Social Influences in Consumers' Mobile Phone Switching Behavior

Full Papers

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Abstract

Mobile phones have become a commodity and consumers switch their phones increasingly often. Earlier research suggests that social influences have a role in mobile phone switching, but the literature does not well explain what the underlying dynamics behind it are. We address this gap and report a longitudinal study on the social influences in consumers' mobile phone switching behavior. Theoretically the paper is founded on switching behavior and more specifically on the push-pull-mooring framework that has been recently used to explain consumers' switching behavior related to different products and services. Our mostly qualitative survey data was collected annually among Finnish university students during 2012-2014. While mobile phone users primarily base their switch decisions on rational reasons, indications of social influences on their switching behavior were discovered. Most interestingly, respondents seemed to recognize the role of social influences in their past behavior, but did not connect this to their future decisions.

Keywords

Mobile phones, consumers, switching behavior, longitudinal study

Introduction

Today Mobile phones can be considered as a consumable as the global penetration approaches 100%. Based on the ITU (2013) statistics the global mobile phone subscription penetration at the end of 2013 was about 6.8 billion, with the total world population of 7.1 billion. Mobile phones are rapidly replacing the traditional voice communication mobile phones, globally. Similarly to the 1990's mobile phone revolution, we are not witnessing vivid smartphone saturation.

The availability of the growing myriad of application software (apps) is a prerequisite for the smartphones to generate any value aside telephony services for a user. Apps can be downloaded to the mobile devices largely regardless of time and place. Due to the constantly increasing computational power, modern smartphones can perform several tasks that were just recently possible only for computers. Mobile technology increasingly

allows the users to transfer their daily information and communication technology based routines from personal computers to smaller, mobile devices.

From a mobile phone manufacturer's viewpoint, developing the technology and the operating system of a phone and selling this bundle as an independent standalone product it is not enough, anymore. The choice of the relating ecosystem is at least as important as the core technology. The mobile phone operating system (i.e. iOS, Android, Windows), user interface, mobile cellular network infrastructure and mobile service operator, are all relevant parts of this ecosystem, as is the mobile application software market, which is used to make the apps available for the users. The most common smartphone - OS - application store combinations at the moment (also in the context of our examination in Finland) are the following: iPhone - iOS - AppStore, Samsung - Android - Play Store, and Nokia/Microsoft - Windows - Windows Phone Store.

With the current near 100% global mobile phone penetration rate, focus of research on consumers and mobile phones has shifted from technology adoption to post-adoption behavior and processes. Users in developed markets switch – that is, replace or change - to a new phone on an average of 1.5-4.5 years (CEA, 2014; TCO Development, 2014). Mobile phones, application software, cellular networks and the mobile service ecosystem in a whole are an important part of most consumers' daily lives. Mobile phones are inherently technology products and primarily judged by the consumers based on their functionality, technical quality, and price. Consumers are also part of their social environment, hence subject to social influences, in the form of social norms and peer pressures. These have both conscious and unconscious effects on the consumers´ product or service switching decisions. Hence, the research question addressed in this paper is as follows*: What is the role of social influences in consumers' mobile phone switching behavior?*

Since Nokia sold its mobile phone division to Microsoft in 2013, Finland as a market traditionally dominated by Nokia is shifting to other brands. This recent and ongoing shift in the market offers us an excellent opportunity to observe changes in the consumer switching behavior. We are particularly interested in the less obvious or conscious reasons or reasoning applied by consumers in their choice of the new device being switched to. We postulate that the differences in technical quality between the major brands are rather minute; the decisions are made more based on personal preferences and more or less acknowledged social influences. More specifically, in the empirical setting of this study we focus on, how much and in which direction social issues and network effects have influenced the mobile service platform switching behavior of Finnish business school students in 2012 - 2014. We utilize interpretive approach in this longitudinal, partly inductive study, comprising an empirical survey data of three consecutive years.

Earlier Research

Success of platform-mediated networks and services depends highly on the size of the user network (Economides & Katsamakas, 2006). Network effects are those positive or negative effects that one user's actions have on another user's valuation of the network (Milgrom & Roberts, 1992). In other words, the value of membership to one user is positively affected by another user joining and enlarging the network (Katz & Shapiro,

1994). Ecosystems, such as, mobile service platforms operate in many-sided markets, where the platform's value to any given user depends on the number of users on the network's other side(s), and the value grows as the platform matches demand from different sides (Rochet & Tirole, 2003; Eisenmann et al, 2006). Both same-side effects (i.e., how valuable is the growth of the network for the users in the same side of the market) and the cross-side network effects (i.e., how valuable is the growth of the network on the other side) are highly relevant in the context of mobile services.

When directly questioned, consumers typically emphasize the technical and technological features as motivation, reasons and reasoning in their mobile phone switching behavior, instead of any social influences in the form of same-side network effect or, opinions or actions of family members, friends, colleagues or other consumers (Tuunainen et al., 2012b, Nykänen, 2013). Earlier studies have found evidence of the role of social influences in consumer behavior in different contexts (Bansal et al., 1999; Tuunainen et al., 2012b), yet only very few have explored them in the context of mobile phone switching (See e.g. Hsu, 2014). Furthermore, recent studies indicate that these influences can be stronger than the consumers initially reveal or realize themselves (Tuunainen et al., 2012a). A person may aim at increasing the value of his or her own device through increased size of the user network by attempting to influence his or her peers to switch to a particular device and service platform. Also, fashion and trends have an effect on consumers' buying behavior (Kim et al, 2002; Park et al., 2006). More specifically in the context of mobile technology, Lu et al. (2005) found that the user´s perceptions of usefulness and ease of use of the technology are significantly attributed to social influences from the user´s social networks and the sense of image.

Although research into consumers' switching behavior has long history in marketing and service research, it is still relatively new perspective in information systems (IS) research. When examining the use of different information systems or technologies, IS research has traditionally focused on technology acceptance by the users (see e.g. Bhattacherjee, 2001; Venkatesh et al., 2012), in circumstances usually involving large paradigmatic shifts in use behavior. However, in the current environment of rapid mobile phone product cycles, there are no large paradigmatic shifts at sight. Rather, consumers more frequently shift from one mobile phone to another somewhat similar product. Therefore, a full comprehension of consumer behavior in the current market environment requires examination of nature of the relationship between products involved in the process of switching, rather than examination of the factors related to the acquired or adopted product. Consequently, switching provides a more appropriate lens for studying behavior of consumers transferring from one information technology product to another.

Switching research in IS has been sparse and lacking an overarching theory (Bhattacherjee et al., 2012; Bhattacherjee and Park, 2014). Therefore, a number of scholars interested in consumer switching behavior have utilized the Push-Pull-Mooring (PPM) framework (Bansal et al., 2005; Zhang et al, 2008) that originates from the study of human migration (Lee, 1966). The PPM framework states that migration decisions are based on a person´s perception of push factors at the origin, pull factors of the destination, and the personal or environmental mooring factors that can inhibit or facilitate the migration decisions (Lee, 1966; Moon, 1995).

Applied to consumer behavior context, the push factors are those that motivate the user to abandon their current product or service and to switch to a new one. Factors, like *satisfaction, perceived quality, value, trust, commitment and price* are often suggested to be strongly associated with the push attributes (see e.g. Bansal et al., 2005; Chang et al., 2014; Ye and Potter, 2011). Low perceived quality and value, low trust with the origin and high price perceptions are associated as strong positive push factors (Bansal et al., 2005). Similarly, pull-factors have direct effects on switching behavior through the effects related to alternatives to current state of affairs. Examination of pull-factors has been mainly restricted to the concept of *alternative attractiveness,* which suggests that the positive characteristics of competing product or service can influence positively the consumer´s switching intentions (Bansal et al., 1999; 2005; Chang et al., 2014; Cheng et al., 2009; Hou et al., 2011; Chiu et al., 2011; Jones et al., 2000). Extant literature also recognizes several mooring factors, the most frequently referred being *switching costs, variety-seeking tendencies, subjective norms i.e. social influences*, *attitudes toward switching,* and *past behaviors* (Bansal et al., 2005). *Social influences* or *subjective norms* refer to a person´s "perception of the social pressures placed on her/him to engage in a certain behavior" (Ajzen and Fishbein, 1980; Bansal et al., 2005). Research on social influence in consumer switching behavior is still rather limited and the treatment of the related constructs varies. Some recent studies, for instance in the context on mobile shopping service switching (Lai et al., 2012) and social networking site switching (Cheng et al., 2009) position factors related to peer influence as pull-factors, while earlier literature of consumer service switching behavior in general (e.g. Bansal et al. 2005) treat social influences explicitly as mooring-factors.

Empirical Study

The longitudinal empirical data presented in this paper was gathered through a survey questionnaire. This survey has been conducted annually in 2012-2014 in Finland, every January among students participating in a Master's level business school course. The total sample consists of 216 responses: 69 (2012), 82 (2013) and 65 (2014).

The survey instrument has both qualitative and quantitative parts, with main emphasis on qualitative. By using quantitative and qualitative approaches in the questionnaire we applied within study triangulation that allowed us to elicit nuanced differences between the switch factors through quantitative questions while simultaneously exploring the full potential switch factor set through use of open-ended questions. The open-ended questions elicited positive and negative aspects of respondents' current and previous mobile phone, as well as explicit explanations for the reasons to switch phones. Conversely, in the quantitative part the respondents were asked to rate the importance of a list of predetermined factors (see Table 2 in the next section). Additionally, background details, such as age, gender, mobile phone brands, models, smartphone-feature phone differentiation and the time of switch were inquired in relation to the most recent switch.

The Push-Pull-Mooring framework (Bansal et al., 2005) was used to structure initial axial codes that emerged inductively from the qualitative questionnaire data. In the coding process, indicators of different push-pull-mooring factors were identified in two coding iterations across the different open-ended questions. The final list consisted of 26 inductively emergent initial switch factors that were then divided into ten

subcategories and three PPM dimensions in subsequent coding iterations. Each of the switch factors and subcategories corresponded with the three PPM framework dimensions (see Table 1). Even though we identified and analyzed all the different PPM factors contributing to the users' switch decisions, in this paper the main focus is on social influences and network effects, as well as on whether and how they have changed over the three-year period.

Findings

There are two relevant market and technological trends evidenced by our data. Firstly, smartphones replaced feature phones almost entirely over the three years. While in 2012 41% of the respondents had a feature phone and 59% a smart phone, by 2014 smartphone penetration was already 98%. The second relevant trend is related to the phone brands: Samsung and Apple overtook Nokia's home ground advantage in popularity in three years. Together these two trends imply a paradigm shift from device centered phone use to software and service centered usage and stronger network effects, which in turn can be expected to affect the importance of social influences in switching behavior. Additionally, even though the examination is primarily focused on voluntary switching, each year 25-40% of the respondents reported having switched their mobile devices in situations where either the switch time or the switch destination was affected by events out of their control as is indicated by the subcategory of forced or assisted switch (Table 1). The forced or assisted switching refers to situation where the previous device was broken or stolen (forced switch) or the new device was a gift or provided by the employer (assisted switch).

Social Influences

As expected, different device characteristics as both push and pull factors were the most important factors in mobile phone switching behavior stated by the respondents (not reported in detail in this paper), and this remained stable over the three years. Nevertheless, clear evidence of social influences in different forms emerged from the data (see table 1). These social influences were primarily conveyed through direct influences, such as, recommendations by friends and peers and reviews in public sources, as well as indirect social norms. Even though the numbers and percentages are fairly small, we can see an increase in the importance of good reviews, recommendations of friends, friends having a more advanced phone (usually smartphone), and friends having a specific phone (most typically iPhone) from year to year.

PPM	Expressed switch factor	Explanation	Generalized subcategory	2012 69 n	%	2013 82 n	%	2014 65 n	%
Push	Previous phone lost / stolen	Forced switch	Forced or assisted switch	10	14,5 %	12	14,6 %	5	7,7 %
	bundle / contract ended	Forced switch		4	5,8 %	5	6,1 %	2	3,1 %
	Got new phone for free	Assisted switch		10	14,5 %	17	20,7 %	10	15,4 %
	Previous phone malfunction	Technical issue	Low satisfaction	20	29,0 %	30	36,6 %	27	41,5 %
	Previous phone felt outdated	Technical issue		12	17,4 %	20	24,4 %	14	21,5 %
	Not happy with previous phone	Dissatisfaction		4	5,8 %	9	11,0 %	15	23,1 %
	No currently needed apps available	**Cross-side network effect**		2	2,9 %	3	3,7 %	1	1,5 %
Pull	Good experience on phone brand or model	Repurchase / familiarity	Prior experience	0	0,0 %	16	19,5 %	15	23,1 %
	Wanted smartphone / advanced technology or performance	Technical issue	Alternative attractiveness	30	43,5 %	37	45,1 %	27	41,5 %
	Wanted applications or specific OS	**Cross-side network effect**		17	24,6 %	22	26,8 %	17	26,2 %
	Better compatibility / sync / subculture	**Cross-side network effect**		2	2,9 %	7	8,5 %	8	12,3 %
Mooring	Cheap / reasonable price offered	Pricing / promotion	Facilitating conditions	8	11,6 %	5	6,1 %	2	3,1 %
	Good bundle offered	Pricing / promotion		1	1,4 %	3	3,7 %	2	3,1 %
	Low switching costs: easy to use similar phone as before	Perceived ease of use		0	0,0 %	0	0,0 %	1	1,5 %
	High switching costs: high prices	Pricing	Switching costs	0	0,0 %	3	3,7 %	1	1,5 %
	Switching history: not switching often	Personal attitude		1	1,4 %	1	1,2 %	3	4,6 %
	Switching history: switching often / early adopter	Personal attitude	Attitude towards switching	0	0,0 %	4	4,9 %	5	7,7 %
	Wanted something new / want to be up-to-date	Variety / upgrade seeking	Variety seeking behavior	10	14,5 %	13	15,9 %	12	18,5 %
	New specific model became available	Variety / upgrade opportunity		1	1,4 %	5	6,1 %	8	12,3 %
	Good reviews from public sources	**Subjective norm**	Social influences	1	1,4 %	3	3,7 %	8	12,3 %
	Friends / peers had recommended a specific phone	**Subjective norm**		2	2,9 %	6	7,3 %	6	9,2 %
	Friends / peers had more modern phones	**Subjective norm**		2	2,9 %	5	6,1 %	7	10,8 %
	Friends / peers had already a specific phone	**Subjective norm**		2	2,9 %	4	4,9 %	5	7,7 %
	Wanted more fashionable phone/design	**Subjective norm**		7	10,1 %	5	6,1 %	7	10,8 %
	Ashamed of previous phone	**Subjective norm**		1	1,4 %	4	4,9 %	0	0,0 %
	Friends / peers suggested / expected / demanded to switch	**Peer pressure**		1	1,4 %	3	3,7 %	1	1,5 %

Table 1 Switch factors 2012-2014 (from open-ended questions)

The pre-defined list of factors that the users were asked to rate would indicate that peers and friends have practically no influence at all (see Table 2). This implies that even though one might be paying attention to what kinds of phones friends and peers have or admit to "*just wanting a smartphone*", this kind of social influence is not acknowledged fully consciously.

Quantitative attributes (Likert scale)	2012			2013			2014		
	n	Mean	SD	n	Mean	SD	n	Mean	SD
Number of apps available	69	3.10	1.27	80	3.53	1.10	65	3.62	1.11
Functionality upgrade/improvement (e.g. from non-smart to smart phone, or more functions)	68	4.09	1.10	80	3.94	1.06	64	4.14	0.87
customizability	69	n/a	n/a	79	3.13	1.05	65	2.85	0.97
Ease of use / user-friendliness	69	4.30	0.77	80	4.23	0.89	65	4.25	0.85
How the phone looks like	69	3.77	0.93	80	3.66	0.93	64	3.84	1.06
shape/size	69	n/a	n/a	80	3.91	0.83	65	3.98	0.98
Can be synchronized/interfaced (manually or automatically) with my other devices	69	3.43	1.25	80	3.78	1.15	65	3.83	1.11
new version	69	n/a	n/a	80	2.40	1.20	65	2.69	1.16
All my friends or my significant other(s) have a phone like this	69	1.77	1.09	79	1.91	0.91	65	1.97	0.93
Peer pressure (others expect me to have a particular phone)	69	1.64	0.92	80	1.96	1.06	64	2.11	1.06
Being in the forefront of development and always having the latest gadgets	69	1.77	0.91	79	2.26	1.26	65	2.23	1.07
A good deal / promotion	69	2.99	1.16	80	3.56	1.17	65	3.23	1.22
Good bundle	69	n/a	n/a	80	2.43	1.26	65	2.54	1.23
Problems with telecom provider (e.g. technical, customer service,…)	69	2.51	1.43	79	2.93	1.28	65	2.88	1.18
Problems with device vendor (e.g. technical, customer service,…)	69	2.70	1.23	79	3.38	1.20	65	3.11	1.06
I got the new phone as a gift or from my company	64	2.59	1.70	76	3.07	1.47	62	2.60	1.42
Other reason(s), please explain and rate its/their importance?	28			10			9		

Table 2 Switch factors 2012-2014 (factors rated on Likert-scale (*1 (not important) - 5 (important to a large extent)*))

Social norms are manifested in the open-ended answers also in terms of comparison to peers. In 2012 and 2013 a few respondents referred to "being ashamed" or embarrassed about his or her outdated (feature) phone as one reason to switch phones. More often (by 44% in 2012 and by 45% in 2013) this was pronounced in terms of wanting to have a smartphone (instead of a feature phone) - as in ""*I want a smartphone since everyone else around me has one already*" (from 2012 data) – or some specific smartphone related features. The desire to have a new phone with more advanced capabilities is still present in 2014 (42%), but since all but one respondent have a smartphone, no feelings of embarrassment are declared anymore. However, less self-reflecting way of saying this – perceiving the previous phone as outdated - has remained important over the three years (17%, 24% and 22% in 2012-2014, respectively).

We see a similar pattern in the way that the respondents see themselves as being in the forefront of development and always having the latest gadgets. In the rated list (Table 2), the importance is quite low in all years, but in the open-ended responses some, albeit only a few, clearly announce themselves as early adaptors of new technology. For example, a respondent in 2014 wrote: *"I always want something better and I cannot be satisfied forever with the smartphone that I have at the moment. I would like to challenge myself keeping myself on the front line of technology development, which is exciting".*

In line with the results of the list of rated factors (Table 2), only weak signals of direct peer pressure were found in the open-ended answers. Deliberate, persuasive peer influencing seems to be rare among university students and it is not perceived to much affect the decisions. However, the implicit social influence references prevail in the responses for questions where the effects of social norms or peer pressure are not asked about directly, but where the respondents refer to their social environment and their perception about the platform choices they feel their social environment expects from them. Counting together all the mentions to peer influence (such as, "*peers had recommended a specific phone*", "*peers had more modern phones*" and "*peers had already a specific (smart)phone*") by the respondents in the open-ended answers, we see that the relevance has increased from 10 % in 2012 to 26% in 2014. Furthermore, implicit switch reasons seem often to appear in statements related to fashion, aesthetics,

"coolness" and person´s own social image. Several respondents expressed their affection for a certain brand or device very openly and directly, writing for instance, that "*the iPhone is just so cool*" or that "*I wanted more fashionable phone*".

Social Influences Specific to Apple iPhone Users

There are also some distinguishable brand-associated differences in the switching behavior of the users, particularly in terms of social influences. While 43 % of the respondents in 2014 were Apple iPhone owners, their share of those 26 % (of the whole sample) referring to peer influence was almost 60%. Also most clearly related to iPhones were references made by some respondents to the value created by same-side network effects in terms of the ability to connect with their friends and chosen communities more easily with the same phone brand: "*Apple has been known as the market leader in smartphones. Hence I have to say the brand is a major reason I chose this phone. Their quality is known to be consistent. A lot of my peers (friends, family) use iPhones so it is easier for me to connect with them by using an iPhone.*" (from the 2014 data). Overall, the Apple iPhone users in the sample manifest stronger social interdependency and same-side network effects facilitated by greater intra-brand synchronizability between different devices (smartphone, tablet, mp3 player, laptop) than the other brands and platforms.

Furthermore, Apple's brand image is clearly stronger than any other brand, referred to by a 2014 respondent as "*reference and social value*" that was the main driver of his latest switch to an iPhone. The iPhone users seem to express certain kind of "sense of belonging" in an Apple subculture. This can be seen in the questionnaire sections where the respondents were asked about their previous switches and also their future switches. Mentions to Mooring and Pull factors, such as "new specific phone available" or "better compatibility/sync/subculture issues" increased in number every year. These mentions were almost entirely made by respondents who already had switched to an iPhone. In our Finland based sample, Nokia users expressed similarly strong brand loyalty in 2012, but by 2014 this kind of loyalty was reserved for Apple's iPhone, only.

Moreover, we find that social influence seems to work also via mobile service platforms through which the users access and download apps. First of all, number of apps available is one of most highly rated factors (see Table 2), implying strong cross-side network effects created by the availability and selection of mobile apps on a given service platform. The respondents also indicate that information on apps is shared among peers, as peers are the most frequently referred source of apps information. Furthermore, there are mentions of brand specific apps that support peer-to-peer communication, again evidencing presence of same-side network effect. This is endemic to Apple but not to other brands. This implies that high compatibility and easy synchronization among the Apple users is not considered to limit communication with the peers with devices of any another brand.

Discussion

The ten subcategory elements that were induced from the data are mostly represented also in earlier IS literature on switching and adoption: dissatisfaction (e.g. Ye and Potter, 2011), prior experience (e.g. Hou et al., 2011), alternative attractiveness (e.g.

Chang et al., 2014), facilitating conditions (Venkatesh et al., 2012), switching costs (e.g. Zhang et al., 2008), variety seeking behavior (e.g. Hou et al., 2011) and social influences (e.g. Hsu, 2014). However, attitude towards switching and forced or assisted switches have been examined only in the context of services (e.g. Bansal et al., 2005; Keaveney, 1995). Especially, the lack of examination of forced or assisted switches could be considered as an oversight since our sample indicates that about every fourth switch had some element of this subcategory.

The role of social influences in the consumer mobile phone switching behavior is not immediately evident, as consumers in general, and our business school student respondents in particular, tend to rationalize their purchase decisions, or at least attempt to do so. Accordingly, it seems more rational and socially acceptable to explain mobile phone switching decisions with reasons related to technical features and functionalities, than to admit having made the decision based on fashion trends or peer influence. Interestingly, analyzing separately our quantitative data (i.e. the pre-defined list of switch factors rated by the respondents) and qualitative data (the open-ended questions), results were contradictory in terms of the importance of social influence. Whereas the quantitative ratings downplayed the significance of peer influence as well as fashion and aesthetical features of the devices, these were clearly evident in the open-ended responses. This could deduce that the open ended questions were answered based on what actually has occurred in the past (for example, the question "*Explain in your own words, what was the situation and what were the reasons for the switch from your previous phone to your current phone? (Be as complete and thorough as possible)*"), while the list of factors ("*Importance of different factors in switching the phone")* was interpreted by the respondents to refer to the future switching decisions. This would mean that the respondents recognized at least to some extent the role of social influences in their past behavior, but do not connect this to their future decisions. This ambiguity of the survey instrument is an obvious flaw in our research design. Yet, it might have provided us novel insights into how the respondents mentally separate their past and future switching decisions. In any case, this is a question that needs to be addressed more thoroughly and carefully in future research.

Even though the changes are not substantial, we can also note a clear increase in the role of social influences in the consumer mobile phone switching behavior. This link between social influences and mobile phone switching has been mostly unexplored in the extant IS research (with the exception of Hsu, 2014). An important factor explaining the increase of social influences is the fast smartphone saturation during the period of the survey data collections, years 2012-2014. Since a smartphone is an inherent part of platform business ecosystem, the role of network effects seems increase with the smartphone market saturation. Smartphones are purchased because of their extended capabilities, including the possibility to interact with social contacts beyond direct voice communication. This same-side network effect is a form of social influence, which is highly relevant in the decision to switch a mobile phone. Some mobile service platforms and phone brands utilize the social and network effects better than others. On the other hand, some consumers like to avoid strong brands and the risk of lock-in, so by creating demand for differentiated features.

Apple has managed to create a strong community with the help of network effects, high customer loyalty and lock-in through cross-platform interoperability, which is evidenced

in our data by iPhone surpassing Nokia mobiles phones as the most popular brand and model by 2014. The smartphone saturation may have aided this tendency as it has resulted in the increased complexity of mobile phones. Product complexity has been associated with decision-making uncertainty, which in turn has been associated with emphasis on familiar brands and social influences (Polites and Karahanna, 2012; Sheth and Parvatiyar, 1995; Walther et al., 2002).

Our findings indicate that consumers' mobile phone switching behavior is driven by different factors, depending on the device and/or platform being switched from and to. Our respondents could be divided into two groups: the iPhone aficionados and the others. The iPhone aficionados seem to emphasize emotions in their switch decisions more than the other phone brand users. Social influences and same-side networks effect seem to play a bigger role in their switching decisions. They do not seem to mind so much if the technical performance of phone of their choice lacks behind the competitors´ performance (in 2012 more so than recently). Technical performance is not considered overly important, as emotions and other perceived benefits may overshadow the quantitative or technologically emphasized rationale in decision-making. The 2012 and 2014 data revealed that over half of the users that recognized and acknowledged the social environment´s influences in their switching behavior were Apple iPhone users (2013 iPhone and Samsung were even in this aspect). The users of any other brands cannot be called aficionados in the same sense, as their switch decisions clearly follow different pattern. The respondents that had switched to Samsung, Nokia and the other, minor brand phones rather seem to have built their switch decisions on more rational consideration, seeking technology reviews and comparing the technical features of the competing alternatives. With a wide range of popular mobile phone models, in 2012 Nokia still had a strong user base and notable brand loyalty among the Finns or students living in Finland . However, this brand affiliation started vanishing fast already in 2013 data. At the time of the data collection in January 2013, the sales of Nokia mobile phones to Microsoft was still half a year ahead, but the market as well as the student respondents were well aware of the troubles Nokia was facing. One of the most critical reasons behind these troubles was the fact that Nokia had not managed to introduce competitive smartphones nor a strong, viable service platform to the market (Tuunainen et al., 2011) early enough.

Conclusions

As a summary of the findings of our longitudinal survey, we conclude that the mobile phone users primarily base their switch decisions on rational reasons, most typically based on technical advances in device features and functionalities. However, inductive part of our study also identified influences that remain unexplored in the switching of IS products: forced or assisted switch and attitude towards switching. Of these two forced or assisted switch category portrayed a clear potential for gaining more comprehensive understanding of consumer switching processes with accounting influence in at least 25 % of the switches. Future research should look into to this in more detail.

The primary focus of this paper was on social influences that play an increasingly important role in the consumers' decision making. Contemporary social norms encourage use of large variety of communication and social media, and as mobile internet accessed with smartphones has increased the possibilities to interact in various

ways with one's social connections, the influence of these social connections has increased, as well. This was evidenced by our survey respondents to apply also to the mobile phone switching behavior, either directly or indirectly; and either consciously or subconsciously.

The findings of this study suggest that, the social influence have had an increasing role in consumers´ switching behavior over the three years the data was collected. During this period, we observed smartphones reaching market saturation (almost 100 % of the respondents) and a strong shift in brand preferences (from Nokia to Apple). These market changes had different impacts on the dynamics of consumer switch behavior, some of which we were able to capture in the analyses of our data. As a limitation, generalizing inferences must be treated cautiously. Even though Finnish students serve admittedly as an excellent observatory for future tendencies in mobile phone behavior, these respondents do not represent the general population, not even in Finland. Nevertheless, we believe our longitudinal study and the findings provide new insights into understanding how consumers make mobile phone switching decisions and the role of social influences in the process. Clearly, more research into understanding the decision making patterns and switch decision making in needed. We are currently in the process of collecting the 2015 data set with the same survey instrument, now supplemented with new sets of questions to re-evaluate and build on the conclusions of this study.

REFERENCES

Ajzen, I., and Fishbein, M. 1980. *Understanding attitudes and predicting social behavior*, Englewood Cliffs, NJ: Prentice-Hall.

Bansal, H. S., and Taylor, S. F. 1999. "The Service Provider Switching Model (SPSM): A Model of Consumer Switching Behavior in the Services Industry," *Journal of Service Research* (2:2), pp. 200-218.

Bansal, H. S., Taylor, S. F., and St. James, Y. 2005. "Migrating to New Service Providers: Toward a Unifying Framework of Consumers´ Switching Behaviors," *Journal of the Academy of Marketing Science* (33:1), pp.96-115.

Bhattacherjee, A. 2001. "Understanding Information Systems Continuance: An Expectation-Confirmation Model," *MIS quarterly* (25:3), pp. 351-370.

Bhattacherjee, A., Limayem, M., and Cheung, C. M. 2012. "User Switching Of Information Technology: A Theoretical Synthesis and Empirical Test," *Information & Management* (49:7), pp. 327-333.

Bhattacherjee, A., and Park, S. C. 2014. "Why End-Users Move to the Cloud: A Migration-Theoretic Analysis," *European Journal of Information Systems* (23:3), pp. 357-372.

CEA 2014. "The Life Expectancy of Electronics" Online. http://www.ce.org/Blog/Articles/2014/September/The-Life-Expectancy-of-Electronics

Chang, I., Liu, C. C., and Chen, K. 2014. "The Push, Pull and Mooring Effects in Virtual Migration for Social Networking Sites," *Information Systems Journal* (24:4), pp. 323-346.

Cheng, Z., Yang, Y., and Lim, J. 2009. "Cyber Migration: An Empirical Investigation on Factors that Affect Users´ Switch Intentions in Social Networking Sites,"

Proceedings of the 42nd Hawaii International Conference of System Sciences 2009, Waikoloa, HI.

Chiu, H.-C., Hsieh, Y.-C., Roan, J., Tseng, K. J., and Hsieh, J.-K. 2011. "The Challenge for Multichannel Services: Cross-Channel Free-Riding Behavior," *Electronic Commerce Research and Applications* (10), pp. 268-277.

Economides, N., and Katsamakas, E. 2006. "Two-Sided Competition of Proprietary vs. Open Source Technology Platforms and the Implications for the Software Industry," *Management Science* (52:7), pp. 1057-1071.

Eisenmann, T., Parker, G., and Van Alstyne, M.W. 2006. "Strategies for Two-Sided Markets," *Harvard Business Review* (2006:October), pp. 92-101.

Hou, A. C., Chern, C. C., Chen, H. G., and Chen, Y. C. 2011. "'Migrating to a New Virtual World': Exploring MMORPG Switching through Human Migration Theory," *Computers in Human Behavior* (27:5), pp. 1892-1903.

Hsu, J. S. C. 2014. "Understanding the Role of Satisfaction in the Formation of Perceived Switching Value," *Decision Support Systems* 59, pp. 152-162.

International Telecommunication Union 2013. "ICT Facts and Figures 2013" Online. http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2013-e.pdf

Jones, M. A., Mothersbaugh, D. L., and Beatty, S. E. 2000. "Switching Barriers and Repurchase Intentions in Services," *Journal of retailing* (76:2), pp. 259-274.

Katz, M.L., and Shapiro, C. 1994. "Systems Competition and Network Effects," *Journal of Economic Perspectives* (8:2), pp. 93-115.

Keaveney, S. M. 1995. "Customer Switching Behavior in Service Industries: An Exploratory Study," *The Journal of Marketing* (59), pp. 71-82.

Kim, J. O., Forsythe, S., Gu, Q., and Moon, S. J. 2002. "Cross-Cultural Consumer Values, Needs and Purchase Behavior," *Journal of Consumer marketing* (19:6), pp. 481-502.

Lai, J.-Y., Debbarma, S., and Ulhas, K. R. 2012. "An Empirical Study of Consumer Switching Behaviour towards Mobile Shopping: a Push-Pull-Mooring Model," *International Journal of Mobile Communications,* (10:4), pp. 386-404.

Lee, E. S. 1966. "A Theory of Migration," *Demography* (3:1), pp. 47-57.

Lu, J., Yao, J. E., and Yu, C. S. 2005. "Personal innovativeness, social influences and adoption of wireless Internet services via mobile technology," *The Journal of Strategic Information Systems* (14:3), pp. 245-268.

Milgrom, P. R., and Roberts, J. 1992. *Economics, Organization and Management: Instructor's Manual*, Englewood Cliffs, NJ: Prentice-Hall.

Moon, B. 1995. "Paradigms in Migration Research: Exploring "Moorings" as a Schema," *Progress in Human Geography* (19:4), pp. 504-524.

Nykänen, J. I. 2013. "Understanding Reasons behind Mobile Service Platform Switching Behavior: An Inductive Analysis from Consumer Perspective," Master's Thesis, Aalto University School of Business, Helsinki, Finland. Available at: http://epub.lib.aalto.fi/en/ethesis/pdf/13230/hse_ethesis_13230.pdf

Park, E. J., Kim, E. Y., and Cardona Forney, J. 2006. "A Structural Model of Fashion-Oriented Impulse Buying Behavior," *Journal of Fashion Marketing and Management: An International Journal* (10:4), pp. 433-446.

Polites, G. L., and Karahanna, E. 2012. "Shackled to the Status Quo: The Inhibiting Effects of Incumbent System Habit, Switching Costs, and Inertia on New System Acceptance," *MIS quarterly* (36:1), pp. 21-42.

Rochet, J.-C., and Tirole, J. 2003. "Platform Competition in Two-Sided Markets," *Journal of the European Economic Association* (1:4), pp. 990-1029.

Sheth, J.N., Parvatiyar., A. 1995 "Relationship Marketing in Consumer Markets: Antecedents and Consequences," *Journal of the Academy of Marketing Science* 23, pp. 255-272.

TCO Development 2014. " Tablets and Smartphones – Shorter Product Cycles Raise Sustainability Risks" Online. http://tcodevelopment.com/news/tablets-and-smartphones-shorter-product-cycles-raise-sustainability-risks/

Tuunainen, V.K., Tuunanen, T., and Piispanen, J. 2011. "Mobile Service Platforms; Comparing Nokia OVI and Apple App Store with the IISIn model," Unpublished paper presented at The 10th International Conference on Mobile Business (ICMB), 2012, Italy.

Tuunainen, V.K., Tuunanen, T., and Fui-Hoon Nah, F. 2012a. "(Hidden) Social Influences in Switching Mobile Service Platforms," Unpublished paper presented at International Conference on Electronic Commerce 2012, Singapore.

Tuunainen, V.K., Tuunanen, T., and Fui-Hoon Nah, F. 2012b. "Mobile Customer´s Switching Behavior: Comparative Importance of Social Factors and Device Characteristics in Lead and Lag Environments," Unpublished paper presented at the pre-ICIS 2012 SIG Services Workshop 2012, Orlando, FL.

Venkatesh, V., Thong, J. Y., and Xu, X. 2012. "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology," *MIS Quarterly* (36:1), pp. 157-178.

Walther, E., Bless, H., Strack, F., Rackstraw, P., Wagner, D., and Werth, L. 2002. "Conformity Effects in Memory as a Function of Group Size, Dissenters and Uncertainty," *Applied Cognitive Psychology* (*16*:7), pp. 793-810.

Ye, C., and Potter, R. 2011. "The Role of Habit in Post-Adoption Switching of Personal Information Technologies: An Empirical Investigation," *Communications of the Association for Information Systems* (28:1), pp. 585-610.

Zhang, K. Z. K., Cheung, C. M. K., Lee, M. K. O. and Chen, H. 2008. "Understanding the Blog Service Switching in Hong Kong: An Empirical Investigation," *Proceedings of the 41st Hawaii International Conference of System Sciences 2008*, Waikoloa, HI.