fear of losing out will have a positive effect on consumers' behaviour of always being logged-in.	Significant
H4: Excessive Internet use will have a positive effect on consumers' behaviour of always being logged-in.	Significant
H5: Habits will have a positive effect on consumers' behaviour of always being logged-in.	Not significant
H6a: Experience of time distortion and telepresence will have a positive effect on consumers' behaviour of always being logged-in.	Not significant
H6b: Experience of skills and challenges will have a positive effect on consumers' behaviour of always being logged-in.	Not significant
H7: The need and willingness to always being logged-in will have a positive effect on customer engagement behaviour online.	Significant

Table 7: Summary of the hypotheses

6.0 Discussion

Looking at the history of life changing innovations like the development of the wheel, electricity, cars, steam engine and telephone, Internet is one of the newcomers on this list influencing people, business and society. We are still in the early face of the Internet evolution, and we can only imagine where it will take us. People's lives and Internet are becoming increasingly more intertwined, and an integral part of our lives. Also over the past decade, Internet has evolved into a powerful arena that has dramatically changed the way we operate our business. Moreover, society has grown to become more dependent on the Internet, as it contains one of the world's biggest informational sources as well as connecting people all over the world. With this evolution, negative aspects appear on a personal level, but also for businesses and society. Especially the security risks and privacy are comprehensive and unresolved issues. Even though the Internet's future looks bright, one should keep in mind that with its glory, negative aspects can evolve.

Although we know Internet is a big innovation and plays an important role, there exists little knowledge about what contributed to its "tipping point". The Internet's global impact, as well as its present and future relevance for individuals, businesses and society, created an interest and desire to understand and gain knowledge about the trend always logged-in. Specifically, this interest developed into an exploration of what the drivers behind the trend were, and whether the trend influenced a business related variable.

Instead of building our research on existing and established frameworks, we were forced to develop a new model based on several theories drawn from research within marketing, psychology and economics. Based on theories from these research fields, the study hypothesised that the presented functional and technological drivers; technology readiness and network externalities, where to have a positive and/or negative effect on customer's behaviour of always being logged-in. Subsequently, it was theorised that the personal drivers of the model; fear of losing out, excessive Internet use, habits and flow, where to have a positive effect on customer's behaviour of always being logged-in. Furthermore, always logged-in was hypothesised to affect the concept of customer engagement.

All together the findings show support and partly support for three out of the six drivers that we hypothesised to affect always logged-in. Technology readiness was found to partly affect the trend always logged-in, as only the dimension technology readiness driver (optimism and innovativeness) was significant, and not the dimension technology readiness inhibitor (insecurity and discomfort). Among the three drivers, technology readiness had the largest impact on consumers' behaviour of always being logged-in. Our research builds on Colby et al.'s (2003) findings, as they argue that technology readiness is strongly correlated with the use of Internet. Moreover, fear of losing out was found to have the second largest impact on consumers' behaviour of always being logged-in. This result is unique in the context of Internet, but if we look into Baumeister et al.'s (1995) research where they argue that most action made by humans are based on the need to belong, our findings are reasonable. Additionally, among the three significant drivers, excessive Internet use showed the least impact on always logged-in. This significant result supports Wang's (2001) argument that people have a hard time getting off the Internet, on which they have come to depend. Furthermore, our study support the reasoning that online customer engagement behaviour is affected by always logged-in. This finding is in accordance with Sashi's (2012) statement that companies believe Internet is essential for building customer engagement.

The remaining drivers, network externalities, habit and flow, revealed no significant impact on the trend always logged-in. Consequently, this made us question if these phenomena could be operating as mediating constructs between the significant drivers and always logged-in. The results from these analyses found no mediating effects. Even though the drivers were not significant and revealed no mediating effects, we speculate whether they should be ignored as potential drivers of always logged-in. However, this is too early to determine as there might be moderators influencing the relationships, resulting in no significance in this study. Several authors have stated that Internet is seen as a classical example of network externalities (Cooper et al. 2008; Wang et al. 2005), and thus it might still function as an important driver. Even though habit was not significant, a prior study carried out by LaRose et al. (2001) found habit to be a significant predictor of Internet usage. Lastly, Novak et al. (2000) argue that flow

is an important contributor when understanding online consumer behaviour. Based on these arguments, we propose further analysis to determine the relationship between these phenomena and the trend.

The findings of this study reveal that consumers' behaviour of always being logged-in is influenced by their technology readiness, excessive Internet use and fear of losing out. For an illiterate, a book is worthless. In the same sense, not possessing a certain level of technology readiness could result in a person not being able to utilise Internet technology. Thus, it reduces a person's likelihood of always being logged-in. The link between technology readiness and always logged-in indicates that technology readiness can be seen as a prerequisite for the functional ability of always being logged-in. Furthermore, excessive Internet use and fear of losing out operate more as drivers keeping the consumer logged-in at all times. The findings indicate that consumers have a fear of losing out of information and social interaction, and consequently people have a need and willingness to always be logged-in. In addition, our findings show that the use of Internet and its applications has for some people created a dependency on the Internet, resulting in an excessive Internet use. This excessive use has in turn led to consumers' always staying logged in. As a result, always logged-in can for some people give rise to inappropriate behaviour, typically excessive which could be disruptive for individuals in their daily lives. Further, the findings reveal that customer engagement is largely initiated by consumers' always logged-in behaviour. We assert that always logged-in is functioning as a foundation where consumers are taking part and involving themselves in business related activities, resulting in customer engagement.

It is difficult to predict where this trend is going, but it is exciting to see how the consumers' behaviour is changing with the advent of Internet.

6.1 Managerial implications

Our research has clear relevance for managers, since generating a deeper understanding of consumer trends is a valuable asset to companies to reduce risk when launching new products and services, and thereby drive sustainable business growth. Consequently, using trend research when creating new products and

services can reward companies with a first mover advantage. By ignoring the importance of trend research, managers may experience negative business impact and lower market share, as Nokia experienced.

Although managers should consider all seven trends, our research suggests that always logged-in is particularly relevant for managers wanting to provide relevant information and services to customers at anytime and from anywhere. When launching a new product or service, managers should in addition to branch shops offer their service or product online, making it more available and useful at anytime and from anywhere. According to SSB (2012c), 73 percent of the Norwegian population bought a service or product online, indicating a huge business potential. Furthermore, the boundary between Internet and the real world is becoming indistinguishable, making Internet presence top priority. If managers see a business potential for their product or service online, it is vital to tailor the right web strategy so they can take advantage of the trend in a professional way.

For a consumer to become and sustain at an always logged-in state, we recommend managers to base their strategies on our suggested drivers, technology readiness, fear of losing out and excessive Internet use. Additionally, to benefit from the trend always logged-in, managers should consider implementing strategies leading to customer engagement behaviour.

The two drivers of TR, optimism and innovativeness, are found to affect consumers' always logged-in presence. Managers should investigate their customers' technology readiness levels as these levels can work as a barrier for Internet adoption and customers' online presence. The different TR levels require that managers design the user interface in accordance with consumers' technology capacities and skills. A lower level of TR requires special attention in designing user friendly interfaces and offering help and guidance on their webpage, since it is important for consumer's to feel in control of the service technologies.

If managers wants their customers' to stay always logged-in, at the same time as the customers are experiencing an inherent fear of losing out, they should make sure their Internet page is updated with information, new products and services, in addition to featuring social contact at all times. To increase the consumers' fear

of losing out managers should stress the importance of new, updated, relevant, useful and interesting information on their Internet page. Moreover, managers should make sure to launch new, relevant and updated services or products on a regular basis, maintaining the customers' interest. We know from literature that humans need interpersonal contact and a sense of belonging, and by taking advantage of the Internet the consumer can communicate and socialise with others. Managers can implement a communication feature on their Internet page so customers can communicate with each other, and the company with the customer. This can be done by implementing a chat and instant message functions.

Managers should be aware that some consumers hold an excessive Internet use behaviour. Web pages that feature Internet applications which generate excessive Internet use and an over involvement (chat rooms, gambling etc.) should implement actions that limit, moderate and control the harmful behaviour. By implementing control functions, the company will gain reputation as a responsible business actor.

Managers should acknowledge the importance of customer engagement since the Internet is considered an innovative and fast growing platform for co-creating values between consumer and companies, and consumer to consumer relationships. There are different tools that managers can implement to increase customer engagement towards their company online. The first action could be to implement recommendation and review features on their Internet page. Second, the company could benefit from a blog function online. At last, being present in social media activities, like having a company Facebook page, creating YouTube clips, and being present on LinkedIn etc., might lead to customer engagement. By stressing the importance of customer engagement and implementing actions, managers will be rewarded with enhanced customer satisfaction, loyalty and customers becoming "fans" (Sashi 2012).

7.0 Limitations and future research

The next paragraph discusses the limitations connected to our research on the trend always logged-in. Furthermore, as this research is in its initial phase, future research that explores new aspects of the trend is needed. The second section suggests supplementary research topics that broaden and explain the trend further.

7.1 Limitations

As this empirical study is a pioneering effort in trying to identify the causes and consequences of always logged-in, it holds several limitations. First of all, the results of this study are limited to Norway as the data collected were based on respondents from the Norwegian population only. Second, investigation of the trend always logged-in is a new research topic within empirical research. We were not able to build our study on prior research within the topic, and consequently there may be relevant causes and consequences of the trend that we were not able to look into in this study. It is natural to assume that always logged-in is influenced by other drivers than the ones discussed in this thesis, therefore future research should look into this.

Third, in the EFA we experienced problems with the technology readiness construct where the items did not form the expected factor structure that Parasurman (2000) found. Others have experienced similar problems with the technology readiness dimensions (Liljander et al. 2006). Our solution to these problems was to form a two-factor structure consisting of the items corresponding to the driver and the inhibitor groupings of the technology readiness dimensions. Although this grouping is based on theory from Parasuraman (2000), we have not found similar procedures in any other research to indicate whether this is a correct way of dividing the items. Fourth, another limitation within this study is the low AVE values for the latent constructs, TRIN, TRDN and FLOW1. The low value indicates that there are some problems with the convergent validity. Fifth, we experienced some limitations regarding the discriminant validity between some of the constructs. The problems with the discriminant validity were found between the constructs TRDR and HABIT, TRDR and FLOW2, TRDR and ALI, and FLOW1 and FLOW2. These problems indicate that the constructs are not truly distinct from one another.

All in all, we consider our work important, as we have provided deeper understanding of the trend always logged-in. However, there are still new research areas within this topic that need further investigation to get an improved understanding of the trend. These are discussed in the next section.

7.2 Future research

The purpose of this study is to raise awareness and create an improved understanding of the trend always logged-in. However, as this research has only investigated some part of always logged-in, we encourage researchers to peruse the objective of getting an even deeper understanding of this topic.

As we just found support for some constructs affecting the trend always logged-in, future research should investigate if there are other drivers and inhibitors influencing the trend. In addition, future research should investigate if always logged-in is influencing other variables besides customer engagement. Relevant topics here could be variables found in social science, like well-being or employee satisfaction.

Moreover, one could also extend the model and see if customer engagement is influencing other relevant variables. Verhoef et al. (2010) propose that customer engagement is linked to firm value, and based on their research one could extend the always logged-in model with firm value as an outcome variable of customer engagement.

As this research did not separate between private and professional life, further research should investigate whether the trend always logged-in shows any significant differences between these life situations. Yet another research approach could be to investigate whether the trend shows any significant differences between age groups in the following segments: “young”, “free and independent”, “chaos in my life” and “life back”. Overall, the discussed approaches will explain the depth and the content of the trend in another perspective.

8.0 References

- Aarts, Verplanken and van Knippenberg. 1998. "Predicting Behaviour from Actions in the Past: Repeated Decision Making or a Matter of Habit?" *Journal of Applied Social Psychology* 28 (15): 1355-1374.
- Aftenposten. 2012. "Milliardtap for Nokia". Accessed January 10, 2012. <http://www.aftenposten.no/okonomi/Milliardtap-for-Nokia-6749921.html#.TzPGlxryjQ>
- Andreassen, Tor W., Giulia Calabretta and Line L. Olsen. 2012. "Trend Spotting: Nøkkelen til Innovasjonssuksess". *MAGMA* 0312.
- Andreassen, Tor W., Line Lervik Olsen and Giulia Calabretta. 2010. "Elektroniske Offentlige Tjenester". *MAGMA* 6.
- Asvanund, Atip, Karen Clay, Ramayya Krishnan and Michael D. Smith. 2004. "An Empirical Analysis of Network Externalities in Peer-to-peer Music-Sharing Networks". *Information Systems Research* 15 (2): 155-174.
- Baron, Reuben M. and David A. Kenny. 1986. "The Moderating-mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical considerations". *Journal of Personality and Social Psychology* 51 (6): 1173-1182.
- Baumeister Roy F. and Mark R. Leary. 1995. "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation". *Psychological Bulletin* 117 (3): 497-529.
- Bossert, Walter, Conchita D'Ambrosio and Vito Peragine. 2007. "Deprivation and Social Exclusion". *Economica* 74: 77-803.
- Brodie, Roderick J., Linda D. Hollebeek, Biljana Juric and Ana Ilic. 2011. "Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research". *Journal of Service Research* 14 (3): 252-271.
- Burns, Alvin C. and Bush, Ronald F. 2009. *Marketing Research*. Upper Saddle River: Pearson.
- Calder, Bobby J., Edward C. Malthouse and Ute Schaedel. 2009. "An Experimental Study of the Relationship between Online Engagement and Advertising Effectiveness". *Journal of Interactive Marketing* 23: 321-331.
- Chen, Hsiang; Rolf T. Wigand and Michael Nilan. 2000. "Exploring Web Users' Optimal Flow Experiences". *Information Technology* 13 (4): 263-281.
- Chou, Chien, Linda Condrón and John C. Belland. 2005. "A Review of the Research on Internet Addiction". *Educational Psychology Review* 17 (4): 363-388.

-
- Cisco. 2011a. "The Cisco Connected World Technology Report". Accessed July 30, 2012. <http://www.cisco.com/en/US/netsol/ns1120/index.html>
- Cisco. 2011b. "The Cisco Connected World Technology Report". Accessed August 11, 2012. <http://www.cisco.com/en/US/solutions/ns341/ns525/ns537/ns705/ns1120/CCWTR-Chapter1-Report.pdf>
- Colby, Charles L. 2009. "The National Technology Readiness Survey: 10 Years of Trends". PowerPoint slides. Retrieved from Techno-ready Marketing web site. Accessed August 11, 2012. <http://www.technoreadymarketing.com/presentations.php>
- Colby, Charles L. and A. Parasuraman. 2003. "Technology Still Matters". *Marketing Management* 12: 28-33.
- Cooper, Robert G. and Elko Kleinschmidt. 1987. "Success Factors in Product Innovation". *Industrial Marketing Management* 16: 215-223.
- Cooper, Russel and Gary Madden. 2008. "Internet Network Externalities". *International Journal of Management and Network Economics* 1 (1): 21-43.
- Csikszentmihalyi, Mihaly. 1975. *Beyond Boredom and Anxiety*. Jossey-Bass. San Francisco, CA.
- Csikszentmihalyi, Mihaly. 1990. *Flow: The Psychology of Optimal Experience*. New York: Harper and Row.
- Dagens IT. 2012. "Nokias Smartdel Nesten Halvert". Accessed January 10, 2012. <http://www.dagensit.no/article2317951.ece>
- Easterby-Smith, Mark, Richard Thorpe and Paul R. Jackson. 2008. *Management Research*. Third edition. Thousand Oaks: Sage.
- Edgett, Scott, David Shipley and Giles Forbes. 1992. "Japanese and British Companies Compared: Contributing Factors to Success and Failure in NPD". *Journal of Product Innovation Management* 9: 3-10.
- Ernst, Holger. 2002. "Success Factors of New Product Development: a Review of the Empirical Literature". *International Journal of Management Reviews* 4 (1): 1-40.
- Faber, Ronald J. and Thomas C. O'Guinn. 1989. "Classifying Compulsive Consumers: Advance in the Development of a Diagnostic Tool". *Advance in Consumer Research* 16: 738-744.
- Faber, Ronald J. and Thomas C. O'Guinn. 1992. "A clinical Screener for Compulsive Buying". *Journal of Consumer Research* 19 (3): 459-469.
- Faber, Ronald J., Thomas C. O'Guinn and Raymond Krych. 1987. "Compulsive Consumption". *Advances in Consumer Research* 14: 132-135.

- Fenn, Jackie. 2011. "Trends that Matter: Top Trends and their Business Impact". *Gartner*.
- Finney, S. J., C. A. DiStefano. 2006. "Non-normal and Categorical Data in Structural Equation Modeling". In *Structural Equation Modeling: A Second Course*, edited by Gregory R. Hancock and Ralph O. Mueller, 269-314. Connecticut: Information Age Publishing.
- Freud Sigmund. 1930. "Civilization and its Discontents". *London: Hogarth Press*
- Gartner. 2011. "Gartner Says Sales of Mobile Devices in Second Quarter of 2011 Grew 16.5 Percent Year-on-year; Smartphone Sales Grew 74 percent". Accessed January 10, 2011. <http://www.gartner.com/it/page.jsp?id=1764714>
- Ghuneim, Mark. 2006. "Terms of Engagement: Measuring the Active Consumer". Accessed July 24, 2012. <http://wiredset.com/2008/03/26/terms-of-engagement-measuring-the-active-consumer/>
- Gladwell, Malcom. 2010. *The Tipping Point: How Little Things Can Make a Big Difference*. Abacus.
- Globalis. 2012. "Den arabiske våren". Accessed August 08, 2012. <http://www.globalis.no/Konflikter/Den-arabiske-vaaren>
- Greenfield, David N. 1999. "Psychological Characteristics of Compulsive Internet Use: A Preliminary Analysis". *CyberPsychology and Behavior* 2 (5): 457-463.
- Griffiths, Mark D. 1998. "Internet Addiction: Does it Really Exist". *Psychology and the Internet: Intrapersonal, Interpersonal, and Transpersonal Implications*.
- Griffiths, Mark D. 2000. "Does Internet and Computer Addiction Exist? Some Case Study Evidence". *Cyberpsychology and behaviour* 3 (2): 211-218.
- Grohol, John M. 1999. "Too Much Time Online: Internet Addiction or Healthy Social Interaction?" *CyberPsychology and Behaviour* 2 (5): 395-401.
- Hair Jr. Joseph.F., William C. Black, Barry J. Babin and Rolph E. Anderson. 2010. *Multivariate Data Analysis – A Global Perspective*. 7th Edition, Upper Saddle River, New Jersey. Pearson Education, Inc.
- Hoffman, Donna L. and Thomas P. Novak. 1996. "A New Marketing Paradigm for Electronic Commerce". *The Information Society: An International Journal* 13 (1): 43-54.
- Hull, Carl L. 1943. *Principle of Behaviour: An Introduction to Behaviour Theory*. New York: Appleton-Century.

-
- Janssens, Wim, Katrien Wijnen, Patrick De Pelsmacker and Patrick Van Kenhove. 2008. *Marketing Research with SPSS*. Pearson Education Limited.
- Kandell, Jonathan J. 1998. "Internet Addiction on Campus: the Vulnerability of College Students". *CyberPsychology and Behavior* 1 (1): 11-17.
- Kaplan, M. Andreas and Michael Haenlein. 2010. "User of the World, Unite! The Challenges and Opportunities of Social Media." *Business Horizons* 53: 59-68.
- Katz L., Michal and Carl Shapiro. 1985. "Network Externalities, Competition and Compatibility". *The American Economic Review* 75 (3): 424-440.
- Kauffman, J. Robert, James McAndrews and Yu-Ming Wang. 2000. "Opening the Black Box of Network Externalities in Network Adoption". *Information System Research* 11 (1): 61-82.
- LaRose, Robert, Dana Mastro and Matteh S. Eastin. 2001. "Understanding Internet Usage: a Social-cognitive Approach to Uses and Gratification". *Social Science Computer Review* 19 (4): 395-413.
- Leary, M. R., Kelly, K. M., Cottrell, C. A. & Schreindorfer, L. S. 2006. "Individual Differences in the Need to Belong: Mapping the Nomological Network". *Unpublished manuscript, Wake Forest University*.
- Liebowitz, S.J. and Stephen E. Margolis. 1995. "Are Network Externalities a New Source of Market Failure?" *Research in Law and Economics* 1-22.
- Liljander, Veronica, Filippa Gillberg, Johanna Gummerus, and Allard van Riel. 2006. "Technology Readiness and the Evaluation and Adoption of Self-Service Technologies". *Journal of Retailing and Consumer Services* 13: 177 – 191.
- Lin, Chien-Hsin; Hsin-Yu Shih and Peter J. Sher. 2007. "Integrating Technology Readiness Into Technology Acceptance: The TRAM Model". *Psychology and Marketing* 24 (7): 641-657.
- Lloyd P. Jones. 1991. *Taste Today: The Role of Appreciation in Consumerism and Design*. Oxford: Pergamon Press
- Malhotra, Naresh K. 2010. *Marketing Research: an Applied Orientation*. New Jersey: Pearson.
- Marseille, Justien and Ilan Roos. 2005 "Trend Analysis: an Approach for Companies that Listen". *Design Management Review* 16 (1): 68-72.
- Maslow, Abraham H. 1968. "Toward a Psychology of Being". *New York: Van Nostrand*.
- Mellor, David, Mark Stokes, Lucy Firth, Yoko Hayashi and Robert Cummins. 2008. "Need for Belonging, Relationship Satisfaction, Loneliness, and Life Satisfaction". *Elsevier*

-
- Miller, Christopher M., Shelby H. McIntyre and Murali K. Mantrala. 1993. "Toward Formalizing Fashion Industry". *Journal of Marketing Research*. 30 (2): 142-157
- Molina-Castillo, Francisco-Jose, Josè-Luis Munuera-Alemàn, and Roger J. Calantone. 2011. "Product Quality and New Product Performance: The Role of Network Externalities and Switching Costs". *Journal of Product Innovation Management* 28 (6): 915–929.
- Mollen, Anne and Hugh Wilson. 2010. "Engagement, Telepresence and Interactivity in Online Consumer Experience: Reconciling Scholastic and Managerial Perspectives". *Journal of Business Research* 63 (9-10): 919–925.
- Neff, Jack. 2007. "OMD Proves the Power of Engagement". Fipp.com. Accessed January 12, 2012.
<http://www.fipp.com/News.aspx?PageIndex=2002&ItemId=13735>
- Norstat. 2012a. "Telephone Interviews (CATI)". Accessed May 24, 2012.
http://www.norstatgroup.com/en/what_we_offer/products/telephone_interviews/
- Norstat. 2012b. "Web - Fremtidens Metode". Accessed June 13, 2012.
http://www.norstat.no/no/hva_vi_tilbyr/produkter/web/
- Novak, Thomas P., Donna L. Hoffmann and Yiu-Fai Yung. 2000. "Measuring the Customer Experience in Online Environments: A structural Modeling Approach". *Marketing Science* 19 (1): 22-42.
- Oren S., Shmuel and Stephen A. Smith. 1981. "Mass and Tariff Structure in Electronic Communications Markets". *The Bell Journal of Economics* 12 (2): 467-487.
- Ouellette, Judith A. and Wendy Wood. 1998. "Habit and Intention in Everyday Life: The Multiple Processes by Which Past Behaviour Predicts Future Behaviour". *Psychological Bulletin* 124 (1): 54-74
- Page, Albert L. 1993. "Assessing New Product Development Practices and Performance: Establishing Crucial Norms". *Journal of Product Innovation Management* 10: 273-290.
- Page, William H. and John E. Lopatka. 2000. "Network Externalities". In *The History and Methodology of Law and Economics*, edited by B. Bouckaert and G. De Geest, 952-980. Encyclopedia of Law and Economics 1.
- Parasuraman, A. 2000. "Technology Readiness Index (TRI): A Multiple-item Scale to Measure Readiness to Embrace New Technologies". *Journal of Service Research* 2: 307–320.
- Parasuraman, A., and C. L. Colby. 2001. *Techno-ready Marketing: How and Why your Customers Adopt Technology*. New York: Free Press
-

-
- Penn, J. Mark and E. Kinney Zalesne. 2007. *Microtrends: the Small Forces Behind Tomorrow`s Big Changes*. New York: Twelve Books.
- Preacher, Kristopher J. and Andrew F. Hayes. 2004. "SPSS and SAS Procedures for Estimating Indirect Effects in Simple Mediation Models". *Behavior Research Methods, Instruments, & Computers* 36 (4): 717-731.
- Robson, Colin. 2002. *Real World Research, second edition*. Blackwell Publishing.
- Rohlf, Jeffrey. 1974. "A Theory of Interdependent Demand for a Communications Service". *The Bell Journal of Economics and Management Science* 5 (1): 16-37.
- Sashi, C.M. 2012. "Customer Engagement, Buyer-seller Relationships, and Social Media". *Management Decision* 50 (2): 253-272
- Schneider, Joan and Julie Hall. 2011. "Why Most Product Launches Fail". *Harvard Business Review* 89 (4): 21-23.
- Sedley, Richard. 2008. "Six Theses on Digital Customer Engagement in a Troubled Economy". Accessed January 12, 2012. <http://www.richard-sedley.net/2008/02/six-theses-on-digital-customer-engagement-in-a-troubled-economy/>
- Srinivasan, Raji, Gary L. Lilien and Arvind Rangaswamy. 2004. "First in, First out? The Effects of Network Externalities on Pioneer Survival". *The Journal of Marketing* 68 (1): 41-58.
- SSB. 2012a. "Informasjonssamfunnet". Accessed May 22, 2012. <http://www.ssb.no/emner/10/03/ikt/>
- SSB. 2012b. "Statistikkbanken". Accessed May 22, 2012. http://statbank.ssb.no/statistikkbanken/Default_FR.asp?PXSid=0&nvl=true&PLanguage=0&tilside=selectvarval/define.asp&Tabellid=04519
- SSB. 2012c. "Tre av Fem Deltar i Sosiale Nettsamfunn". Accessed January 9, 2012. <http://www.ssb.no/emner/10/03/ikthus/>
- Store Norske Leksikon. 2011. "Informasjons- og Kommunikasjonsteknologi". Accessed May 2, 2011. http://www.snl.no/informasjons-_og_kommunikasjonsteknologi
- Tabachnick, Barbara G. and Linda S. Fidell. 1996. *Using Multivariate Statistics*. New York: HarperCollins. 3rd edition.
- TNS Gallup. 2011. "TNS Gallup InterBuss Q4 2011: Norges Største Undersøkelse om Internettvaner". Accessed May 02, 2012. BI Library Database
- Tolman, Edward C. 1932. *Purposive Behaviour in Animals and Men*. New York: Appleton-Century.
-

-
- Valence, Gilles, Alain d'Astous and Louis Fortier. 1988. "Compulsive Buying: Concept and Measurement". *Journal of Consumer Policy* 11 (4): 419-433.
- Van Doorn, Jenny, Katerine N. Lemon, Vikas Mittal, Stephan Nass, Doreén Pick, Peter Pirner and Peter C. Verhoef. 2010. "Customer Engagement Behaviour: Theoretical Foundations and Research Directions". *Journal of Service Research* 13 (3): 253-266.
- Verhoef, Peter C., Werner J. Reinartz and Manfred Krafft. 2010. "Customer Engagement as a New Perspective in Customer Management". *Journal of Service Research* 13 (3): 247-252.
- Verplanken, Bas and Henk Aarts. 1999. "Habit, Attitude, and Planned Behaviour: is Habit an Empty Construct or an Interesting Case of Goal-directed Automaticity?" *European Review of Social Psychology* 10 (1): 101-134.
- Verplanken, Bas and Sheina Orbell. 2003. "Reflections on Past Behaviour: A self-Report Index of Habit Strength". *Journal of Applied Social Psychology* 33 (6): 1313-1330.
- Victorino, Liana, Ekaterina Karniouchina and Rohit Verma. 2009. "Exploring the Use of the Abbreviated Technology Readiness Index for Hotel Customer Segmentation". *Cornell Hospitality Quarterly* 50 (3): 342-359.
- Voyles, Bennett. 2007. "Beyond Loyalty: Meeting the Challenge of Customer Engagement". *The Economist*. Accessed January 12, 2012. <http://www.adobe.com/engagement/pdfs/partI.pdf>
- Wang, Chih-Chien; Hsu, YaHui; and Fang, Wenchang. 2005. "Acceptance of Technology with Network Externalities: An Empirical Study of Internet Instant Messaging Services". *Journal of Information Technology Theory and Application* 6 (4): 15-28.
- Wang, Wei. 2001. "Internet Dependency and Psychosocial Maturity Among College Students". *International Journal of Human-Computer Studies* 55 (6): 919-938.
- Young, Kimberly S. 1998. "Internet Addiction: The Emergence of a new Clinical Disorder". *Cyberpsychology and Behavior* 1 (3): 237:244.
- Zeithaml, Valarie A., A. Parasuraman and Arvind Malhotra. 2002. "Service Quality Delivery Through Websites: A Critical Review of Extant Knowledge". *Journal of the Academy of Marketing Science* 30: 362-375.

9.0 Appendix

Appendix 1: Observed Measures

Nr	Label in questionnaire	Label in SPSS and Lisrel	Question	Construct
1	s1.0		Do you use the Internet?	Screening variable
2	s2.1	s1	Usually, I can figure out new technological products and services without help from others	Technology readiness - Drivers
3	s2.2	s2	In general, I am the first among my friends to acquire new technology	Technology readiness - Drivers
4	s2.3	s3	I often find new technology too complicated to be useful	Technology readiness - Inhibitors
5	s2.4	s4	When I receive technical support from a provider of a technological product or service, I sometimes feel that I am being taken advantage of	Technology readiness - Inhibitors
6	s2.5	s5	I like the idea of doing business online, because it does not limit me to regular business hours	Technology readiness - Drivers
7	s2.6	s6	Technology gives me more control over my daily life	Technology readiness - Drivers
8	s2.7	s7	Technology makes me more efficient in my work life	Technology readiness - Drivers
9	s2.8	s8	I do not consider it safe giving out bank details online	Technology readiness - Inhibitors
10	s2.9	s9	I consider it unsafe doing business with a company which can only be reached online	Technology readiness - Inhibitors
11	s2.10	s10	If I provide information online, I can never be sure that it gets to the right place	Technology readiness - Inhibitors
12	s3.1	s11	As more people connect to the Internet the more valuable the Internet is to me	Network externalities - Direkte
13	s3.2	s12	As more people connect to the Internet the more effectively I can update others on my	Network externalities - Direkte
14	s3.3	s13	As more people connect to the Internet the more effectively I can be updated on others activities	Network externalities - Direkte
15	s3.4	s14	As more people connect to the Internet the more people I have the possibility to stay in touch with	Network externalities - Direkte
16	s3.5	s15	As more people I know communicate on the Internet, the more I am willing to do the same	Network externalities - Direkte
17	s4.1	s16	Being online has become easier because of the increased availability of free wifi	Network externalities- Indirekte
18	s4.2	s17	Being online has become easier because of the increased offering of mobile devices	Network externalities- Indirekte
19	s4.3	s18	Being online has become easier because of the increased availability of free wifi the increased offering of mobile devices the lower Internet subscription prices	Network externalities- Indirekte
20	s5.1	s19	If I am not online, I am concerned that I will miss out on information relevant to me	Fear of losing out
21	s5.2	s20	If I am not online, I am concerned that I will miss out on important social activities	Fear of losing out
22	s5.3	s21	If I am not online, I am concerned that I will miss not belong to my personal online community	Fear of losing out
23	s5.4	s22	If I am not online, I am concerned that I will miss be perceived as different by people that matters to me	Fear of losing out
24	s6.1	s23	Being online is something I do frequently	Habits
25	s6.2	s24	Being online is something I do automatically, without thinking about it	Habits
26	s6.3	s25	Being online is something that require an effort for me not to do	Habits
27	s6.4	s26	Being online is something that belongs to my daily routine	Habits
28	s6.5	s27	Being online is something I catch myself doing	Habits
29	s6.6	s28	Being online is something I do when I am bored	Habits
30	s6.7	s29	Being online is something I do to kill time	Habits
31	s7.1	s30	When the computer, mobile phone or similar is nearby, I cannot help going online	Excessive Internet use
32	s7.2	s31	When the computer, mobile phone or similar is nearby, I have an irresistible urge to go online	Excessive Internet use
33	s7.3	s32	Sometimes I feel a strong urge to go online	Excessive Internet use
34	s7.4	s33	It can be difficult logging off the Internet	Excessive Internet use
35	s8.1	s34	When I am online, I feel that time flies	Flow -1
36	s8.2	s35	When I am online, I tend to lose track of time	Flow -1
37	s8.3	s36	When I am online, I often forget where I am	Flow -1
38	s8.4	s37	I forget my immediate surroundings when I am online	Flow -1
39	s8.5	s38	Using the Internet inspires me	Flow -1
40	s8.6	s39	Using the Internet challenges my skills	Flow -1
41	s8.7	s40	I know how to find what I am looking for on the Internet	Flow -2
42	s8.8	s41	I consider myself good at searching for information online	Flow -2
43	s9.1	s42	It is important to always have access to the Internet	Always logged-in
44	s9.2	s43	Overall, I am always connect to the Internet	Always logged-in
45	s9.3	s44	Overall, I have a need to access the Internet at anytime, anywhere	Always logged-in
46	s9.4	s45	Overall, I think the quality of my social life would be significantly reduced without access to the Internet	Always logged-in
47	s9.5	s46	Overall, I think the quality of my professional life would be significantly reduced without access to the Internet	Always logged-in
48	s9.6	s47	I am always logged on to the Internet, because I need access to information	Always logged-in
49	s9.7	s48	I feel free when I do not have access to the Internet	Always logged-in
50	s9.8	s49	I feel restless when I do not have access to the Internet	Always logged-in
51	s9.9	s50	I think it is comfortable not have access to the Internet	Always logged-in
52	s9.10	s51	Not having access to the Internet makes me feel disconnected from friends	Always logged-in
53	s9.11	s52	Not having access to the Internet makes me feel disconnected from work	Always logged-in
54	s10.1	s53	Please indicate to what degree you would be part of the company's online discussion group	Customer engagement
55	s10.2	s54	Please indicate to what degree you would like to provide comments about the company online	Customer engagement
56	s10.3	s55	Please indicate to what degree you would like to provide comments about the company's products and services in an online discussion group	Customer engagement
57	s10.4	s56	Please indicate to what degree you would post videos online about your use of the company's products and services	Customer engagement
58	s10.5	s57	Please indicate to what degree you would interact with other customers in an online discussion group	Customer engagement
59	s10.6	s58	Please indicate to what degree you would value other customers comments about the company's products and services	Customer engagement

Appendix 2: Questions and scales

Nr	Label in Questionnaire	Label in SPSS	Use of likert scale
1	s1.1	-	1 = Yes, 2 = No
2-11	s2.1 - 2.10	s1 - s10	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
12-16	s3.1 - 3.5	s11 - s15	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
17-19	s4.1 - 4.3	s16 - s18	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
20-23	s5.1 - 5.4	s19 - s22	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
24-30	s6.1 - 6.7	s23 - s29	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
31-34	s7.1 - 7.4	s30 - s33	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
35-42	s8.1 - 8.8	s34 - s41	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
43-53	s9.1 - 9.11	s42 - s52	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
54-59	s10.1 - 10.6	s53 - s58	1 = Strongly disagree, 7 = Strongly agree, 8 = I dont know
60	s11	-	1 = Male, 2 = Female
61	s12	-	1 = 15-29, 2 = 30-44, 3 = 45-59, 4 = 60-75, 5 = 76+
62	s13	-	Open
63	s14#1	-	0 = Not, 1 = Computer
64	s14#2	-	0 = Not, 1 = Laptop
65	s14#3	-	0 = Not, 1 = Mobile Phone
66	s14#4	-	0 = Not, 1 = Tablet
67	s14#5	-	0 = Not, 1 = Others, specify
68	s14_open	-	Open
69	s15	-	1 = Less than high school, 2 = High school, 3 = Bachelor or less, 4 = Master or higher
70	s16	-	Open
71	s17	-	1 = Never, 2 = Up to 20% of my time, 3 = Up to 40% of my time, 4 = Up to 60% of my time, 5 = Up to 80% of my time, 6 = Up to 100% of my time

Appendix 3: Survey (original questionnaire in Norwegian)

NORSTAT 2012 - Telefonintervju

Målgruppe: 16-67 år

Åpningsinformasjon til respondenten:

Vi gjennomfører en landsomfattende forbrukerundersøkelse, og lurer på om du har mulighet til å svare på noen spørsmål. Utfylling av spørreskjemaet vil ta ca. 10-15 minutter. Alle svar er anonyme og vil kun bli brukt i akademisk sammenheng.

Spørsmålene omhandler ditt bruk og forhold til Internett. Med Internett bruk refereres det til bruk av: mail, nettbank, nyheter, sosiale medier, søke etter informasjon via Internett etc.

For de fleste alternativer bruker vi skalaen 1 til 7, der 1 er lavest og 7 er høyest.

Åpningsspørsmål

1. Bruker du Internett?

Hvis nei, takk for din interesse. Ha en god dag/kveld.

2. Teknologisk Modenhet

Angi i hvilken grad du er enig / uenig i følgende utsagn: 1 = Helt uenig, 7 = Helt enig (8 = Jeg vet ikke)

- 2.1 Vanligvis forstår jeg nye teknologiske produkter og tjenester uten hjelp fra andre
- 2.2 Stort sett er jeg blant de første av mine venner til å benytte meg av ny teknologi
- 2.3 Jeg synes at ny teknologi ofte er for komplisert til å være nyttig
- 2.4 Når jeg får teknisk hjelp fra en leverandør av et teknologisk produkt føler jeg av og til at jeg blir utnyttet
- 2.5 Jeg liker å bruke Internett til jobbrelevante oppgaver fordi det ikke begrenser meg til normal arbeidstid
- 2.6 Teknologi gir meg mer kontroll over mitt daglige liv
- 2.7 Teknologi gjør meg mer effektiv i jobben min
- 2.8 Jeg anser det som utrygt å oppgi bankkortinformasjon over Internett
- 2.9 Jeg anser det som utrygt å gjøre forretninger med en bedrift som bare kan nås over Internett
- 2.10 Om jeg sender informasjon over Internett kan jeg aldri være sikker på at den havner på rett sted

3. Nettverkseffekt - Direkte

Angi i hvilken grad du er enig / uenig i følgende utsagn: 1 = *Helt uenig*, 7 = *Helt enig* (8 = *Jeg vet ikke*)

Jo flere som er på Internett...

- 3.1 ...jo mer verdifullt er Internett for meg
- 3.2 ...jo mer effektivt kan jeg oppdatere andre om mine aktiviteter
- 3.3 ...jo mer effektivt kan jeg bli oppdatert om andres aktiviteter
- 3.4 ...jo flere gir det meg muligheten til å holde kontakt med
- 3.5 Jo flere jeg kjenner som kommuniserer over Internett, jo mer villig er jeg til å gjøre det samme

4. Nettverkseffekt - Indirekte

Angi i hvilken grad du er enig / uenig i følgende utsagn: 1 = *Helt uenig*, 7 = *Helt enig* (8 = *Jeg vet ikke*)

Å være på Internett har blitt enklere på grunn av...

- 4.1 den økende tilgjengeligheten av gratis wifi (f.eks: tilgang til gratis Internett på offentlige steder som flyplasser, kafeer etc.)
- 4.2 det økende tilbudet av mobile enheter (f.eks: nettbrett, smarttelefoner, etc.)
- 4.3 ... lavere priser for Internett-tilkobling

5. Behovet for å tilhøre

Angi i hvilken grad du er enig / uenig i følgende utsagn: 1 = *Helt uenig*, 7 = *Helt enig* (8 = *Jeg vet ikke*)

Hvis jeg ikke er på Internett er jeg bekymret for at jeg...

- 5.1 ... vil gå glipp av informasjon som er relevant for meg
- 5.2 ... vil gå glipp av viktige sosiale aktiviteter
- 5.3 ... ikke er en del av mitt Internetbasert sosiale nettverk (f.eks: Facebook, LinkedIn, Twitter osv.)
- 5.4 ... vil bli oppfattet som annerledes av folk som betyr noe for meg

6. Internettbruk – Vaner

Angi i hvilken grad du er enig / uenig i følgende utsagn: 1 =Helt uenig, 7 = Helt enig (8 = Jeg vet ikke)

Å gå på Internett er noe ...

- 6.1 ... jeg gjør ofte (mer enn to ganger om dagen)
- 6.2 ... jeg gjør automatisk, uten å tenke over det
- 6.3 ... som krever innsats av meg å ikke gjøre
- 6.4 ... som tilhører min daglige rutine
- 6.5 ... jeg tar meg selv i å gjøre
- 6.6 ... jeg gjør når jeg kjeder meg
- 6.7 ... jeg gjør for å slå i hjel tid

7. Internettbruk – Overdreven Internettbruk

Angi i hvilken grad du er enig / uenig i følgende utsagn: 1 =Helt uenig, 7 = Helt enig (8 = Jeg vet ikke)

- 7.1 Når PC'en, mobiltlf eller lignende er i nærheten, kan jeg ikke la være å gå på Internett
- 7.2 Når PC'en, mobiltlf eller lignende er i nærheten, kjenner jeg en uimotståelig trang til å gå på Internett
- 7.3 Noen ganger føler jeg en sterk trang til å gå på Internett
- 7.4 Det kan være vanskelig å logge av Internett

8. Flow

Angi i hvilken grad du er enig / uenig i følgende utsagn: 1 =Helt uenig, 7 = Helt enig (8 = Jeg vet ikke)

- 8.1 Når jeg surfer på nettet, føler jeg at tiden flyr
- 8.2 Når jeg surfer på Internett, pleier jeg å miste oversikt over tiden
- 8.3 Når jeg surfer på Internett, glemmer jeg ofte hvor jeg er
- 8.4 Jeg glemmer mine umiddelbare omgivelser når jeg surfer på Internett.
- 8.5 Jeg blir inspirert av å bruke Internett
- 8.6 Når jeg bruker Internett får jeg utfordret evnene mine (f.eks: søke ferdigheter, teknologiske ferdigheter)
- 8.7 Jeg vet hvordan jeg finner hva jeg leter etter på Internett
- 8.8 Jeg anser meg selv som flink til å søke etter informasjon på Internett

9. Alltid logget på Internett

Angi i hvilken grad du er enig / uenig i følgende utsagn: 1 =Helt uenig, 7 = Helt enig (8 = Jeg vet ikke)

- 9.1 Det er viktig å alltid ha tilgang til Internett
- 9.2 Generelt, er jeg alltid koblet til Internett
- 9.3 Generelt, har jeg behov for tilgang til Internett når som helst og hvor som helst
- 9.4 Generelt, ville kvaliteten på mitt yrkesaktive liv bli betydelig redusert uten tilgang til Internett
- 9.5 Generelt, ville kvaliteten på mitt yrkesaktive liv bli betydelig redusert uten tilgang til Internett
- 9.6 Jeg er alltid logget på Internett, fordi jeg trenger tilgang til informasjon (f.eks. mail, værmelding, telefonkatalog, nettbank, rutetider, nyheter etc.)
- 9.7 Jeg føler meg fri når jeg ikke har tilgang til Internett

-
- 9.8 Jeg føler meg urolig når jeg ikke har tilgang til Internett
 - 9.9 Jeg synes det er behagelig å ikke ha tilgang til Internett
 - 9.10 Når jeg ikke har tilgang til Internett føler jeg meg koblet fra mine venner
 - 9.11 Når jeg ikke har tilgang til Internett føler jeg meg koblet fra jobb

10. Forbrukerengasjement

Tenk på et selskap eller en merkevare du føler en viss nærhet til. Anta at dette selskapet har et diskusjonsforum eller er engasjerte i sosiale medier på Internett hvor du kan komme i kontakt med selskapet og/eller andre kunder.

Vennligst oppgi i hvilken grad...

1 = Ikke i det hele tatt, 7 = Ekstremt mye, (8 = Jeg vet ikke)

- 10.1 ... du vil delta i selskapets online diskusjonsgruppe
- 10.2 ... du ønsker å gi kommentarer om selskapet på Internett
- 10.3 ... du ønsker å gi kommentarer om selskapets produkter og tjenester i en diskusjonsgruppe
- 10.4 ... du vil legge ut video på Internett om din bruk av selskapets produkter og tjenester
- 10.5 ... du ville tatt kontakt og diskutere med de andre kundene som var aktive i diskusjonsgruppen
- 10.6 ... du ville verdsette andre kunders kommentarer om selskapets produkter og tjenester

Demografi - til slutt har vi noen bakgrunns spørsmål

11. Er du kvinne eller mann?

12. Hvilket av følgende beskriver din alder?

- 1. 15 – 29
- 2. 30 – 44
- 3. 45 – 59
- 4. 60 – 67

13. Generelt, hvor mange timer er du koblet til Internett daglig?

Informasjon: å være koblet til Internett referer til din mulighet til å koble til Internett når som helst og fra hvor som helst.

14. Hva slags elektroniske apparater bruker du for å koble til Internett både på jobb og privat?

Informasjon: Kryss ut alle relevante svarene

- 1. Stasjonær datamaskin
- 2. Bærbar datamaskin
- 3. Mobiltelefon
- 4. Lesebrett
- 5. Andre, spesifiser:

15. Hvilken utdanning har du?

- 1. Grunnskole
- 2. Videregående skole
- 3. Høyskole/ Universitet (Bachelor eller mindre)
- 4. Høyskole / Universitet (Master eller høyere)

16. Hva er din nåværende jobb / studier?

Informasjon til intervjuer: be spesifikt om stilling og bransje, eller studieretning

17. Hvor mye av tiden din bruker du på Internett eller IT i din nåværende jobb / studier?

1. Aldri
2. Opptil 20 % av tiden min
3. Opptil 40 % av tiden min
4. Opptil 60 % av tiden min
5. Opptil 80 % av tiden min
6. Opptil 100 % av tiden min

Det var det vi hadde å spørre deg om – Tusen takk for hjelpen, og ha en fortsatt fin dag!

Appendix 4: Sampling

Sampling					
		Frequency	Percent	Valid Percent	Cumulative %
Valid	Fast	300	50.0	50.0	50.0
	Mobil	300	50.0	50.0	100.0
	Total	600	100.0	100.0	

Appendix 5: Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative %
Valid	Male	284	47.3	47.3	47.3
	Female	316	52.7	52.7	100
	Total	600	100.0	100.0	

Appendix 6: Age

Descriptive Statistics - Age					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	600	15	85	48.19	16.281

What age describes you?					
		Frequency	Percent	Valid Percent	Cumulative %
Valid	15 - 29	103	17.2	17.2	17.2
	30 - 44	127	21.2	21.2	38.3
	45 - 59	205	34.2	34.2	72.5
	60 - 75	144	24.0	24.0	96.5
	76 +	21	3.5	3.5	100.00
	Total	600	100.00	100.00	

Appendix 7: Electronic device

What type of electronic device do you use to connect to the Internet when you are at work and/or at home?					
		Frequency	Percent	Valid %	Cumulative %
Valid	Computer	348	26.8	26.8	26.8
	Laptop	507	39.1	39.1	65.9
	Mobile phone	307	23.7	23.7	89.5
	Tablet	123	9.5	9.5	99.0
	Others, specify	13	1.0	1.0	100.0
	Total	1298	100.0	100.0	

Appendix 8: Hours connected to the Internet daily

Descriptive Statistics - Hours online						
	N	Minimum	Maximum	Mean	Median	Std. Deviation
Hours Online	600	0	24	7.8	5.00	7.586

Overall, how many hours are you connected to the Internet daily?					
		Frequency	Percent	Valid %	Cumulative %
Valid	0	2	.3	.3	.3
	1	118	19.7	19.7	20.0
	2	72	12.0	12.0	32.0
	3	46	7.7	7.7	39.7
	4	47	7.8	7.8	47.5
	5	34	5.7	5.7	53.2
	6	17	2.8	2.8	56.0
	7	30	5.0	5.0	61.0
	8	45	7.5	7.5	68.5
	9	19	3.2	3.2	71.7
	10	40	6.7	6.7	78.4
	11	2	0.3	0.3	78.7
	12	17	2.8	2.8	81.5
	14	4	0.7	0.7	82.2
	15	3	0.5	0.5	82.7
	16	11	1.8	1.8	84.5
	17	1	0.2	0.2	84.7
	18	5	0.8	0.8	85.5
	20	3	0.5	0.5	86.0
	21	2	0.3	0.3	86.3
22	2	0.3	0.3	86.7	
24	80	13.3	13.3	100.0	
Total	600	100.0	100.0		

Appendix 9: Time spent on Internet or IT at work/ studies

How much of your time do you use Internet or IT for your current work/studies?					
		Frequency	Percent	Valid %	Cumulative %
Valid	Never	149	24.8	24.8	24.8
	Up to 20 % of my time	184	30.7	30.7	55.5
	Up to 40 % of my time	88	14.7	14.7	70.2
	Up to 60 % of my time	72	12.0	12.0	82.2
	Up to 80 % of my time	59	9.8	9.8	92.0
	Up to 100 % of my time	48	8	8	100.0
	Total	600	100.0	100.0	

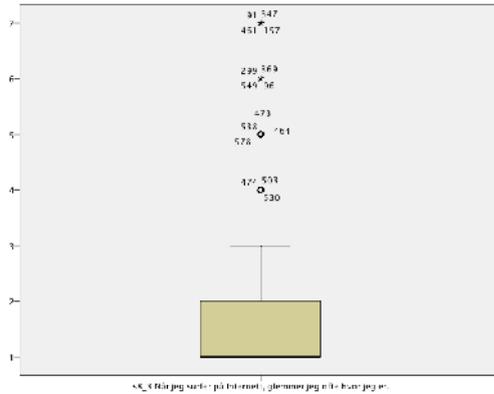
Appendix 10: Missing values

Item	Number of respondents answering "I dont know"	% of missing data
s1	1	0,2
s2	4	0,7
s3	6	1,0
s4	44	7,3
s5	63	10,5
s6	0	0,0
s7	58	9,7
s8	3	0,5
s9	5	0,8
s10	0	0,0
s11	14	2,3
s12	11	1,8
s13	5	0,8
s14	3	0,5
s15	2	0,3
s16	18	3,0
s17	18	3,0
s18	18	3,0
s19	0	0,0
s20	0	0,0
s21	12	2,0
s22	3	0,5
s23	0	0,0
s24	0	0,0
s25	4	0,7
s26	0	0,0
s27	7	1,2
s28	1	0,2
s29	0	0,0

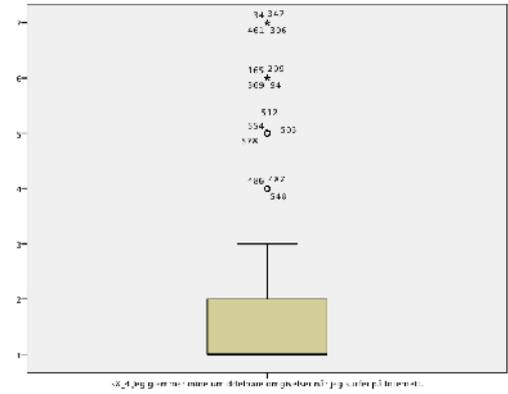
Item	Number of respondents answering "I dont know"	% of missing data
s30	0	0,0
s31	0	0,0
s32	0	0,0
s33	1	0,2
s34	1	0,2
s35	0	0,0
s36	2	0,3
s37	0	0,0
s38	0	0,0
s39	1	0,2
s40	1	0,2
s41	0	0,0
s42	0	0,0
s43	2	0,3
s44	0	0,0
s45	0	0,0
s46	48	8,0
s47	0	0,0
s48	6	1,0
s49	1	0,2
s50	7	1,2
s51	2	0,3
s52	55	9,2
s53	9	1,5
s54	8	1,3
s55	4	0,7
s56	4	0,7
s57	4	0,7
s58	7	1,2

Appendix 11: Outliers

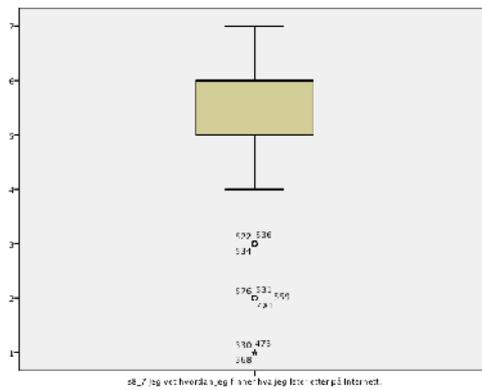
s36



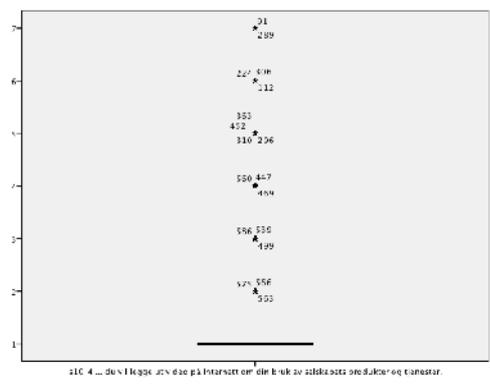
s37



s40



s56



Appendix 12: Normality

Statistics - Normality								
	TR	Network Externalities	Fear Of Losing Out	Exessiv Internet Use	Habits	Flow	ALI	CE
Valid	600	600	600	600	600	600	600	597
Missing	0	0	0	0	0	0	0	3
Mean	4.0040	4.6369	2.6575	4.4676	2.1840	3.6729	3.1686	2.2917
Std. Error of Mean	.03276	.05694	.05720	.06158	.05105	.04054	.04045	.04879
Std. Deviation	.80257	1.39471	1.40101	1.50835	1.25058	.99293	.99086	1.19223
Variance	.644	1.945	1.963	2.275	1.564	.986	.982	1.421
Skewness	-.190	-.342	.764	-.311	1.359	.214	.326	1.117
Std. Error of Skewness	.100	.100	.100	.100	.100	.100	.100	.100
Kurtosis	.172	-.502	-.053	-.705	1.729	.099	-.307	.982
Std. Error of Kurtosis	.199	.199	.199	.199	.199	.199	.199	.200
Minimum	1.40	.63	.75	1.00	.80	1.00	.91	.67
Maximum	6.20	7.00	7.00	7.00	7.00	7.00	6.27	6.83

Appendix 13: Multicollinearity

		Correlations					
		Network Externalities	Fear of losing out	Exessiv Internet use	Habits	Flow	Technology Readiness
Network Externalities	Pearson Correlation	1	.460**	.530**	.380**	.475**	.303**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Fear of losing out	Pearson Correlation	.460**	1	.441**	.519**	.411**	.211**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Exessiv Internet use	Pearson Correlation	.530**	.441**	1	.585**	.506**	.283**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Habits	Pearson Correlation	.380**	.519**	.585**	1	.509**	.186**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Flow	Pearson Correlation	.475**	.411**	.506**	.509**	1	.264**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Technology Readiness	Pearson Correlation	.303**	.211**	.283**	.186**	.264**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

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

a. Listwise N=586

Appendix 14: KMO and Barlett’s test, for EFA nr 1

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling	0.908
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	15239.757
	1653
	.000

Appendix 15: KMO and Barlett’s test, for EFA nr 2

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling	0.900
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	11878.257
	861
	.000

Appendix 16: Total Variance Explained – Eigenvalues for EFA nr 1

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadingsa
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	13.879	23.929	23.929	13.295	22.923	22.923	6.728
2	4.231	7.294	31.224	3.329	5.739	28.662	8.735
3	3.122	5.383	36.607	3.004	5.179	33.841	8.661
4	2.667	4.599	41.205	2.026	3.493	37.333	7.960
5	2.369	4.084	45.289	2.202	3.796	41.129	6.604
6	1.906	3.287	48.576	1.239	2.136	43.265	6.759
7	1.881	3.244	51.820	1.242	2.141	45.406	8.224
8	1.657	2.857	54.677	1.131	1.950	47.356	4.549
9	1.346	2.321	56.998	1.191	2.054	49.410	7.819
10	1.300	2.242	59.239	0.995	1.716	51.126	5.124
11	1.246	2.148	61.387	0.904	1.559	52.685	2.236
12	1.096	1.889	63.277	0.775	1.336	54.022	5.788
13	1.037	1.788	65.065	0.761	1.312	55.333	1.708

Appendix 17: Total Variance Explained – Eigenvalues for EFA nr 2

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadingsa
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	11.156	26.561	26.561	10.636	25.325	25.325	6.029
2	3.378	8.042	34.604	2.884	6.867	32.192	7.380
3	2.871	6.836	41.439	2.456	5.847	38.039	5.765
4	2.255	5.368	46.808	1.950	4.642	42.681	6.954
5	1.883	4.483	51.291	1.352	3.220	45.900	6.006
6	1.627	3.873	55.164	0.934	2.223	48.124	6.487
7	1.422	3.385	58.549	1.232	2.933	51.057	4.710
8	1.240	2.951	61.500	0.996	2.372	53.429	4.952
9	1.201	2.860	64.360	0.655	1.559	54.988	4.302
10	1.141	2.716	67.076	0.811	1.930	56.919	2.645

Appendix 18: Rotated Pattern Matrix for EFA nr 1

Constructs	Items	Pattern Matrix(a)												
		Factor												
		1	2	3	4	5	6	7	8	9	10	11	12	13
Technology Readiness	s1					.609								
	s2					.431								
	s3					-.304								
	s4											.249		
	s5								.355					
	s6					.213								
	s7								.698					
	s8											.675		
	s9											.664		
	s10											.659		
Network Externalities	s11		.483											
	s12		.993											
	s13		1.006											
	s14		.767											
	s15		.590											
	s16										.768			
	s17										.785			
	s18										.630			
Fear of Losing out	s19				.782									
	s20				.971									
	s21				.777									
	s22				.579									
Habit	s23									.783				
	s24									.588				
	s25									.299				
	s26									.828				
	s27			.325						.534				
	s28											.827		
	s29											.910		
Excessive Internet Use	s30			.903										
	s31			1.032										
	s32			.570										
	s33			.662										
Flow	s34						.804							
	s35						.879							
	s36						.577							
	s37						.557							
	s38						.378							
	s39						.360							
	s40					.842								
	s41					.967								
Always logged In	s42							.617						
	s43							.908						
	s44							.820						
	s45							.318						
	s46								.874					
	s47							.458	.315					
	s48												.583	
	s49							.442						
	s50													.737
	s51								.225					
s52									.780					
Customer Engagement	s53	.842												
	s54	.883												
	s55	.919												
	s56	.546												
	s57	.842												
	s58	.605												
% of variance explained		22.923 %	5.739 %	5.179 %	3.493 %	3.796 %	2.136 %	2.141 %	1.950 %	2.054 %	1.716 %	1.559 %	1.336 %	1.312 %

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

Note: loadings above .3, insignificant loadings (marked red) and cross loadings (marked red) are displayed

Appendix 19: Rotated Pattern Matrix for EFA nr 2

Constructs	Items	Pattern Matrix(a)									
		Factor									
		F1 - CE	F2 - DNE	F3 - FLOW1	F4 - EIU	F5 - ALI1	F6 - FOLO	F7 - INE	F8 - HABIT	F9 - FLOW2	F10 - ALI2
Network Externalities	s11		.499								
	s12		.991								
	s13		1.010								
	s14		.764								
	s15		.585								
	s16							.776			
	s17							.799			
Fear of Losing out	s18							.658			
	s19						.759				
	s20						.942				
	s21						.738				
Habits	s22						.548				
	s23								.907		
	s24								.505		
Excessive Internet Use	s26								.745		
	s30				.882						
	s31				.968						
	s32				.616						
Flow	s33				.665						
	s34			.790							
	s35			.883							
	s36			.586							
	s37			.566							
	s38			.345							
	s39			.336							
	s40									.927	
Always Logged in	s41									.795	
	s42					.677					
	s43					.812					
	s44					.796					
	s45					.295					
	s46										.876
	s48					-.296					
	s49					.386					
Customer Engagement	s50					-.240					
	s52										.762
	s53	.848									
	s54	.891									
	s55	.920									
	s56	.543									
	s57	.828									
	s58	.613									
% of variance explained		25.325 %	6.867 %	5.847 %	4.642 %	3.220 %	2.223 %	2.933 %	2.372 %	1.559 %	1.930 %

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Note: loadings above .3, insignificant loadings (marked red) and cross loadings (marked red) are displayed

Appendix 20: Technology Readiness factors – Drivers and Inhibitors

Factor analysis - TR		
	Driver	Inhibitor
s1	.589	
s2	.727	
s3	.314	.361
s4		.287
s5	.513	
s6	.611	
s7	.567	
s8		.691
s9		.640
s10		.638

Note: loadings above .3, insignificant loadings (marked red) and cross loadings (marked red) are displayed

Appendix 21: Squared Interconstruct Correlations Matrix

Squared Interconstruct Correlations Matrix (Standardized)											
	TRDR	TRIN	DNE	INE	FOLO	HABIT	EIU	FLOW1	FLOW2	ALI	CE
TRDR	1.0000										
TRIN	0.0729	1.0000									
DNE	0.2916	0.0289	1.0000								
INE	0.1225	0.0196	0.2704	1.0000							
FOLO	0.1444	0.0064	0.3136	0.0441	1.0000						
HABIT	0.4489	0.0324	0.2809	0.2025	0.1296	1.0000					
EIU	0.1936	0.0100	0.2304	0.0324	0.3844	0.2401	1.0000				
FLOW1	0.0961	0.0000	0.1296	0.0081	0.2500	0.0576	0.3969	1.0000			
FLOW2	0.5476	0.0729	0.1296	0.1089	0.0529	0.3364	0.0784	0.0400	1.0000		
ALI	0.3844	0.0009	0.1764	0.0529	0.2704	0.3025	0.3844	0.2116	0.1681	1.0000	
CE	0.1369	0.0400	0.1936	0.0529	0.0961	0.0841	0.1369	0.0784	0.1024	0.1156	1.0000

Appendix 22: Syntax

SPSS Syntax for covariancematrix

```
write outfile = 'D:\Data\A0610629\system\Desktop\SEM\ALI.dat'
```

```
/ s42 s43 s44 s49
```

```
s53 s54 s55 s56 s57 s58
```

```
s1 s2 s5 s6 s7
```

```
s3 s8 s9 s10
```

```
s11 s12 s13 s14 s15
```

```
s16 s17 s18
```

```
s19 s20 s21 s22
```

```
s23 s24 s26
```

```
s30 s31 s32 s33
```

```
s34 s35 s36 s37 s38 s39
```

```
s40 s41 (46F6.0).
```

```
execute.
```

PRELIS Syntax hentet ut fra SPSS

```
DA NI=46 NO=586 MI=99 TR=PA
```

```
RA FI='D:\Data\A0610629\system\Desktop\SEM\ALI.dat'
```

```
CO ALL
```

```
LA
```

```
s42 s43 s44 s49
```

```
s53 s54 s55 s56 s57 s58
```

```
s1 s2 s5 s6 s7
```

```
s3 s8 s9 s10
```

```
s11 s12 s13 s14 s15
```

```
s16 s17 s18
```

```
s19 s20 s21 s22
```

s23 s24 s26
s30 s31 s32 s33
s34 s35 s36 s37 s38 s39
s40 s41

OU MA=CM CM='D:\Data\A0610629\system\Desktop\SEM\ALI.cov'

LISREL Syntax

SEM with basis in EFA reduced

DA NI=46 NO=586 MA=CM

CM FI = 'D:\Data\A0610629\system\Desktop\SEM\ALI.cov'

LA

s42 s43 s44 s49
s53 s54 s55 s56 s57 s58
s1 s2 s5 s6 s7
s3 s8 s9 s10
s11 s12 s13 s14 s15
s16 s17 s18
s19 s20 s21 s22
s23 s24 s26
s30 s31 s32 s33
s34 s35 s36 s37 s38 s39
s40 s41

SE

1 2 3 4
5 6 7 8 9 10
11 12 13 14 15
16 17 18 19
20 21 22 23 24
25 26 27
28 29 30 31
32 33 34
35 36 37 38
39 40 41 42 43 44
45 46

MO NY=10 NX=36 NE=2 NK=9 LX=FU,FR BE=FU,FI PS=DI GA=FU,FI

TD=FU,FI TE=FU,FI

LE

ALI CE

LK

TRDR TRIN DNE INE FOLO HABIT EIU FLOW1 FLOW2

PA LY

*

4 (1 0)

6 (0 1)

PA LX

*

5 (1 0 0 0 0 0 0 0 0)

4 (0 1 0 0 0 0 0 0 0)

5 (0 0 1 0 0 0 0 0 0)

3 (0 0 0 1 0 0 0 0 0)

4 (0 0 0 0 1 0 0 0 0)

3 (0 0 0 0 0 1 0 0 0)

4 (0 0 0 0 0 0 1 0 0)

6 (0 0 0 0 0 0 0 1 0)

2 (0 0 0 0 0 0 0 0 1)

FR BE 2 1

FR GA 1 1 GA 1 2 GA 1 3 GA 1 4 GA 1 5 GA 1 6 GA 1 7 GA 1 8 GA 1 9

FR TD 1 1 TD 2 2 TD 3 3 TD 4 4 TD 5 5 TD 6 6 TD 7 7 TD 8 8 TD 9 9 TD 10 10
TD 11 11 TD 12 12

FR TD 13 13 TD 14 14 TD 15 15 TD 16 16 TD 17 17 TD 18 18 TD 19 19 TD 20
20 TD 21 21 TD 22 22

FR TD 23 23 TD 24 24 TD 25 25 TD 26 26 TD 27 27 TD 28 28 TD 29 29 TD 30
30 TD 31 31 TD 32 32

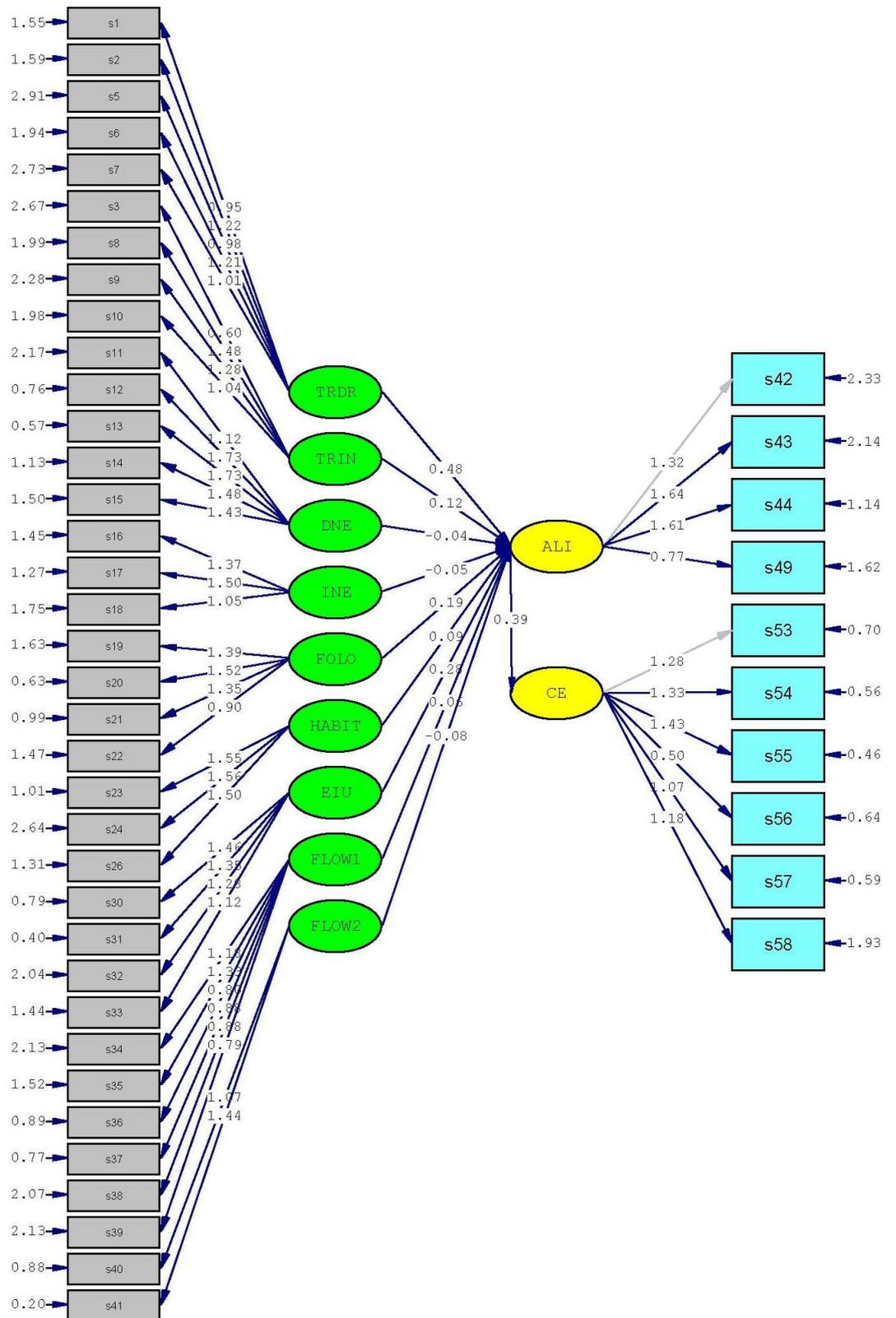
FR TD 33 33 TD 34 34 TD 35 35 TD 36 36

FR TE 1 1 TE 2 2 TE 3 3 TE 4 4 TE 5 5 TE 6 6 TE 7 7 TE 8 8 TE 9 9 TE 10 10

PATH DIAGRAM

OU SC RS MI AD=OFF IT=900

Appendix 23: Structural Equation Model



Chi-Square=2775.49, df=943, P-value=0.00000, RMSEA=0.058

Appendix 24: Mediating effects

MEDIATING VARIABLE: Direct Network Externalities (DNE)			
	<i>Regression 1</i>	<i>Regression 2</i>	<i>Regression 3</i>
TRDR	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=TRDR) and 0.000 (m=DNE)
EIU	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=EIU) and 0.000 (m=DNE)
FOLO	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=FOLO) and 0.000 (m=DNE)

MEDIATING VARIABLE: Indirect Network Externalities (INE)			
	<i>Regression 1</i>	<i>Regression 2</i>	<i>Regression 3</i>
TRDR	(sig.) 0.000	(sig.) 0.000	sig. 0.000 (x=TRDR), and not sig. 0.181 (m=INE)
EIU	(sig.) 0.000	(sig.) 0.000	Both is sig.: 0.000 (x=EIU) and 0.017 (m=INE)
FOLO	(sig.) 0.000	(sig.) 0.000	Both is sig.: 0.000 (x=FOLO) and 0.033 (m=INE)

MEDIATING VARIABLE: HABIT			
	<i>Regression 1</i>	<i>Regression 2</i>	<i>Regression 3</i>
TRDR	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=TRDR) and 0.000 (m=HABIT)
EIU	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=EIU) and 0.000 (m=HABIT)
FOLO	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=FOLO) and 0.000 (m=HABIT)

MEDIATING VARIABLE: FLOW1			
	<i>Regression 1</i>	<i>Regression 2</i>	<i>Regression 3</i>
TRDR	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=TRDR) and 0.000 (m=FLOW1)
EIU	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=EIU) and 0.000 (m=FLOW1)
FOLO	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=FOLO) and 0.000 (m=FLOW1)

MEDIATING VARIABLE: FLOW2			
	<i>Regression 1</i>	<i>Regression 2</i>	<i>Regression 3</i>
TRDR	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=TRDR) and 0.001 (m=FLOW2)
EIU	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=EIU) and 0.000 (m=FLOW2)
FOLO	(sig.) 0.000	(sig.) 0.000	Both sig.: 0.000 (x=FOLO) and 0.000 (m=FLOW2)

Appendix 25: Preliminary Thesis Report

Monica Paulsen: 0794040
Marthe Myren Leistad: 0818505

BI Norwegian Business School - Preliminary Thesis Report -

- Always logged-in -

Hand-in date:
16.01.2012

Supervisor:
Associate Professor Line Lervik Olsen

Campus:
BI Oslo

Examination code and name:
GRA 1902 Preliminary Thesis Report

Programme:
Master of Science in Strategic Marketing Management

Content

CONTENT.....	I
1.0 INTRODUCTION.....	1
1.1 TOPIC OF INTEREST	1
1.2 TOPIC OF IMPORTANCE	1
1.3 TRENDS AND VALUE DRIVEN SERVICE INNOVATIONS.....	2
1.4 PROBLEM STATEMENT	4
2.0 LITERATURE REVIEW.....	4
2.1 "ALWAYS LOGGED-IN" AND THE THEORETICAL CONTRIBUTION	4
2.2 DRIVERS OF "ALWAYS LOGGED-IN"	4
<i>Technology</i>	5
<i>Network externalities</i>	6
<i>Fear of Loosing Out</i>	7
<i>User Acceptance of Technology</i>	7
2.3 CUSTOMER ENGAGEMENT	9
2.4 EXTRAGIOUNIUS VARIABLES.....	10
<i>Internet Addiction</i>	10
2.5 CONCEPTUAL MODEL	12
3.0 METHODOLOGY.....	13
3.1 DESIGN AND APPROACH	13
4.0 REFERENCES.....	14
5.0 APPENDIX.....	18
APPENDIX 5.1: DIAGNOESTIC QUESTIONAIR OF INTERNET ADDICTION	18
APPENDIX 5.2: THE PLAN FOR THE DATA COLLECTION AND THESIS PROGRESSION.....	19

1.0 Introduction

This research proposal is the preliminary to our master thesis. As it is a preliminary report, there will be changes from this document to our final master thesis. The paper consists of topic of interest and its importance to the field, an introduction to trends, research question, literature review, conceptual model and methodology. When it comes to methodology it is important to point out that this procedure is still undecided and there can be expected changes to the content. The plan for data collection and the thesis progression is presented in appendix 5.2.

1.1 Topic of Interest

This master thesis can be seen as a contribution to the existing and on-going trend research, *Value-Driven Service Innovation*, conducted at BI Norwegian Business School (Calabretta, Andreassen and Olsen, work in progress). Our research will primarily seek to contribute to a deeper understanding of the underlying trend “always logged in”. This involves identifying the drivers behind the trend “always logged-in” and assessing if these positively affect the overall trend. Additionally, we will also address the question if the variable addictive behaviour has an influence on the relationships between “always logged-in” and the drivers. Furthermore, we aim to establish if “always logged-in” is affecting “customer engagement behaviour” (CEB).

1.2 Topic of Importance

Developing and launching new products and services can be an expensive, time consuming and risky activity for companies. Research conducted within new product development (NPD) states that the failure rate is approximately 45 percent for fully commercialised products launched in developed western economies (Page 1993; Edgett, Shipley and Forbes 1992). Although the failure rate varies between different products and services it is important to determine what the critical success factors of new product and service development are. Research within this field has identified consumer needs, wants and preferences as some of the most important success factors (Cooper and Kleinschmidt 1987; Ernst 2002). Additionally, Schneider and Hall (2011) point out that unsuccessful innovation launches are often caused by inappropriate timing of the product- or service launch.

To ensure sustainable future business growth, companies have to start early in developing new and successful products and services. Since future consumer needs and wants rapidly changes and often aren't presently known, companies have to rely on underlying consumer trends from the society in the innovation process. Trend research provides executives and other decision makers with early assessments of drivers and opportunities (Fenn 2011). We therefore argue that generating a deeper understanding of consumer trends is a valuable asset for companies to reduce the risk of launching new products or services, and hereby drive future growth and success.

Since Internet opened for public use in the early 1990s, customers' online presence has rapidly increased. In 2010, 91 percent of the Norwegian households had a computer, and 90 percent of the Norwegian households had Internet access (SSB-1 2011). The average Internet use per minute in Norway has increased rapidly during the last eleven years (SSB-2 2011). And in 2010 the average Internet use for people in the age group 16-24 years was 162 minutes per day, while the Internet use for people in the age group 25-44 years was 104 minutes per day (SSB-2 2011). Moreover, several customers see the value of purchasing services or products at anytime and from anywhere. In 2011, 73 percent of the Norwegian population had bought a product or service online (SSB-3 2012).

The above figures illustrate the widespread use of Internet in society and the importance of getting a deeper understanding of the customer's involvement in the online environment. This research will benefit companies providing or considering providing their products or services online. A deeper understanding of the trend "always logged-in" will provide managers with knowledge on which factors they should focus on to achieve successful product and service innovations for their business online.

1.3 Trends and Value Driven Service Innovations

The increasing need and willingness of always being connected to the Internet has been identified as one of seven trends within the Value-Driven Service Innovation project at BI Norwegian Business School (Calabretta, Andreassen and Olsen, work in progress). We find this trend particular interesting due to its future

significant impact on peoples professional and daily lives. Calabretta et al. (working progress) define the trend, “always logged-in”, in the following way: “*the rising need and willingness of having access to information and services at any time and from anywhere*”. The authors argue that people are turning more and more demanding when it comes to access to their virtual life and to intangible services, since all what is intangible and virtual should be always accessible (Calabretta et al. work in progress).

According to Marseille and Roos (2005, 68), trends are shaped by “*changes in the behaviour of societies, markets and the consumers who drive them*”. Trends may also differ in their size, e.g. micro trends, (Penn and Zalesne 2007), and their lifespan, e.g. “fads” (Lloyed Jones 1991). Literature within trends and the drivers of trends is a rather under explored research field. So far researchers have mostly focused on trends within in the context of the fashion industry (Miller, McIntyre and Mantrala 1993).

When it comes to trends it is all about picking the right trend, using it at the right time and in the right way. Multiple factors will play a part of creating a success or a failure. Malcome Gladwell (2000) has written a world renowned book called “The Tipping Point” where he talks about understanding the emergence of trends. He presents the term “the tipping point” which is described as the dramatic moment when there is a sudden change, like a boiling point. Moreover, it is when the unexpected becomes expected, where radical change is more than possible, it is a certainty. The author introduces three characteristics of this phenomenon; one, it is like a virus making the audience “infected”, two, incremental changes gives big effects, and three, the change happens in a hurry and not steady and slowly. But this change can go both ways, towards success or failure. There is a tipping point in the introduction of any new technology. Take for instance mobile phones; in the 1990’s they got smaller and cheaper, and within 1998 the service improved making the technology hit a tipping point and suddenly everyone had a cell phone.

A good understanding of trends in consumer lifestyle is an important factor for successful product- and service innovations for businesses. Just a brief knowledge about a trend is often not sufficient enough to get a good understanding of why the trend influences consumer behaviour and lifestyles. Therefore a research that

investigates the drivers of a trend, here the drivers of the trend “always logged-in”, would be a valuable contribution to the literature and provide useful information to managers. A better understanding of the drivers of the trend “always logged-in” may also create insight to how this trend will develop in the future.

1.4 Problem statement

Based on the above presentation of the topic of interest and importance of topic, and the following literature review, we present our preliminary research question:

What are the drivers behind the trend “always logged-in”, and is there a relationship between the trend and customer engagement behaviour?

At this point in time, the research question will stand as a guideline for the future progress and it is not to be regarded as definite.

2.0 Literature Review

2.1 “Always logged-in” and the theoretical contribution

As stated previously “always logged-in” is related to people’s need and willingness of accessing information and services anytime and anywhere (Andreassen, Calabretta and Olsen work in progress). Andreassen et al. (work in progress) reasons that the increasing mobility and identity of life in developed countries, reduces peoples attachment to tangible objects, through becoming more demanding when it comes to accessing their virtual life and intangible services (work in progress, 8). Research within trends has primarily been conducted within the field of innovation research. We will take this a step further and discuss trend-research within the fields of marketing and innovation, since our research build on theories from both fields.

2.2 Drivers of ”always logged-in”

We have identified four factors that we argue are the main drivers behind the trend “always logged-in”. Through reviewing existing literature we have identified the following drivers: *technology*, *network externalities*, *user acceptance of technology* and *fear of losing out*. The arguments for their impact on the dependent variable, “always logged-in”, will be discussed below.

Technology

Information and Communication Technology (ICT) is the generic term for technological gathering, transmission, processing, storage and presentation of information (Store Norske Leksikon – 1 2011). Each year, economies spend more than US\$ 800bn on ICT (Heeks 2009) and it is seen as one of the major driving forces of the new economy (Qingxuan and Li 2002). In 2012, there is no problem getting online anywhere at any time: at the café, in the car, at the cabin, at the working place, at school, either with the computer, the tablet or the mobile phone. Recent year's development within technology has made this possible. Technology will continue to develop further, and our habits and daily life will probably depend more on the connection to the Internet at all times. According to Chou, Condron and Belland (2005) rapidly updated information is a major feature that attracts users to participate online. When the Internet is increasing in the population, the demand to deliver higher technology quality is also there. An increasing development of user-friendly Internet devices allows even consumers with low network literacy to use the Internet more easy and comfortable (Chou et al. 2005).

In Norway, on average there are 1.4 desktops and 1.8 laptops in every household. 43 percent say they use a computer every day, and as much as 39 percent informs that they use both a computer and a mobile phone or a tablet logged on to the internet daily. The daily usage of Internet was sky-high in 2010; 77 percent of the population was daily visiting the web, with an average of 104 online minutes spent. (TNS Gallup 2010)

The Internet connection for computers and mobile phones has during the last ten year's improved. In 2010, 73 percent of the Norwegian households had a broadband subscription, which provided them with faster and more stable Internet connection (SSB-4). Furthermore, new innovations have been developed within hardware and software technologies, which allows for a more user friendly and superior Internet experiences. A tablet, which is a personal computer without a keyboard, is maybe the most recent development within hardware technologies. This device has a touchscreen and is smaller in size compared to a normal laptop screen, making it easier to carry around. This tablet computer has a wireless system, which brings the consumer online. Approximately 1 out of 10 states that

they are planning on buying a tablet pc within the next 12 months. (TNS Gallup 2010) We argue that technological innovations within hardware, software and online accessibility have a positive influence on the consumer trend of always being logged-in. Hence,

H₁: Technology related to Internet connection has a positive effect on consumer's behaviour of always being logged-in.

Network externalities

There are many products for which the utility that a user derives from consumption of the good increases with the number of other agents consuming the good (Katz and Shapiro 1985, 424). Evidence of network externalities has been found in several markets like: telecommunication (Rohlf's 1974; Oren and Smith 1981), banking (Kauffman, McAndrews and Wang 2000), peer-to-peer music-sharing (Asvanund, Krishnan and Smith 2004) and Internet (Cooper and Madden 2008). The literature has focused on two types of externalities; direct and indirect. Direct network externalities occur when the utility of the network to the individuals increases with the number of consumers that uses the product or service (Kauffman et al. 2000, 159). Furthermore, indirect network externalities arise when the utility of a product increases with the number of users because for instance the quality of the product is higher or there are more complementary products available (Kauffman et al. 2000, 159).

Although there has been found evidence of network externalities within the Internet market, no one has investigated if this is a driver of the trend "always logged-in". Several web-sites like eBay, Wikipedia and Facebook feature a network effect. Kaplan and Haenlein (2009) state that social media show positive network externalities in the sense that they get more attractive to join the more participants they already have. We argue that network externalities will positively affect Internet users and their rising need and willingness of having access to information and services at any time and from anywhere. Hence,

H₂: Network externalities operating in the Internet market has a positive effect on consumer's behaviour of always being logged-in.

Fear of Loosing Out

Another driver of “always logged-in” could be the individual fear of “losing out” on information and social contact by not being logged on to the Internet. There has been little research done within this field, therefore we will look into other research areas in order to try to explain this driver. One field that has been researched a lot within the areas of education, sociology, psychology, politics and economics is Social Exclusion. According to Bossert, D’Ambrosio and Peragine (2007), individuals can be socially excluded only in comparison with other members of society, depending on the extent to which an individual is able to associate and identify himself with others. Additionally, if the condition of the individual is persistent or worsen over time this can make the individual even more socially excluded.

We can draw comparison to social exclusion if we look at the Internet and its arena as an online society. If the individual is not logged on to the Internet and not a part of this society, he/she can feel socially excluded from the online environment. Online pages such as Facebook, Youtube, chat-rooms, blogs and e-mailing, creates arenas for online social engagement, and includes a huge part of conversations that are happening online and not face-to-face. A face-to-face conversation can include information derived from the Internet, and by not being logged on and participating in the online environment it could be difficult to be a part of the conversation, which can give a feeling of exclusion. Such a feeling may be a driver for why people are logged on to the Internet and a part of the online “community”. Thus,

H₃: Consumers fear of losing out will have a positive effect on their behaviour of always being logged-in.

User Acceptance of Technology

For a consumer to be online or more precisely “always logged-in” it requires an interaction between technology and the consumer (Parasuraman 2000). Consumer willingness to interact and use technology depends on several factors. Within academia there is a growing body of research trying to explain and predict user adoption of new technology. One of the most widely cited models within this research stream is the TAM model introduced by Davis in 1989 (Wang, Wang,

Lin and Tang 2003; Pavlou 2003). The TAM model consist of the two variables; 1) perceived usefulness and 2) perceived ease of use, that are determining attitudes towards adoption, behavioural intention to use, and actual usage of information technology (Davis, Bagozzi and Warshaw 1989). Davis (1989:320) defined perceived usefulness as the degree to which a person believes that using a particular system will enhance his or hers performance, while perceived ease of use refers to the extent to which a person believes that using a particular system will be free of effort.

Furthermore, other authors have tried to explain and predict user adoption of new technology trough focusing on individual differences among consumers. The technology-readiness (TR) construct refers to people's propensity to embrace new technologies for accomplishing goals in home life and work (Parasuraman, 2000:308). The underlying theory of TR is based on that people's general beliefs about technology are a combination of positive and negative feelings. Positive feelings push a person towards usage of new technologies, while negative feelings may hold a consumer back. Moreover, the TR construct consists of four dimensions: *optimism* and *innovativeness* that are drivers of technology readiness, and *discomfort* and *insecurity* that are inhibitors (Parasuraman, 2000).

In service settings there is a need for involvement from customers to co-produce the service (Lin, Shin and Sher 2007). Lin et al. (2007) reason that this co-production makes TAM applied in marketing setting not sufficient to explain consumer technology adoption behaviour. The authors argue that the TAM model have to take individual differences into account to better explain consumers' technology adaption. Based on this reasoning the authors integrate the construct of TR (Parasuraman, 2000) with the TAM (Davis 1989), and propos a new model named TRAM (Lin et al, 2007). This model is tested and confirms that perceived usefulness and perceived ease of use together has complete mediation effect between TR and consumers' use intention. Lin et al. (2007) argues that the new model, TRAM, contributes to a more in-depth understanding of people's technology acceptance behaviour.

While Davis (1989) used the TAM model to predict peoples technology-adopting behaviour in work environments, others (Wang et al. 2003; Parasuraman, 2000;

Lin et al. 2007) have found that TAM, TR and TRAM have significant effects on predicting peoples intention to use Internet. Based on this we argue that the factors within the TRAM model; technology readiness, perceived usefulness and perceived ease of use, is affecting peoples needs of being “always logged-in”. Hence,

H₄: Consumers technology readiness has a positive effect on their behaviour of always being logged-in

H₅: Consumers acceptance of information technology has a positive effect on their behaviour of always being logged-in.

2.3 Customer Engagement

The term “customer engagement” (CE) is a relatively new term that has only emerged in the academic marketing and service literature the last five years (Brodie, Hollebeek, Juric and Ilic 2011:255). This has led to several researches reviewing the literature and trying to define and understand the concept (Brodie et al. 2011; Verhoef, Reinartz and Krafft 2010). Brodie et al. (2011:260) defines CE as “*a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g. a brand) in focal service relationships. It occurs under a specific set of context dependent conditions generating differing CE levels; and exists as a dynamic, iterative process within service relationships that cocreate value. CE plays a central role in a nomological network governing service relationships in which other relational concepts (e.g. involvement, loyalty) are antecedents and/or consequences in iterative CE processes. It is a multidimensional concept subject to a context- and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioural dimensions*”.

This broad definition from Brodie et al. (2011) incorporates a multidimensional perspective of engagement. Our interest is to focus further on the aspect of the behavioural dimension of CE. Van Doorn, Lemon, Mittal, Nass, Pick, Pirner and Verhoef (2010) states that customer engagement behaviours (CEB) goes beyond transactions, and may be specifically defined as customer behavioural manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers.

Internet is considered as an innovative and fast growing platform for co-creating values with consumers. The variety within online activities opens up for different

forms of participation and involvement between the consumers and corporations. The most known CEB activities within the online environment include electronic word-of-mouth (e-wom), recommendation and reviews, blogging, and other social media activity (Van Doorn 2010). From the company's perspective, there should be a focus on CEB because it can result in future positive and/or negative financial and non-financial outcomes (Van Doorn 2010). According to Sawhney, Verona and Prandelli (2005) online CE offers companies benefits such as enhanced interactivity, greater persistence, increased speed and higher flexibility.

Present CEO's and CFO's are demanding evidence and are struggling to see the value of investing in CE, mostly because it is difficult to monitor the return on investment (ROI). Because of this, researchers are trying to turn the focus around by confirming that CE is generating enhanced corporate performance through sales growth, profitability and superior competitive advantage (Neff 2007; Sedley 2008; Voyles 2007). These statements are based on the fact that CE play a central role in viral marketing through customers creating e-wom (reviews/recommendations), and contributing to the process of new product/service development (Brodie et al. 2011).

Since the trend is showing that the consumer is "always logged-in", it could be interesting to link this to the research field of CE to see if the trend is affecting the CEB. Internet has introduced more arenas for the consumer to be engaged more easily and more often, also in a more advanced matter. We argue that the trend "always logged in" leads customers to take part and involve themselves in business related activities more often than before. We therefore hypothesize that,

H₆: The rising need and willingness to "always being logged in" has positively increased customer's engagement behaviour.

2.4 Extrajournalistic variables

Internet Addiction

Can the trend of always logged-in be linked to addiction? According to Becker and Murphy (1988), a good may be addictive to some persons but not to others. A person may be addicted to some goods but not to other goods. Addiction means to devote oneself towards something, toward someone, toward some activity or

towards some experience (Schaler. 2000). Research indicates that maladaptive patterns of Internet use constitute behavioural addiction (Chou et al, 2005). Academic attention has been given in recent years to what some researchers define as “Internet addiction” (Chou et al. 2005). According to Wang (2001), some people feel so excited with this new ITC-revolution and appear to have a hard time getting off the line, they are “hooked”. The terminology “internet addiction” is controversial, and researchers are still debating whether it can be seen as a true addiction that creates problematic behaviour. Although the terminology remains a problem, we will in this thesis report use the term “Internet addiction” to cover the collective phenomenon. Kandell (1998) defines Internet addiction as “a psychological dependence on the internet, regardless of the type of activity once logged on”.

Many Internet studies indicates that time spent online is an important factor or index for determine Internet addiction (Young, 1998). Online activities or applications (such as; chat rooms or Internet games) are also variables used to determining Internet addiction. The work of Young (1998), Chou and Hsiao (2000) empirically confirm that Internet addicts use two-way communication functions more than none-addicts do. Chou (2005) draw the conclusion that the Internet itself is not addictive, however interactive functions appear to contribute to the development of pathological Internet use. Social networks have changed the way we interact with each other enormously, not only on a private basis but also professionally. Stanford University School of Medicine have conducted a national study indicating that almost one in eight Americans suffers from at least one sign of problematic Internet use (Netaddiction.com 2012). Our society has become more and more dependent on technological interaction, and it can be difficult to draw a distinctive line between the addicts and the none-addicts.

Internet addiction is obviously linked to the trend always logged-in, but the question is in what manner? Researchers are emphasizing that once a person is considered addictive to the Internet this behavior may override all other variables that affect the trend. Based on this, Internet addiction is not suitable to be considered as a driver of the trend. According to research we consider Internet addiction to not affect the trend in its self, but rather work as an outside force affecting the relationship between the drivers and the trend. Currently it is

debatable if this outside force should be considered as a moderator in the model or seen as a screening variable. This issue will be addressed later in the process when more literature is reviewed. Furthermore, at this point in time we consider using Internet addiction as a screening variable that provides us with the possibility to exclude “addictive” Internet consumers. We believe that this provides us with a more representative sample. The screening process could be based on Young’s (1996) research within addictive behaviour. Respondents answering yes to five or more of the eight questions, presented in appendix 5.1, will be classified as addictive Internet users.

2.5 Conceptual Model

The relationships between the independent variables (IV’s), the moderator and the dependent variables (DV’s), discussed in the literature review, are presented below in the conceptual model (*figure 1*). “Always logged-in” is seen as an intermediate variable in this model, meaning that this variable is both a DV and IV. First, the consumer’s need and willingness of always being logged-in is hypothesized to be affected by the following IV’s: technology, network externalities, fear of losing out and user acceptance of technology. Secondly, in the relationship between “always logged-in” and customer engagement, “always logged-in” is regarded as the antecedent, whereas customer engagement is the consequence variable.

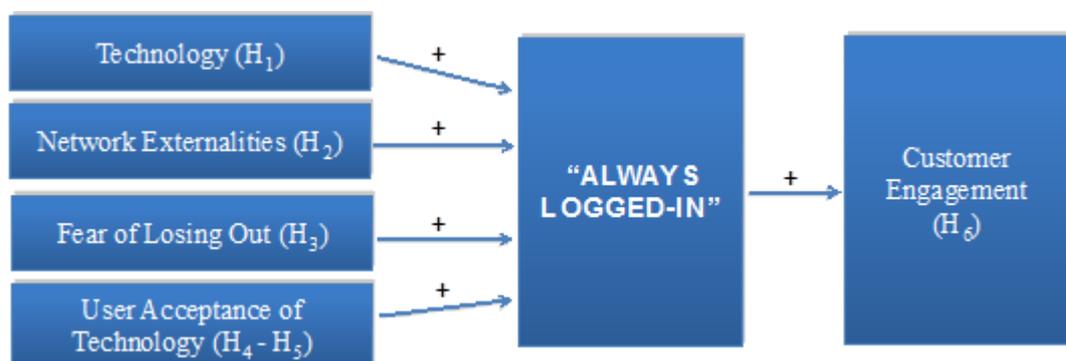


Table 1: The conceptual model

3.0 Methodology

3.1 Design and approach

Our research will take on a mixed method design. Since little or no research has been done to exploit the drivers of the trend “always logged-in”, the first part of our paper will take on an explorative design. The primary goal with this part is to explore the subjects matter and to get a deeper understanding of the underlying drivers of this trend. The research approach used in this part will be qualitative methods, and the data collection method will be in-depth interviews. The objective of qualitative research is to facilitate perception and comprehension as well as to create ideas, institutions and generate hypothesis (Calabretta - 1. 2011). In-depth interviews are often used when the aim is to get a better understanding of a subject from the respondent’s perspective. To do so we will interview Norwegian professionals and experts on the field within different age groups and gender.

After gathering a basic understanding of the main drivers of the trend, a descriptive design will be taken on in part two. The objective with this study is to establish relationships between the drivers and “always logged-in”. With descriptive design, we have no basis to assert the existence of causal relationships, only that there is a correlation (Gripsrud, Olsson and Silkoset 2008). This part consists of quantitative research where we test the hypotheses constructed from the qualitative research by using the data collection method survey. We are interested in individual data (age, gender) and the population selected will be Norwegian consumer with online connection at home, at school or/and at work.

At this point in time, the third part of the methodology is still not confirmed. So far, our thoughts is that if a relationship between the drivers and always logged-in is confirmed, we want to research further and see if this trend has an effect on customer engagement behaviour (CEB). A quantitative research may be taken on using a survey. Like in the second part of the methodology we are interested in individual data using the Norwegian population that has any kind of online connection, as our sample. It is important to emphasize that this third part methodology is not confirmed and may be subject to change.

4.0 References

- Andreassen, Tor W., Giulia Calabretta and Line L. Olsen. Work in progress. "Prosper Through Innovation: Trend Spotting Gets You There". *BI Norwegian Business School*.
- Asvanund, Atip, Karen Clay, Ramayya Krishnan and Michael D. Smith. 2004. "An Empirical Analysis of Network Externalities in Peer-to-Peer Music-Sharing Networks." *Information Systems Research* 15(2):155–174.
- Becker, Gary S and Murphy, Kevin M. 1988. "A Theory of Rational Addiction." *The Journal of Political Economy*. 96 (4): 675-700.
- Bossert, Walter, Conchita D'Ambrosio and Vito Peragine 2007. "Deprivation and Social Exclusion". *Economica* 74, 77-803.
- Brodie, Roderick J., Linda D. Hollebeek, Biljana Juric and Ana Ilic. 2011. "Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research". *Journal of Service Research*. 14(3):252-271.
- Calabretta, Giulia, Tor W. Andreassen and Line L. Olsen. Work in progress. "Escaping innovation traps. It's the adoption – stupid!" *BI Norwegian Business School*.
- Chou, Chien, Linda Condron and John C. Belland. 2005. "A Review of the Research on Internet Addiction." *Educational Psychology Review* 17(4): 363-388.
- Chou, Chien and Ming-Chun Hsiao. 2000. "Internet addiction, usage, gratifications, and pleasure experience-the Taiwan college student case." *Computer and education* 35 (1): 65-80.
- Cooper, R. G and Kleinschmidt. 1987. "Success Factors in Product Innovation", *Industrial Marketing Management* 16:215-223
- Cooper, Russel and Gary Madden. 2008. "Internet network externalities." *Int. J. Magement and Network Economics* 1(1):21-43.
- Dagens IT, 2011. "Tidenes mest populære apps". Accessed 29.04.2011. <http://www.dagensit.no/article2063937.ece>
- Davis, Fred D. 1989. "Perceived usefulness, perceived ease of use, and user acceptance of information technology." *MIS Quarterly* 13:319–340.
- Davis, Fred D.; Richard P. Bagozzi and Paul R. Warshaw. 1989. "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models". *Management Science*, 35: 982-1003.
- Edgett, Scott, David Shipley and Giles Forbes. 1992. "Japanese and British Companies Compared: Contributing Factors to Success and Failure in NPD". *Journal of Product Innovation Management* 9:3-10.

-
- Ernst, Holger. 2002. "Success factors of new product development: a review of the empirical literature". *International Journal of Management Reviews* 4(1):1-40
- Fenn, Jackie. 2011. "Trends that matter: Top trends and their business impact". *Gartner*.
- Gladwell, Malcom. 2010. *The tipping Point: how little things can make a big difference*. Abacus.
- Hair Jr. Joseph.F., William C. Black, Barry J. Babin., and Rolph E. Anderson (2010). *Multivariate Data Analysis – A Global Perspective*. 7th Edition, Upper Saddle River, New Jersey. Pearson Education, Inc.
- Heeks RB. 2009. "Worldwide expenditure on ICT4D". *ICT4Dblog*. Accessed January 9, 2012. <http://ict4dblog.wordpress.com/2009/04/06/worldwide-expenditure-on-ict4d>
- Kandell, Jonathan J. 1998. "Internet Addiction on Campus: The Vulnerability of College Students." *CyberPsychology and Behavior*. 1(1): 11-17.
- Kaplan, M. Andreas and Michael Haenlein. 2010. "User f the world, unite! The challenges and opportunities of Social Media." *Business Horizons*. 53:59-68.
- Katz L., Michal and Carl Shapiro. 1985. "Network Externalities, Competition, and Compatibility." *The American Economic Review* 75(3):424-440.
- Kauffmann J. Robert, James McAndrews and Yu-Ming Wang. 2000. "Opening the Black Box of Network Externalities in Network Adoption." *Information system research* 11(1):61-82.
- Lin, Chien-Hsin; Hsin-Yu Shih and Peter J. Sher. 2007. "Integrating Technology Readiness into Technology Acceptance: The TRAM Model". *Psychology and Marketing*. 24 (7): 641-657.
- Lloyd P. Jones. 1991. *Taste today: the role of appreciation in consumerism and design*. Oxford: Pergamon Press
- Lovelock, C. H., & Wirtz, J. (2004). "Services marketing: People, technology, Strategy" (5th ed.). Upper Saddle River, NJ: Pearson Education.
- Marseille Justien and Ilan Roos. 2005 "Trend Analysis: An Approach for Companies that Listen". *Design Management Review* 16(1):68-72
- Neff, Jack. 2007. "OMD Proves the Power of Engagement". *Fipp.com*. Accessed January 12, 2012. <http://www.fipp.com/News.aspx?PageIndex=2002&ItemId=13735>
- Netaddiction.com. 2012. "A growing Epidemic". Accessed January 9, 2012. <http://www.netaddiction.com/>

-
- Oren S., Shmuel and Stephen A. Smith. 1981. "Mass and Tariff Structure in Electronic Communications Markets." *The Bell Journal of Economics* 12(2):467-487.
- Page, Albert L. 1993. "Assessing New Product Development Practices and Performance: Establishing Crucial Norms" *Journal of Product Innovation Management*, 10:273-290.
- Parasuraman, A. 2000. "Technology readiness index (TRI): A multiple-item scale to measure readiness to embrace new technologies." *Journal of Service Research*. 2:307-320
- Pavlou, Paul A. (2003). "Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model". *International Journal of Electronic Commerce*. 7(3):101-134.
- Penn, J. Mark and E. Kinney Zalesne. 2007. *Microtrends: the small forces behind tomorrow's big changes*. New York: Twelve Books.
- Qingxuan, Meng and Mingzhi Li. 2002. "New Economy and ICT development in China". *Information Economics and Policy*. 14 (2): 275-295.
- Rohlf, Jeffrey. 1974. "A Theory of Interdependent Demand for a Communications Service." *The Bell Journal of Economics and Management Science* 5 (1):16-37.
- Sawhney, Mohanbir, Ginmario Verona and Emanuela Prandelli. 2005. "Collaborating to create: The Internet as a Platform for Customer Engagement in Product Innovation". *Journal of Interactive Marketing* 19 (4): 4-17.
- Schaler, Jeffrey A. 2000. "Internet addiction: To diagnose or disregard". *New Therapist* 7. Accessed January 9, 2012. <http://www.schaler.net/newtherapist.htm>
- Schneider, Joan and Julie Hall. 2011. "Why Most Product Launches Fail". *Harvard Business Review* 89 (4):21-23
- Sedley, Richard. 2008. "Six Theses on Digital Customer Engagement in a Troubled Economy". *Richard-sedley.net*. Accessed January 12, 2012. <http://www.richard-sedley.net/2008/02/six-theses-on-digital-customer-engagement-in-a-troubled-economy/>
- SSB-1. 2011. "Informasjonssamfunnet." Accessed April 26, 2011. <http://www.ssb.no/emner/10/03/ikt/>
- SSB-2. 2011. "Statistikkbanken." Accessed April 26, 2011. http://statbank.ssb.no/statistikkbanken/Default_FR.asp?PXSid=0&nvl=true&
- SSB-3. 2012. "Tre av fem deltar i sosiale nettsamfunn". Accessed January 9, 2011. <http://www.ssb.no/emner/10/03/ikthus/>
-

- SSB-4. 2011. "Jamn utvikling mot raskare breiband." Accessed May 3, 2011.
<http://www.ssb.no/emner/10/03/inet/>
- Store Norske Leksikon - 1. 2011. "Informasjons- og kommunikasjonsteknologi."
Accessed May 2, 2011. http://www.snl.no/informasjons-_og_kommunikasjonsteknologi
- TNS Gallup. 2011. "TNS Gallup InterBuss Q4 2010: Norske personer og husholdningers bruk av Internett og teknologi." Accessed April 28, 2011.
BI Library Database
- Van Doorn, Jenny, Katerine N. Lemon, Vikas Mittal, Stephan Nass, Doreén Pick, Peter Pirner and Peter C. Verhoef. 2010. "Customer Engagement Behaviour: Theoretical Foundations and Research Directions". *Journal of Service Research*. 13(3):253-266.
- Verhoef, Peter C. Verhoef, Werner J. Reinartz and Manfred Krafft. 2010. "Customer Engagement as a New Perspective in Customer Management". *Journal of Service Research*. 13(3):247-252.
- Voyles, Bennett. 2007. "Beyond Loyalty: Meeting the Challenge of Customer Engagement". *The Economist*. Accessed January 12, 2012.
<http://www.adobe.com/engagement/pdfs/partI.pdf>
- Young, K.S. 1998. Internet addiction: "The emerge of a new clinical-disorder." *Cyberpsychology and Behavior* 1(3): 237:244.
- Wang, Wei. 2001. "Internet dependency and psychosocial maturity among college students". *Int. J. Human-Computer Studies* (55): 919-938.
- Wang, Yi-Shun, Yu-Min Wang, Hsin-Hui Lin and Tzung-I Tang. 2003. "Determinants of user acceptance of Internet banking: An empirical study." *International Journal of Service Industry Management*. 14:501–519

5.0 Appendix

Appendix 5.1: Diagnostice questionnaire of Internet addiction

Questions determining if respondents are classified as addicted Internet users

(Young 1996).

Q1. Do you feel preoccupied with the Internet (think about previous online activity or anticipate next online session)?

- Yes
- No
- I don't know

Q2. Do you feel the need to use the Internet with increasing amounts of time in order to achieve satisfaction?

- Yes
- No
- I don't know

Q3. Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?

- Yes
- No
- I don't know

Q4. Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use?

- Yes
- No
- I don't know

Q5. Do you stay online longer than originally intended?

- Yes
- No
- I don't know

Q6. Have you jeopardized or risked the loss of significant relationship, job, educational or career opportunity because of the Internet?

- Yes
- No
- I don't know

Q7. Have you lied to family members, therapist, or others to hide the extent of involvement with the Internet?

- Yes
- No
- I don't know

Q8. Do you use the Internet as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)?

- Yes
- No
- I don't know

Appendix 5.2: The plan for the data collection and thesis progression

Month	Task
January	<ul style="list-style-type: none"> - Submit Research preliminary, January 16th 2012 - Revision of Master thesis after comments on the preliminary - Write-up of literature review
	<ul style="list-style-type: none"> - Write-up of literature review - Verification of model - Create survey - Pre-test survey
Mars	<ul style="list-style-type: none"> - Collect data - Punching of data - Analyze data
April	<ul style="list-style-type: none"> - Analyze data - Start write-up of results - Easter holiday beginning of April
May	<ul style="list-style-type: none"> - Write-up of results/analysis - Write-up of discussion - Write-up of implications - Write-up of limitations
June	<ul style="list-style-type: none"> - Work with language - Proofread
July	<ul style="list-style-type: none"> - Work with language - Proofread
August	
September	<ul style="list-style-type: none"> - Submission of Master Thesis, September 1s