Brand loyalty in Smartphone

Master Thesis

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Abstract

Problem statement – what factors determine brand loyalty in Smartphone?

Purpose – The purpose of this study is to examine causal antecedent factors leading to brand loyalty in the Swedish Smartphone market

Theory – theoretical review and critical analysis of academic journals related to dependant and independent variables and conceptual model is formulated.

Methodology - Quantitative approach is used to quantify the relationship between dependant and independent variables based on the proposed theoretical model that delineates the relationships between dependant variable brand loyalty and the independent variables customer satisfaction, perceived quality, brand experience, brand image, brand switching cost and product involvement.

Data – In total 200 responses were collected through a structured interview from Uppsala University, Uppsala central train and bus station and two big shopping centers in Uppsala (S: t per galleria and Forum galleria). Apple and Sony Ericsson brand users are interviewed in the data gathering process, 100 respondents for each brand.

Findings – the analysis suggest brand image, product involvement and customer satisfaction determined brand loyalty in Apple brand, whereas customer satisfaction was the only determinate factor in Sony Ericsson brand.

Keywords Smartphone, Brand loyalty, Customer satisfaction, Perceived quality, Brand image, Brand switching cost, Customer product involvement, Sweden

Paper type: Research paper
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1. Introduction

A revolutionary and magical product that is literally five years ahead of any other mobile phone, the guardian (2012). Smartphone is not just a simple mobile phone; rather it has an
extensive data storage capacity and processing power (Leyland, et al., 2010). The Smartphone has moved the data processing power to the hands of mobile users, who can use the mobile device irrespective of time and space (Leyland, et al., 2010). According to Euromonitor 2010, Smartphone contains functions such as instant messaging, downloading applications, and the use of information services such as WiFi and global positioning system (GPS) and entertainment. The market demand for Smartphone in worldwide is high. The percentage shipment has been growing in the last three years remarkably, according to Euromonitor (2012) & Canalys.com (2012). Vendors shipped 488 million Smartphone’s in 2011, compare to 415 clients PCs Canalys.com (2012). A 62.7 % increase its sales volume 2010/2011 according to Canalys.com (2012).

The demand for Smartphone in Sweden has been driven by the availability of cheaper model and sales volume increase by 124% in year 2010, and demand for features phone decline by 22% according to Euromonitor (2012). The forecasted sales volume of Smartphone is expected to increase in the year 2010/2015 by 115% in total. However, mobile manufacturers such as Nokia and Sony Ericsson have faced a new competitive environment in Sweden market from new entrants Apple and HTC according to the report. Apple and HTC are well-known to customers through the importance of the brand in the country and extensive marketing campaigns according to the Euromonitor (2012).

Rapid technological development and short product life have been the characteristics of the industry (Xun Li, et al., 2010). Mobile manufacturing and operating developing companies are pushing Smartphone technology so hard, the new Smartphone with higher speed and more features are coming out every year (Xun Li, et al., 2010). Short product life forced the Smartphone owners to upgrade their phones on an average 18 months to keep with the new generation Smartphone (Xun Li, et al., 2010). In general, most Smartphone customers are young and middle age groups according to Nielsen (2011). Hedonism, visibility, and open-mindedness are the main characteristics of the groups’ and they often consider Smartphone as a means of leisure, simplicity in life, social connectives and information access Anna Wilska (2002).
Both Nokia and Sony Ericsson were dominant in ordinary mobile cell phone and Smartphone respectively, Euromonitor (2012). They have strong customers’ loyalty, especially in Finland and Sweden due to companies’ origin countries and their products have good reputation among the customers. Even the first-time Smartphone used for cell phone model R380 and available in mass market by Sony Ericsson in the beginning of 2000’s according to Steve Bridges (2001). Smartphone demand and growth prospects are high in Sweden according to Euromonitor international, January 2012.

### Mobile Phones brand share 2006-2010

<table>
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<tr>
<th>% retail volume</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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</thead>
<tbody>
<tr>
<td>Sony Ericsson mobile communication AB</td>
<td>31.6</td>
<td>30.7</td>
<td>29.3</td>
<td>24.5</td>
<td>28.0</td>
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<tr>
<td>Nokia Svenska AB</td>
<td>31.8</td>
<td>30.6</td>
<td>24.9</td>
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<tr>
<td>Samsung Electronics Nordic AB</td>
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<tr>
<td>Apple Computer AB</td>
<td>-</td>
<td>-</td>
<td>1.2</td>
<td>5.4</td>
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<td>14.6</td>
<td>15.7</td>
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<td>Motorola AB</td>
<td>3.2</td>
<td>2.5</td>
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<td>Total</td>
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</table>

Source: Euromonitor Mobile phone in Sweden January 2012

*Note*

*Nokia market share includes feature phone*

The above table shows well established telephone manufacturers such as Nokia, Ericsson, LG and Motorola brand’s loss marginal-market share in Sweden to newly emerging mobile manufacturers since the beginning of 2007, according to Euromonitor January 2012 edition. In the five- year period from 2006- 2010 Sony Ericsson, Nokia, LG and Motorola lost 3.6%, 5.2 %, 6.5% and 2.9% market shares on average respectively. However, in the same time Samsung, Apple and HTC were won 1%, 9.4% and 6.9 market shares individually on average.
Why Apple and Sony Ericsson brand? The above table showed Apple and HTC market share in Sweden has been increasing in the last 4-5 years, in contrary the leading Smartphone manufacturers and service provider such as Ericsson and Nokia lose marginal market share in the same period. It would be interesting to analyze four brands at the same time, but due to the limited scope of study and time, in this research, only two brands into consideration. The market leader was Sony Ericsson at the moment and Apple brand won a large market share as compared other new brand on that specific period of time.

1.2 Problem statement
Most previous research on customer loyalty has been carried out in static market and mature environment (Son K, et al., 2010). That means uncommon to see a new market’s actor is dominant. The new actors are dominate because market environment is dynamic:- 1) short product life 2) fast technology and design change/ development 3) constant new product introduction 4) the established market actors are struggling to maintain the competitiveness. What factors lead to Smartphone brand loyalty in Sweden?

1.3 Purpose
The purpose of this study is analyzing causal antecedent factors that lead to brand loyalty in Smartphone market in Sweden.

1.4 structures of the thesis
The thesis structured in the following way. On section “2 “literature review discussed and presented, on section “3 “research methodology discussed and presented on section “4” Sampling and data collection presented, on a Section “5 “ discussion presented , on Section “6” recommendation and suggestion presented and at end appendix and tables.

2. Literature Review
The literature structured in the following way. Overall conceptual frameworks presented first, and then in section 3.1 theoretical discussions on the dependant variable “brand loyalty”. On section 3.2 customer satisfaction, on section 3.3 perceived brand quality, on section 3.4 customer brand experience, on section 3.5 brand image, on section 3.6 switching cost and on section 3.7 customer product involvement discussed in detail.
2.1 Brand loyalty
Brand loyalty has been the center of attention among academicians and practitioners for many decades Jan Møller & Torben Hansen (2006). In their attempt to conceptualize brand loyalty, most academicians and practitioners focused on the behavioral aspect, less emphasis on the attitudinal brand loyalty. The attitudinal aspect has gotten more attention when they notice behavioral brand loyalty couldn’t give them a comprehensive picture of loyalty. Behavioral loyalty considers proportional purchase, purchase sequence and probability of purchase Dick and Basu (1994). Behavioral brand loyalty cannot explain why customers who made a repetitive purchase, sometime switch away and buy other competitive brands Allan & Joel Bubinson (1996). Dick and Basu (1994, p. 100) also state that “the behavioral definition is, consequently, insufficient to explain how and why brand loyalty developed and modified up.”

In contemporary researches brand loyalty has been explained in terms of behavioral and attitudinal perspective Sekan & Gökhan (2005). (Son K, et al., 2010, p. 131) argue that brand
loyalty “a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, causing a repetitive same brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior.” Antouridis & Trivellas (2010, p.333) claim that brand loyalty “....... Loyalty has both attitudinal and behavioral elements, and it is determined by the strength of the relationship between relative attitude and repeat patronage”

Dick & Basu (1994) developed a conceptual framework of brand loyalty based on relative attitude and repeated patronage. According to them, attitude used to evaluate an object/ brand position on a continuum favorable, so brand attitude range from high to low. An individual customer may have a positive or negative attitude toward a brand, but in rare situation customers may patronize a brand for which they have negative attitude Dick & Basu, (1994).

A consumer might have a high or a low altitude to a brand, however situation might affect attitude. Even if customers have high attitude, they might not buy the brand because comparatively great attitude for other brands Dick & Bastu (1994). Attitude is a comparative concept and there is no objective measurement. The relative attitude combines with the attitudinal differentiation of a brand gives more indications of brand patronage than relative attitude in isolation Dick & Bastu (1994). According to them brand loyalty is the result of relatively high altitude and high repeat patronage.

There is a difference between brand loyalty in durable goods, service and consumption goods. In durable goods once the customers bought the product; they will stay away from the market until the need for replacing the product. However, consumer purchase consumption goods frequently and large in number, the behavioral aspect of consumer is the appropriate measurement indicator; the proportion of purchase and the frequency. Whereas durable goods more attitudinal aspects of consumer are important because durable goods are tangible, and it has a long life span as compare to service and consumer goods. For a short while customers will be 100% loyal to a single durable goods brand Thiele & Bennett (2001).

Why is important to study brand loyalty? Brand loyalty plays significant role in brand extensions as well as brand equity. Jan Møller Jensen and Torben Hansen (2000, p. 444) state that brand loyalty increase brand market share “brand loyalty increases exponentially
market share, resistance to alternative competitor brands and favors positive word of mouth”. (Mokhtar, et al., 2000, p. 827) state that brand loyalty is a crucial role in organization profitability and future growth prospect “Loyal customers stick with their suppliers or service providers over the long run. They also express their loyalty by giving a greater share of their wallets to their high-value brands or service providers and by generating word-of-mouth referrals. All of these behaviors will directly affect profitability.”

Why only six factors? Brand loyalty is a broader concept and it is influenced by various factors. In this thesis the factors that influence brand loyalty were limited to six for operational reasons. As the number of independent variables increases, the size of questions would also increase in numbers. The response rate would be declining, because the questions take a long time to respond. To encourage response rate the questions and the independent variables were limited to reasonable numbers, even if there are others independent variables that could affect brand loyalty.

2.2 Customer Satisfaction
Customer satisfaction is the result of purchase expectation and post purchase experience comparison with incurred cost Serkan & Gökhan (2005). The customer might have high, low and no expectation. It is also depends on the importance of brand as well as the cost. If the expectation for brand/product performance is high, post purchase experience will determines customer satisfaction even if the customers are low cost conscious.

Customer satisfaction can be overall satisfaction Serkan & Gökhan (2009). Overall satisfaction is the result of accumulative experience and encounter rather than specific satisfaction or dissatisfaction, which has longitudinal by nature Serkan Aydin & Gökhan (2009). Overall customer satisfaction is longitudinal, so a customer's response is cognitive.

Paurav Shukla (2004, p. 85) states that customer satisfaction is “customer’s psychological response to his/her or her positive evaluation of the consumption outcome in relation to his/her expectation”. Satisfaction is a subjective evaluation of the consumption experience. The argument is based on disconfirmation satisfaction theory. The theory state that customer evaluation of product/brand is based on comparison between expected performances with

Expectation indicates the customers anticipated performance. There are various expectation indicators that customers might expect from brand performance. Customers might expect brand provide functional or other expectation, but that depends on customer's interest. Although all customers might not be able to list out the entire possible brand benefits due to the fact that customers might have little awareness or motivation to do so Joss & Hans (1995). Their brand performance rating is based on the attributes' that they are familiar with or the attributes that customers want to have from the brand.

Performance is how the product or brand carries out the intended purpose or operating character Gilbert & Carol Surprenant (1982). It is highly influenced by customer expectation. Brand performance is a baseline for comparison with the customer expectation. Brand performance might exceed, meet or below expectation. The performance criteria are highly based on tangible and intangible's brand attributes. Brand specific performance attributes include hardware, software, stylishness or other attributes.

Hardware refers physical components of the technology. That can be anything physically handled i.e. Keyboard, camera, screen etc. Software refers operating systems that run on the system, i.e iTune, GPS etc. Stylishness refers the outlook of the object. I.e weight, size, shape, design, color etc., Encyclopedia Britannica Online.

Disconfirmation is the variance between prior expectation and actual performance Gilbert & Carol Surprenant (1982). Customers might have positive or negative disconfirmation of their experience. Positive disconfirmation indicate performance exceed expectation, while negative disconfirmation indicate performance less than anticipated expectation. If the consumers have no previous experience with alternative brands, they might be less motivated to compare the difference between expectation and performance; it is hard for them making any meaningful comparison Joss & Hans (1995). However, individual consumption experiences determine the outcome of satisfaction or dissatisfaction Rodoula Tsiotsou (2005). Customer consumption experience rated based on individual attitude on continuum range, very dissatisfied to very satisfied.
Why is important to study customer satisfaction? Satisfied customer will be more inclined to stay with service provider or using the same brand in the future, however, dissatisfied customers are willing to search alternative brand information. H. Lin & Y. Wang (2006 p. 273) stated that “a dissatisfied customer is more probable to search for information on alternatives and more likely to yield to competitor overtures than is a satisfied customer. According to Hill & Alexander (2006, p. 1) “It is far less costly to keep the existing customers than it is to win new ones up”. In supporting previous argument Hill & Alexander (2006, p. 2) state that customer satisfaction one way of measuring organization and product performance in a competitive marketplace “customer satisfaction is a measure of how your organization totals product performance in relation as a set of customer requirements.” Satisfied customers have high probability remain to use the existing company product or brand as compare to dissatisfied customers, who are willing to search information about alternative product or brand Santouridis & Trivellas (2010).

Numerous empirical studies on goods and service markets support customer satisfaction influence loyalty positively Youl & John (2010). However, satisfaction is a necessary condition to customer loyalty, but not it is sufficient condition. Even if customers are satisfied with the brand, sometime they switch to other brands. Brand loyalty is a deeply held positive attitude combine with repeat purchasing behavior Youl & John (2010). Only those satisfied customers will have a positive attitude and repeat purchasing behavior. It is hard to conceptualize dissatisfied customers might have a high positive attitude, and even if they show repeats purchasing behavior in situations where there is no alternative brand to substitute or high switching cost Youl & John (2010).

Brand satisfaction is one factor that influences brand loyalty (Youl & John 2010, Bennett & Bove 2001; Bennett, Härtel, &McColl-Kennedy 2005 and Jones & Suh 2000). The more the customer satisfied with the brand the more they are willing to use the same brand in the future. Feick, L., Lee, J. and Lee, J. (2001) stated that high level satisfaction strongly correlated with increase brand loyalty.
2.3 Perceived brand quality

Perception of brand quality is determined by individual customers (Cole, Robert and Flynn 2009). Individual customer is the ultimate determinate of quality. However, there is a parameter than can be used to establish brand quality as a reference. Bruks & Naylar (2000) and (Pappu, Quester,& Cooksey, 2006) state that the common method to assess the quality of product/service is establishing quality dimension. The following are quality parameters to assess the quality of durable goods; easy to use, serviceability, durability, performance and excellent feature (prestige).

Easy to use refers a customer's ability to start and operate the product with the help of instruction available with a product. The instructions to start and operate the product are clear and understandable to meet quality criteria. Serviceability refers to the customer’s access to obtain services from manufacturers. The services include repairing and upgrading the brand, services also available with reasonable time, place and price to customers. Durability refers how long the product last, the length of time product function properly without the need of repair. Performance refers how well the product performs the intended purpose, for example, how well micro-wave cook food. Prestige refers to how well the products communicate superiority and relevance to a social group Bruks & Naylar G (2000).

Lee. H, Lee. C &Wu .C (2009) argue that brand quality is a cumulative evaluation of brand excellence. It includes tangible and intangible brand attributes. Customers might not understand brand quality the way manufacturers do Bruks & Naylar (2000). According to them, it is common method customers use intangible brand attributes when their asses brand quality for durable goods. (Cole, Robert, Flynn, 2009, p. 68) state that “Perceived quality can affect a willingness to buy, and the price that customers will pay. “

Brand loyalty expected to occur when perceived quality has been judged favorably Gurbuz (2008). According to him when the customer perceived the brand has high quality, they will develop brand loyalty. He also states that perceived quality is the main driver of brand loyalty and a positive quality evaluation as a construct that maintains behavioral intentions. Boulding et al. (1993) states that the positive relationship between perceived quality and repurchase intention and willing to recommend.
2.4 Brand experience

Brand experience is a subjective and internal response as well as a behavioral response when an individual customer's encounter with the product, shopping and consumption Brakus & Zarantonello (2009). Product experience is the result of the customers physically contact with the product or virtual presentation on advertising Brakus & Zarantonello (2009). Some experience might have a short impact, where some experience stays for long. Brand experience span from brand consumption to the environment where brand displayed (Kerin, et al., 1992).

However, Brakus & Zarantonello (2009, p. 53) argue that brand experience is not a general evaluation of customers overall experience “brand experience is specific sensations, feelings, cognitions, and behavioral responses triggered by specific brand-related stimuli.” For example, the customers might have specific experience; this iPod puts me in a good mood. However, experience through a time results general evaluation and attitude toward the brand.

Other researchers rather argue brand experience as the total pleasantness and unpleasantness encounters that affect attitudinal and behavioral response of the customers and influences patronage (Kerin, et al., 1992). Sahin, Zehir and Kitap (2002, p. 1289) argue that brand experience as a combination of behavioral, affective and cognitive response “Brand experience is conceptualized as sensations, feelings, cognition, and behavioral responses evoked by brand-related stimuli that is part of a brand’s design and identity, packaging, communications, and environments.” The positive outcome of brand experience will influence brand loyalty.

Brand experience has a direct relationship with brand loyalty and it plays a crucial role in brand building process, Iglesias, Singh, & Batista- Fouget (2010). According to them if the customers have positive and pleasant experience, they would likely purchase the same brand repeatedly and they become loyal to the brand. Iglesias, Singh, & Batista- Fouget (2010 p. 572) also state that “brands which are capable of delivering a superior brand experience can achieve preference over and differentiation from other brands and build brand loyalty and foster evangelism”.

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2.5 Brand Image

(Lee. H, Lee. C & Wu.C, 2009, p. 1093) state brand image as “perceptions about a brand as reflected by the brand association held in consumer memory.” Consumers associate the brand with tangible and intangible attributes, often it is represented by the feelings and thoughts the consumers have in their minds. The brand association easily helps customer’s process information and retrieves when they made the purchasing decision because it recalls positive feelings and attitudes toward that brand (Lee. H, Lee. C & Wu. C, 2009).

The brand image is also brand uniqueness when it comes to competing brands (Lee. H, Lee. C & Wu. C, 2009). Almost all competitive brands have unique dimensions to differentiate themselves from the competitor’s brand. The brand might be differentiated by the color, the texture, sound, packaging, design, weight, while other more abstract dimensions can be brand uniqueness.

Brand image also includes the customer’s knowledge, belief and information about the specific brand (Lee. H, Lee. C & Wu. C, 2009). The source of information and knowledge might come from advertising, promotion, friends, internet, word of mouth or company reports and bulletins. Customers’ knowledge might include the range of products within the brand, the philosophy the company and the brand’s quality. When consumers grow a positive image for a brand, they might develop a strong connection. Customers may also develop beliefs about the brand. If the customers have a strong belief about a brand, the more deeply rooted the brand image in their mind. As an outcome, consumers easily identify brands and they are not easily persuaded by a competitor’s offering as they would otherwise. Hyun & Kim (2011, p. 430) stated that “[...] A favorable brand image would have a positive influence on consumer behavior towards the brand in terms of increasing loyalty, commanding a price premium and generating positive word-of-mouth.” Chen and Myagmarsuren (2011, p. 960) argue that” Brand image is a subjective perception, a mental representation of functional and non-functional information regarding the product or service. One important part of subjective perception of brand image is the symbolic concepts brand personality.”

Brand image is the perceived functions and symbolic association in the mind of customers and the strength and favor of brand image depends on the consumer’s value (Salciuviene, Ghauri, Mockaitis and De Mattos, 2009). According to them a product functional attribute is
tangible excellence of a brand on performing certain technical functionality in high standard and symbolical brand attribute refers intangible benefits offered by brand such as self-image and status.

Brand image plays an important role when consumer evaluates service and product and it is a driving force for customer brand loyalty Chen and Myagmarsuren (2001). According to them brand image influence attitudinal and behavioral response of customers toward brand, company and services. Kwon and Lennon (2009) also state that brand image crate strong company patronage intention among customers, and they are willing to pay premium prices and strong feeling and affiliation.

### 2.6 Brand switching costs

Switching cost is cost incur by a customer when they decide to switch to another brand. The cost might be one time, which includes financial and non financial Burnham & Mahajan (2003). According to them, the cost includes" searching cost, transaction cost, learning cost, customer habit, emotional cost, cognitive effort, coupled with financial, social and physiological risk of part of the buyer."

Searching cost might include time and an effort made in searching information and comparing alternative brand quality, price, serviceability, product warranty and other brand offering from competitive brand Burnham & Mahajan (2003).

The economic cost is sunk cost and progressive cost. Sunk cost is the one-time purchase cost incurred by customers, which is paid at the beginning of brand purchase and onetime sum payment. Progressive cost is an additional cost incurred by customers when they update functional system and repair. The sunk costs and progressive costs increase switching costs because it increases customers’ investment on a brand Burnham & Mahajan (2003).

Learning cost usually stated as the effort and energy put by customers to learn new setting and feature. Learning progress depends on customer skill and the complexity of brand Burnham & Mahajan (2003). The more complex to learn a brand is the more time-consuming to get used to a new setting and procedure. Long procedural learning might frustrate customers and they hesitate to change brands.
Social and physiological risk also factor to switching cost. Customers’ perception about brand switching might affect social status Burnham & Mahajan (2003). If a brand glorify/undermine social states, the high / low probability the customer will show switching tendency. Customers might fear they might not end up using the new brand which is considered as less worthy among friends and family members Burnham & Mahajan (2003).

Physiological risk is uncertainty associated brand when customers were not sure about brand quality and performance in advance Burnham & Mahajan (2003).

Switching cost has some advantage to a firm, because it has a direct effect on brand loyalty Serkan & Gökhan (2005). They stated that higher the switching cost reduces customer sensitivity to price and satisfaction level. Switching cost makes customers less likely to switch to another brand Feick, L., Lee, J. and Lee, J. (2001). They state that even if the customers are dissatisfied, they will keep using the brand due to high switching cost. The higher switching cost reduces information searching for alternative brands as Jones .H , Mothersbaugh .D, and Beatty .S ( 2000).

2.7 Customer product involvement

Customer product involvement is conceptualized as individual customer’s connection with the brand. Customers might think a specific product or brand is personally important and necessary. The customer perceptions determine a product involvement level rather than a product Pascale & AI Lin Lim (2003). The brand might have different importance in different situations and it influences customers’ product involvement. For example, a person who is going to prepare a dinner for the guest who has diabetes/allergic problem might highly involve in the selection of grocers than other time. Customers are highly involved in product selection when product is considered very important, essential and give meaningful pleasure & desire according to Pascale & AI Lin Lim (2003). The essence of a brand for a customer’s might influence information searching, processing and decision making, Von Riesen & Herndon (2011). According to (Malär, et al. 2011, p. 36) “a consumer’s level of involvement with an object, situation, or action is determined by the degree to which she/he perceives that concept to be personally relevant." Personal relevance of brand emerged usually from individual self-concept, self-esteem and public self-consciousness according to them.
Customers’ involvement with a brand has different reasons. Mittal B & Lee. M (1989, p. 366) state that the followings are the reasons that drive customer involvement “(a) utilitarian, i.e., economic, rational, functional goals - these concerns the physical performance of a product (b) sign-value, i.e., A social, self-concept related, or impression management goals and (c) hedonic, i.e., Sensory pleasure or experiential goals.” From the statement utilitarian, sign value and hedonic are the antecedent factor for customer involvement. Mittal & Lee (1989) stated brand risk is another valuable source to customer product involvement. According to them, the brand risk is the probability that customers happen to buy inferior products.

Customers’ consumption of brand is not based on only satisfying a basic need; it is also used as a way of expressing self as an individual and social status. Petruzzellis (2010, p. 612) argue that “It is a way of self expression, individual identity formation, creativity, or even art.”

Brand loyalty interacts with customer product involvement (Pascale & Ai Lin Lim 2003, LeClerc and Little 1997). They stated that the repetitive purchase of the high involvement product indicates brand loyalty. Park (1996) stated that product involvement and attitudinal loyalty are highly correlated. Olson (2007, p. 320) stated that product involvement is a strong indication of brand loyalty “brand loyalty has typically explained the origins of brand commitment as attitudinal loyalty or as an outcome of product involvement, and suggested a positive relationship between product involvement and brand loyalty”.

3. Methodology

Quantitative method is used to meet the purpose of this study, estimate the quantitative effect of the causal variables upon the variable that they influence. Brand loyalty is the dependant variable, which is influenced by the independent variables. The independent variables are customer satisfaction, brand quality, brand experience, brand image, switching costs and customer product involvement. Dependent and independent variables have a linear relationship. By definition linear relationship is the proportional increase/decrease in independent variability will proportional increase /decrease dependent variables.
Multiple regression mathematical models used to analyze the causal relationship between dependant and independent variables. This method is used when there is more than one variable that cause change in the dependant variable. Microsoft Excel and SPSS are used to analyze the data. Microsoft excel is used to compile the raw data before the raw data transfer to SPSS program. Variables coefficients, p-value, R and $R^2$ (square) of the regression output are used to investigate the statistical significance of the estimated relationships, that is, the degree of confidence that the true relationship is close to the estimated relationship.

### 3.1 Data Collection and Sampling characteristics

The data collection took place in Uppsala. Uppsala University faculties, Uppsala central train and bus station and two big shopping centers that found in central Uppsala (S: t per galleria and Forum galleria). The assumption for the sampling site is, the sites attract every day many people from different part of the city and neighbors’ cities, and also it is shopping places for Smartphone. These places increase the chance to reach many people who are currently using Apple and Sony Ericsson brands.

After data collection was completed, the compiled data in Microsoft Excel worksheet were transformed to SPSS program. Apple and Ericsson's data compiled separately. The survey questions have eight parts. The first part of the question includes basic information of the respondents; age, gender, education and which Smartphone brand the respondents were using.
at the moment. The second part of the question includes customer satisfaction; the third part of the question includes perceived quality; the fourth part of the question includes brand experience, the fifth part of the question includes brand image; the sixth part of the question includes switching costs; the seventh part of the question includes customer product involvement, and the eighth part includes brand loyalty. The questions organized from the independent variable to the dependent variables. There were 100 respondents for each brand; in total 200 respondents of which 35% of respondent were men and 65% respondent was Female. 72% of respondent were university graduates (first-degree), 17.4% of respondent was high school graduates, 9.7% of respondent was a master’s degree graduate and 0.7% of respondent was above the master’s degree level. The average age of the respondents was 24 years old. Sixty years was the oldest respondent and eighteen years were the youngest respondents.

A group of people who are currently using the brand (Apple, Sony Ericsson) are the population of this study. The age limits between 18-60 years old. The age limits consider the users’ income level and the inclination to new technology adoption. The users’ income refers the amount of money that can be used for consumption and saving. In general eighteen and above years old is most adult start work and get sustainable income. Adoption of technological product refers consumer’s attraction to the product. When people get old, they are not usually attracted to products that have complex setting. Mary & Zeithaml (1985) state that the older the consumers, the more negative view of technology. According to them sixty five and above years old consumers are less inclined to adopt new technology. However, Ali Quazi (2011) states that older people above fifty years use their innovation skills significantly less than those ages under fifty. Ali Quazi (2011, p. 36) states that “Older people are less interested in adopting a technological innovation as they experience higher levels of anxiety in using a new technology.” Sixty years age considered the upper limit for this thesis.

The questions for thesis were reached to respondent on their presence and asked with alternative choices. Each question has a seven-point Likert scale (one being ‘highly disagreed’ and seven being ‘highly agrees’). The questions were tested on a small number of respondents before administer into large scale. The respondents were five Uppsala University students and three sales women working in a cosmetics shop in Central Uppsala. The sales women involvement in preliminary survey was a random choice. They were willing to
participate in the survey questions. They were between 24 -28 years old. Some questions were further modified to accommodate the respondents' understanding. Couples of questions were removed from final research questions after respondents' suggestion. Respondents said questioners not capture the real importance of Smartphone description. The following questions were removed after preliminary survey:

*I think that this brand gives me an image of someone important

*This brand changes my image in other people’s eyes

*This brand reflects my success in life

*I think this brand can relate to the pleasant experience

Result from preliminary survey indicated, there were no discrepancies in the response pattern from actual survey. The following table showed the preliminary survey result.

<table>
<thead>
<tr>
<th>N</th>
<th>LOYALTY</th>
<th>Age</th>
<th>Gender</th>
<th>EDUCA.</th>
<th>SATISFACTION</th>
<th>QUALITY</th>
<th>BRAND EXP</th>
<th>BRAND IMAGE</th>
<th>SWITCHING COST</th>
<th>PRODUCT INV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6.4</td>
<td>24</td>
<td>F</td>
<td>High school</td>
<td>5.40</td>
<td>5.5</td>
<td>5.6</td>
<td>5.8</td>
<td>2.4</td>
<td>4.8</td>
</tr>
<tr>
<td>2</td>
<td>5.4</td>
<td>25</td>
<td>F</td>
<td>High school</td>
<td>6.20</td>
<td>6.4</td>
<td>4.5</td>
<td>5.4</td>
<td>4.8</td>
<td>2.3</td>
</tr>
<tr>
<td>3</td>
<td>4.2</td>
<td>27</td>
<td>F</td>
<td>High school</td>
<td>6.30</td>
<td>5.67</td>
<td>6</td>
<td>6.68</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>4</td>
<td>6.3</td>
<td>27</td>
<td>M</td>
<td>Bachelor</td>
<td>6.20</td>
<td>5.6</td>
<td>6.2</td>
<td>6</td>
<td>3.8</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>26</td>
<td>F</td>
<td>Bachelor</td>
<td>5.50</td>
<td>5.6</td>
<td>3.7</td>
<td>6.4</td>
<td>1.4</td>
<td>2.2</td>
</tr>
<tr>
<td>6</td>
<td>5.4</td>
<td>20</td>
<td>M</td>
<td>Bachelor</td>
<td>5.58</td>
<td>6</td>
<td>3.4</td>
<td>6.8</td>
<td>1.4</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>6.4</td>
<td>28</td>
<td>F</td>
<td>High school</td>
<td>5.29</td>
<td>4.8</td>
<td>4.4</td>
<td>5.4</td>
<td>4.4</td>
<td>5.6</td>
</tr>
<tr>
<td>8</td>
<td>6.2</td>
<td>19</td>
<td>M</td>
<td>Bachelor</td>
<td>6.00</td>
<td>5</td>
<td>5.4</td>
<td>6.6</td>
<td>2</td>
<td>3.8</td>
</tr>
</tbody>
</table>

**Average response

The questioners were conducted different places in Uppsala, but there were no noticeable differences in the response pattern due to location difference. That might be the places are close to each other and the respondents were similar age group.

The sampling design of this thesis is non probability. Sekaran & Bougie (2011) state that in non probability sampling the elements in the population do not have any probability of being chosen as sample subjects. However, in probability sampling design which each element of the population has some known probability of being selected as sample subject Sekaran &
Bougie (2011). Convenience sampling is one of non probability sampling designs. Convenience sampling refers to the procedure of collection of information from members of the population, who are most conveniently available to provide Willam Zikmund (2000). Why this method? Because it was hard to convince Smartphone sellers in Uppsala city to access their customer database to carry out probability sampling. The possibilities of their database access were restricted due to confidentiality.

**Advantage of convenience sampling:**
- Convenient and economical
- Large number of questioners collected quickly and economically
- It would be ground for future exploratory research based on probability sampling

**Disadvantage of convenience sampling**
- It is inappropriate generalizing the result beyond the specific sample group

### 3.2 Measurement

In measuring the given independent variables some dimension measurements and scales were adopted from previous research work that already passed requirements for validity and reliability.

**Validity:** - It refers a characteristic of measurement. Do a test measures what the researcher intended to measure and how well a measure is an indicator of specific traits Cooper & Schindloer (2011).

**Reliability:** - It refers the measurement stability over time, the measurement instrument will produce the same result each time with the assumption that the measured item under consideration is not changed Willam Zikmund (2000).

#### 3.2.1 Brand Loyalty

To measure brand loyalty seven scales measurement is adopted from Serkan & Gökhan (2005). Dimensional measurements adopt from Dick & Bastu (1994). The questions which included in this part is adopted from previous research with slight modification aimed at capturing the core essence of loyalty from this thesis perspective; attitudinal and future purchasing tendency of customers, which are also the main theme of Dick & Bastu (1994) research work. The questions included under this part:
• I will buy an X brand in the future even if competitive brands offer cheaper prices
• I recommend brand X to my friends and family
• I consider myself loyal to brand X
• Brand X is my first choice among Smartphone brand
• I have a favorable attitude towards brand X

3.2.2 Customer Satisfaction
For measuring customer satisfaction, seven scale measurements strongly dissatisfied (one) and strongly satisfied (seven) is adapted from Gilbert & Carol Surprenant (1982) & Rodoula Tsiotsou (2005). Various researchers have used different dimension to measurement customer satisfaction. Rodoula Tsiotsou (2005) used three dimensional measurements for sport shoes, Gilbert & Carol Surprenant (1982) used seven dimensional measurements for video disc players, but in this thesis seven dimensional measurements were used. The questions that included under satisfaction are adopted from previous research and some modification with the aim of capturing the essence of satisfaction from this thesis perspective. Customer expectation, brand performance, disconfirmation and overall satisfaction are the core area of focus. The questions include in this part:

• My expectation regarding brand X performance is high
• I satisfied with brand X using experience
• Overall brand X meets my need and I am satisfied
• I am satisfied with the stylishness of brand X
• I am satisfied with the hardware functionality of brand X
• I am satisfied with the operating functionality of brand X
• I am satisfied with the service provision of brand X

3.2.3 Perceived Brand quality
For measuring perceived brand quality, seven scale measurements are adopted from Licen Darsono and Junaedi (2006). The operational measurements are subjective judgment made by the consumer regarding the excellence or superiority of a product. Five dimensional measurements with some modification is adopted from (Pappu, Quester & Cooksey, 2006) and Ramos & Franco (2005). They used measurement dimension for car and TV sets. The questions under perceived brand quality are:

• Brand X offers products with very good quality
• Brand X offers products with consistent quality
• Brand X offers very durable products
• Brand X offers very reliable products
• Brand X offers products with excellent features

3.2.4 Brand experience
For measuring brand experience five-point Likert scales with anchors strongly disagree (one) and strongly agree (five) is adopted from (Azize, Cemal and Hakan Kitapc, 2011) and (Brakus, Schmitt & Zarantonello, 2009). The former authors used to measure automobile experience and the later authors used to measure Apple/iPod experience. The operational measurements are sensations, feelings, cognition, and behavioral responses of customers to the brand. It is reasonable enough to get a consistent scale measurement across the variable. The scale is adjusted to 7. The questions under brand experience included are adopted from previous research with slight modifications. It’s aimed at capturing the essence of customer's brand experience from this thesis perspective.

• Using brand X crate positive feelings and sentiments
• I find brand X interesting in a sensory way
• Brand X increase desire to learn new thing and problem solving
• I feel brand X products go with my way of life
• Because of brand X, I feel I am part of a smart community

3.2.5 Brand Image.
For measuring brand image a five-Likert scales ranging from one (completely disagree/completely unimportant) to five (completely agree/very important) is adopted from (Salciuviene, Mockaitis and De Mattos, 2009). They used to measure cell phone brand image from different cultural perspectives. The operational measurements are perceptions’ attribute benefits and symbolic attributes benefits’. The measurement scale adjusts to 7. The questions under brand image include:

• I think brand X is well-known and prestigious
• I think brand X has a reputation for high quality
• I think brand X is fashionable and elegant
• I think brand X is number one among Smartphone brands
• The organization manufacturing brand X is trustworthy
3.2.6 Brand switching costs
For measuring perceived switching cost, a seven (7) scale measurement is adapted from (Aydin Özer and Arsil, 2005). The operational measures are perceived economic costs, learning costs, searching costs, social and physiological risk was adopted from Paurav Shukla (2004). He used dimensional measurement for brand switching cost on Vehicles, TV, Soap, Hair oil and Ice cream. The questioners under brand switching costs include:

- I think it is not worth spending money on brand X
- I am afraid that my choice of brand X may reduce the esteem that I have among my families and friends
- I am afraid that if I change brand X to another brand I will lose important files that I have on it
- I am afraid that if I want to change brand X to another brand in the future I cannot afford the time to get the information and fully evaluate alternative brand
- I am afraid that it needs effort and time to learn new features and setting of brand X

3.2.7 Customer product involvement
For measuring customer product involvement five points like scale response format (fully agree- fully disagree) and five dimensions measurements are adopted from Laurent and Kapferer (1985). Measurement dimension is adopted from Pascale and AI Lin Lim (2003). They used to measure sport shoes & ballpoint pens. The operational measurements are product importance, risk importance, risk probability, pleasure and sign. The measurement scale adjusts to 7. The questioners under product involvement include:

- Brand X personally very important to me
- Brand X says a lot about who I am
- I should be annoyed with myself, if it turned out I had made the wrong choice when buy brand X
- When I buy brand X I can never be quite sure it was the right choice or not
- Whenever I buy brand X it is like giving myself a present

4. Result and analysis
Before proceeding to regression analysis, data clearing and statistical test were done. SPSS used in data clearing. The collected data passed through the following test; normality, multicollinearity, reliability and validity.
Normality test is a way to estimate whether the sample data close approximation to the actual unknown population, Paul Newbold (2003). Graphical and statistical methods can be used to test normal distribution of the sampled data. Normal probability plots provide a good way to test variables' distribution. The horizontal axis indicates data ranks from smallest to largest; the vertical axis indicates cumulative normal probability of the ranked data Paul Newbold (2003).

In the plots, a normal distribution produces a straight diagonal line, and if the plotted data follow the line, the normality is assumed Lawrence (2006). Statistically Skewness’s and Kurtosis used to check normality. For normal distribution, Skewness's range between 1and -1 Lawrence (2006) and Kurtosis range between 3 and -3, Paul Newnold (2003). Skewness is a statistical test that used to verify whether the data are distributed symmetrically or not Mark (1996). Kurtosis measures the relative concentrations of data value on in the center versus on the tail Paul Newnold (2003).

Apple and Sony Ericsson sample data meet the normal distribution criteria. Skeweness and Kurtosis range between on the acceptable level of normality, but with one exception age is not normally distributed in both brands. It is positively skewed and marginally high Kurtosis value.

The multicollinearity used to test whether two or more independent variables are highly correlated to each other. The test indicated there is no high correlation between independent variables for both Apple and Sony Ericsson sample data. VIF value of independent variables less than the threshold level 3, for both Apple and Sony Ericsson Andy Filed (2009).

Both Apple and Sony Ericsson brands meet the reliability test with their respective Cronbach’s Alpha value of (. 851) and (. 907) which is presented in (table 2 & 3) the appendix part of the thesis. The values are greater than the recommended level (. 80), by Andy Field (2009).

The mean value of each independent variable was used for regression analysis. The questions under customer satisfaction, perceived quality, brand experience, brand image, switching costs and product involvement are added and then divided by the number of questions to get the mean value (Q1+Q2+Q3+Q4… Q7/7).
4.2 summary output

Tables (1 and 2) below showed summary output of the regression from SPSS for Apple and Sony Ericsson brand. It provides summary statistics about the usefulness of the regression according to Albert (2001).

Table 1

**Model Summary of Apple brand**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.756(^a)</td>
<td>.572</td>
<td>.529</td>
<td>.938</td>
<td>.572</td>
<td>13.375</td>
<td>9</td>
<td>90</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), PRODUCT INVOLVEMENT, EDUCATION, GENDER, QUALITY, AGE, SWITCHING COST, SATISFACTION, BRAND EXP, BRAND IMAGE

R indicates how strong the independent variables as the whole related to dependant variable, from the table 1& 2, it is possible to see (. 756) and (. 758) on a scale from 0 to 1 for Apple and Sony Ericsson respectively.

Table 2

**Model Summary of Sony Ericsson**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.758(^a)</td>
<td>.574</td>
<td>.532</td>
<td>1.170</td>
<td>.574</td>
<td>13.482</td>
<td>9</td>
<td>90</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), PRODUCT INVOLVEMENT, Age, GENDER, EDUCATION, SATISFACTION, SWITCHING COST, BRAND EXP, BRAND IMAGE, QUALITY

The model summary indicates independent variables have strong relationships with dependant variables. R square indicates the degree of independent variables variation explaining the
dependant variable Albert (2001). A 57.2 % change of the dependant variables (brand loyalty) on Apple brand explained by independent variables all taken together. A 42.8 % change in the dependant variable on Apple brand explained by other variables, which have not been included in this regression model. A 57.4 % change in the dependant variable (brand loyalty) on Sony Ericsson explained by independent variables all taken together. A 42.6 % change of dependant variables on Sony Ericsson's explained by other variables, which have not been included in this regression model.

4.3 ANOVA output

An ANOVA portion of the output designed to evaluate the general validity (global utility) of a multiple regression model Albert (2001). According to him, ANOVA table examines the variations in the dependant variable explained by the regression and compares it with variation with unexplained by the response variable. However, ANOVA doesn’t tell about the individual contribution of variable in the model Andy Field (2009).

ANOVA taste whether the model is significantly better at predicting the outcome than using the mean as a best guess. Specifically, the F- ratio represents the ratio of the improvement in prediction that results from fitting the model “regression “relative to the inaccuracy that exists in the model “residual” Andy Field (2009).

Table 3

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
</table>

28
If the improvement due to fitting the regression model is much greater than the inaccuracy within the model then the value of F value greater than 1 and SPSS calculates the exact probability of obtaining the value of F by chance Andy Field (2009). The Apple model the F – ration is 13.375, which is very unlikely happen by chance (p< .05). The Sony Ericsson model F- ratio is 13.482, which is highly significant (p< .05). The results indicate the models significantly improve the ability to predict the outcome variables.

Table 4

ANOVA (Sony Ericsson)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>166.149</td>
<td>9</td>
<td>18.461</td>
<td>13.482</td>
<td>.000</td>
</tr>
<tr>
<td>1 Residual</td>
<td>123.241</td>
<td>90</td>
<td>1.369</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>289.390</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: LOYALTY

b. Predictors: (Constant), PRODUCT INVOLVEMENT, EDUCATION, GENDER, QUALITY, AGE, SWITCHING COST, SATISFACTION, BRAND EXP, BRAND IMAGE
4.4 Model Parameters

The multiple regressions take the form of equations that contains the coefficient (b) for each predictor and “b” values indicate the individual contribution of each predictor to the model. Andy Field (2009). The b values tell the relationship between brand loyalty and each predictor. Positive coefficients indicate positive relationship and negative coefficients indicate negative relationship. The b values also indicate what degree each predictor affects the outcome if the effects of all other predictors are held constant Andy Field (2009).

Each beta value has an associated standard error indicating whether these values differ across different samples, and the standard error used to determine whether “b” values differ significantly from zero Andy Field (2009). If “t” test associated with “b” values significant (p<.05) then the predicates significantly contribute to the models. The smaller the value of significance and the larger “t” values the greater the contribution of the predictors Andy Field (2009). For Apple model brand image “t” value = 4.359, p<.05 product involvement “t” value = 4.392, p<.05 and satisfaction “t” value = 2.367, p < .05 are significant predictors of brand loyalty. For Sony Ericsson model customer satisfaction “t” value = 2.568, p<0.05 is a significant predictor of brand loyalty.

However, the following predictors have no significant effect on Apple brand loyalty because p value is greater than the minimum .05 levels; (age p= .652, gender p= .363, education p= .139, perceived quality p= .617, brand experience p= .590, switching cost, p= .400) and the following predictors have no significant effect on Sony Ericsson brand loyalty, because p value is greater than minimum (.05) levels (age p = .968, gender, p= .627, education p= .301, perceived quality p= .186, brand experience, p = .128, brand image, p= 0.73, switching cost p = .332, product involvement, p= .151).

<table>
<thead>
<tr>
<th>Coefficients of Apple Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

30
a. Dependent Variable: LOYALTY

*b coefficient of predictors

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>-1.326</td>
<td>.993</td>
<td>-1.336</td>
<td>.185</td>
</tr>
<tr>
<td>1</td>
<td>Age</td>
<td>.001</td>
<td>.025</td>
<td>.003</td>
<td>.040</td>
</tr>
<tr>
<td></td>
<td>GENDER</td>
<td>-.132</td>
<td>.270</td>
<td>-.035</td>
<td>-.488</td>
</tr>
</tbody>
</table>
a. Dependent Variable: LOYALTY

BL\textsubscript{Apple} = -1.609 + .715BI + .475 CPI + .386 Cs

BL = Brand Loyalty, BI= Brand Image, CPI = customer product Involvement and Cs= Customer satisfaction

**Brand Image** ( b= .715): The coefficient of brand indicates that if it increase by 1 unit, brand loyalty increase by .715 units of Apple brand. This implication is true, if the other two variables are held constants (customer product involvement and customer satisfaction).

**Customer product involvement** (b=. 475): The coefficient of customer product involvement indicates that if it increases by 1 unit, brand loyalty increase by .475 units of Apple brand. This implication is true, if the other two variables are constants (brand image and customer satisfaction).

**Customer satisfaction** (. 386): The coefficient of customer satisfaction indicates that if it increase by 1 unit, brand loyalty increase by. 386 for Apple brand. This implication is true, if the other two variables are constants (brand image and customer product involvement).

If assumed all the independent variables are Zero, brand loyalty for Apple brand will be negative (-1.609). Mathematically the number makes sense, but in real life situation there is no negative loyalty.

**Sony Ericsson**
Customer satisfaction (0.497): The coefficient of customer satisfaction indicates that if it increases by one unit, brand loyalty increases by 0.497 for Sony Ericsson brand. The negative constant number does not add up any practical meaning, because there is no negative loyalty.

5. Discussion

The regression analysis confirms the following independent variables are significant and influencing brand loyalty in Apple brand; customer satisfaction, brand image and customer product involvement. Customer satisfaction is the only independent variable that influences brand loyalty for the Sony Ericsson brand. However, perceived product quality, brand experience, age, gender and education have no significant effect and influencing brand loyalty on both brands.

Regression analysis provided sufficient evidence that customer satisfaction is among the factor that determines Apple brand and Sony Ericsson brand loyalty, which is in line with the argument of Youl & John (2010). The satisfied customer will buy the same brand in the future and patronized the brand. In addition, they will develop a positive attitude and feeling because it is hard to conceptualize dissatisfied customers will have a positive attitude towards the brands. Satisfaction is the combination of cognitive response to consumption (using) experience that is stated by Gilbert & Carol Surprenant (1982). A customer using experience is the important element of customer satisfaction. It is the result of a brand specific attribute that customers easily identify. Brand specific attributes include hardware functionality, operating system and network connectivity. That is a basic criteria customer’s compare brand performance with their expectation. The following branch mark used by most customers to evaluate brand performance, how well the touch screen of Smartphone works? How well the Smartphone brand good at taking nice pictures? How well the Smartphone brand video recording quality? How well the operating system is friendly? How many free download apps available? How well the network function and processing speed? A brand that has a good performance rating on brand attribute can ignite customer satisfactions.

Customers’ satisfaction based on physical attributes and aesthetic has got some critics from researchers. Joss & Hans (1995) state that most customers might not be able to list out the possible brand attributes and they might not be familiar enough with all the potential benefits brand could offer. Their satisfaction assessment based on limited attribute that customer
familiar with. There are possibilities for customers can express their satisfaction and dissatisfaction perception of limited brand attribute rather than compressive brand attribute. That is because all customers might not give equal value to all brand attributes, it might happen to be satisfied /dissatisfied on limited brand attribute that can dictate the whole satisfaction evaluation.

Satisfaction is based on individual customer assessment rather than some objective benchmark, so there would be no objective brand performance rating between Apple and Sony Ericsson brand users; rather it is a subjective individual customer’s psychological response to consumption experience, which goes to the previous argument stated by Paurav Shukla (2004).

Apple and Sony Ericsson brand users have positive disconfirmation with their brands. Positive disconformities are discrepancies between prior expectation and actual performance. If the customers got higher service's benefits as compare to the expectation, they will develop a positive attitude toward a brand the argument the previous study of Gilbert & Carol Surprenant (1982).

Apple and Sony Ericsson brand users are satisfied with their brand hardware, operating system, service provisions and stylishness. However, it is hard to compare which brand users are more satisfied on their brand because it needed further factor loading analysis on satisfaction construct. Customer satisfaction is among the factors that affect brand loyalty in a Smartphone. Customers who are satisfied with their brand might have high probability remain to use the brand in the future compare to customers who are dissatisfied; they are willing to search alternative brand information.

Brand image is the most determinate factor on brand loyalty. Apple brand has a higher brand image in the consumer mind. Apple brand users associate their brands with prestigious, high quality, fashionable, elegant, trustworthy and number-one among Smartphone brands. Intangible brand attributes are main constitutes of brand image and Apple brand users feel they are using brands that have high acceptance in Smartphone brand users. They connect the brand with higher symbolic associations, which goes with previous research argument (Salciuviene, Ghauri and De Mattos, 2009). Intangible's brand attributes offered higher self-image and status benefits. Symbolic association of Apple brand increases individual self image and status. That might be the case, Apple brand users in some extent think they have a
marginally higher status than customers who are using other brands. In addition they think Apple brand has higher technical functionality with respect to other brands.

Apple brand users think the brand is unique in comparison to competitive brand. The uniqueness of a brand has its impact on brand image, and the argument goes with (Lee. H, Lee. C & Wu.C, 2009). Due to that fact, the customers willing to pay the premium price for the brand. The brand users have deeply rooted positive brand image in their mind and as an outcome they easily identify the brand, the argument goes with previous study Hyun & Kim (2011).

A favorable Apple brand image has a positive influence on consumers’ behavior and increase loyalty and generates positive word of mouth.

Customers are highly involved with the Apple brand. Customers think Apple brand personally important and necessary because the brand gives them meaningful pleasure and desire, the argument goes with Pascale and Ali Lin Lim, (2003). The essence of the Apple brand for the users would influence the information searching, processing and decision making. Apple brand users used the brand as a means of expressing individual and social status, which goes with Petruzzellis (2010) argument. Apple brand is just not only providing functionality benefits to users. It is also a means to express social status and enjoyment benefits, which close the brand as luxuries.

Apple brand users’ conscious of the risk associated buying products with less quality that might lead to disappointment, so they take longer time to evaluate all the available information before they make buying decision the statement goes with Mittal and Lee (1989).

In general brand image, customer satisfaction and product involvement are the main determinant factors on brand loyalty in Smartphone in Sweden market.

The main contribution of this thesis is using the existing knowledge on brand loyalty and applied to Smartphone context. Most previous studies on brand loyalty have done in stable and mature market situation. In addition, many studies have not been done on causal antecedent factors that lead to brand loyalty in a Smartphone. Analyzing brand performance on dynamic market condition might be one way of understanding consumers’ behaviors.

It would also make room for comparative analysis on factors that are determinate on the stable market situation and dynamic market environment specifically on brand loyalty. In this thesis
it is the author argued that the market conditions for Smartphone are not stable and mature rather dynamic. It is characterized as fast technological development, short product life and new market actors are dominant. Conceptual understanding of the market situation can help managers and marketing practitioners to undertake various administrative action and marketing campaign with the main aim on increasing brand loyalty to avoid the loss of their customers to competitive brands.

6. Conclusion Limitations and future research direction

As a concluding remark, Smartphone is not just an ordinary phone. It provides most services previously done by computers. It is now part and parcel of consumers’ daily life. It is not a matter of fashion rather, it is necessary. Consumers’ developed an especial connection with the brand. Most Smartphone brand users are young and middle age group. These groups of consumers are always looking the best quality brand, social connectivity and cheap price. The market environment of Smartphone is dynamic and unstable due to the product short lifecycle, fast technological development and unstable consumer behavior.

Due to the following reasons any generalization of the result would be compromised; Data in this thesis lack normal distribution (age) (2) the sampling design is not probability, so it is not possible to make any generalization beyond the sample group.

It is assumed that the following variables are predictors of brand loyalty; customer satisfaction, perceived quality, brand experience, brand image, switching costs and customer product involvement, but the following variables can also affect brand loyalty; attractiveness of alternative brand, price and affective commitment.

In the future research, it would be good to use more sample size and even distribution across different age groups.
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Appendix
Table 1 the research questions which were conducted for this thesis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement dimensions</th>
<th>Adopted with modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>Q5. My expectation regarding the performance of Apple/Sony Ericsson brand is high</td>
<td>Gilbert &amp; Carol Surprenant, (1982)</td>
</tr>
<tr>
<td></td>
<td>Q6. There is positive difference between Apple/Sony Ericsson brand performance and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q7. Overall brand Apple/Sony Ericsson brand meets my need and I am satisfied</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q8. I am satisfied with the stylishness of Apple/Sony Ericsson brand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q9. I am satisfied with the hardware functionality of Apple/Sony Ericsson brand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q10. I am satisfied with the operating functionality of Apple/Sony Ericsson brand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q11. I am satisfied with the service provision of</td>
<td></td>
</tr>
<tr>
<td>Brand</td>
<td>Questions</td>
<td>References</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Apple/Sony Ericsson brand</td>
<td>Q.12 Brand X offers products with very good quality</td>
<td>Bruks &amp; Naylar (2000)</td>
</tr>
<tr>
<td></td>
<td>Q.13 Brand X offers products with consistent quality</td>
<td>(Pappu, Quester &amp; Cooksey 2006)</td>
</tr>
<tr>
<td></td>
<td>Q.14 Brand X offers very durable products</td>
<td>Ramos &amp; Franco M, 2005</td>
</tr>
<tr>
<td></td>
<td>Q.15 Brand X offers very reliable products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q.16 Brand X offers products with excellent features.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q 17. Using Apple/Sony Ericsson brand crate positive feelings and sentiments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q.19 Apple/Sony Ericsson brand increase desire to learn new thing and problem solving</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q.20 I feel Apple/Sony Ericsson brand products go with my way of life</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q21. Because of Apple/Sony Ericsson brand, I feel I am part of a smarter community</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Q19 was modified from, “This brand stimulates my curiosity and problem solving”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q.22 I think Apple/Sony Ericsson brand is well known and prestigious</td>
<td>Gill &amp; Dawra, 2010</td>
</tr>
<tr>
<td></td>
<td>Q.23 I think Apple/Sony Ericsson brand have a reputation for high quality</td>
<td>(Salciuviene, Ghauri, De Matto, 2009)</td>
</tr>
<tr>
<td></td>
<td>Q.24 I think Apple/Sony Ericsson brand is</td>
<td></td>
</tr>
</tbody>
</table>
| Brand switching cost | Q27. I think it is not worth spending so much money on brand x  
Q28. I am afraid that my choice of brand x may reduce the esteem I have among my relatives and friends  
Q29. I am afraid that if I change my Apple/Sony Ericsson brand to another brand I will lose important files that I have on it  
Q.30 I am afraid that I cannot afford the time to get the information and fully evaluate brand x  
Q.31 I am afraid it need effort to learn new features and setting on brand x, it seems also difficult to understand | Burnham & Mahajan (2003) |
| Customer product involvement | Q.32 Brand x very important to me  
Q.33 Brand x sign reflect the sort of person is  
Q.34 I should be annoyed with myself, if it turned out I’d made the wrong choice when buying brand x  
Q.35 When I buy brand x I can never be quite sure it was the right choice or not. | Kapferer & Laurent.G, (1993) Pascale, Ai Lin Lim , (2003) |
| Q.36 Whenever I buy brand X it's like giving myself a present. | Brand Loyalty | Q.37 I will buy X brand in the future | Q.38 I recommend brand X to my friends and family | Q.39 I consider myself loyal to brand X | Q.40 Brand x is my first choice among Smartphone brands | Q.42 I have favorable attitude towards brand X | Dick & Bastu (1994) |

The following tables were produce using SPSS

Table 2

**Reliability Statistics, Apple**

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.851</td>
<td>.895</td>
<td>40</td>
</tr>
</tbody>
</table>

Table 3

**Reliability Statistics, Sony Ericsson**

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.907</td>
<td>.924</td>
<td>40</td>
</tr>
</tbody>
</table>